ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales · Charity number 1122750

Details

Status	Registered
Legal form	Charitable company
Company number	06429421
Registered	2008-02-12
Register	View on the Charity Commission register

Contact

Address	25 Brook's Mews London W1K 4DZ
Phone	0041795753906
Email	info@adfkulen.org
Website	www.adfkulen.org

Activities

Objects: 3. OBJECTS 3.1 THE DIRECTORS SHALL HOLD THE CAPITAL AND INCOME OF THE CHARITY IN FURTHERING THE FOLLOWING OBJECTS(OBJECTS):3.1.1 TO PRESERVE ARCHAEOLOGY IN THE ANGKOR AND PHNOM KULEN REGIONS OF CAMBODIA AND TO CONSERVE THE AREAS FOR THE PUBLIC BENEFIT;3.1..2 TO ADVANCE RESEARCH FOR THE PUBLIC BENEFIT REGARDING THE ARCHAEOLOGY IN THE ANGKOR AND PHNOM KULEN REGIONS OF CAMBODIA;3.1.3 TO ADVANCE THE EDUCATION FOR THE BENEFIT OF THE PUBLIC OF THE ARCHAEOLOGY IN THE ANGKOR AND PHNOM KULEN REGIONS OF CAMBODIA; AND 3.1.4 TO RELIEVE POVERTY IN CAMBODIA PARTICULARLY BUT NOT EXCLUSIVELY IN THE ANGKOR AND PHNOM KULEN REGIONS.

Activities: To research & conserve the Khmer heritage, jointly with the local authorities & coupled with capacity building of national archaeologists. To raise the awareness of the local population regarding their unique heritage. To improve the communities daily life with a particular emphasis on education, environmental protection, hygiene and sanitation, enhanced crop production in the target area.

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Classification

- **How:** Provides Human Resources, Provides Buildings/facilities/open Space, Provides Advocacy/advice/information, Sponsors Or Undertakes Research
- **What:** Education/training, The Prevention Or Relief Of Poverty, Overseas Aid/famine Relief, Arts/culture/heritage/science, Environment/conservation/heritage, Economic/community Development/employment
- **Who:** Children/young People, The General Public/mankind

Geography

- **Area of benefit:** THE ANGKOR AND PHNOM KULEN REGIONS OF CAMBODIA.
- Cambodia

Finances

Period end	Income	Expenditure	Assets	Employees
2024-12-31	£166,131	£135,732	-	-
2023-12-31	£119,670	£112,065	-	-
2022-12-31	£90,631	£114,986	-	-
2021-12-31	£127,509	£151,690	-	-
2020-12-31	£118,997	£193,301	-	-

Trustees

Name	Role	Appointed
VINCENT CHEVANCE		

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ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales - Charity number 1122750

Accounts

Registered number: 06429421
Charity number: 1122750

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2024

LUBBOCK FINE LLP
Chartered Accountants
Paternoster House
65 St Paul's Churchyard
London EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

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ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

REFERENCE AND ADMINISTRATIVE DETAILS OF THE CHARITY, ITS TRUSTEES AND ADVISERS

FOR THE YEAR ENDED 31 DECEMBER 2024

Trustees	Vincent Chevance
Company registered number	06429421
Charity registered number	1122750
Registered office	25 Brooks Mews London W1K 4DZ
Company secretary	Jean-Baptise Chevance
Accountants	Lubbock Fine LLP Chartered Accountants & Statutory Auditors Paternoster House 65 St Paul's Churchyard London EC4M 8AB

The Trustee presents the annual report, which includes the director's report, together with the financial statements of the Archaeology and Development Foundation for the period from 1 January 2024 to 31 December 2024. The Trustee confirms that the Annual Report and financial statements of the Charity comply with the current statutory requirements, the requirements of the Charity's governing document and the provisions of the Statement of Recommended Practice (SORP), applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

Since the company qualifies as small under section 383, the strategic report required of medium and large companies under The Companies Act 2006 (Strategic Report and Director's Report) Regulations 2013 is not required.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Archaeology and Development Foundation is a company, incorporated on 16 November 2007, governed by its Memorandum and Articles of Association. It registered as a charity with the Charity Commission for England & Wales on 12 February 2008.

New Trustees are appointed by the members. The Trustees may appoint a person who is willing to act as a Trustee, either to fill a vacancy or as an additional trustee.

New Trustees are briefed on their legal obligation under charity and company law, the content of the Memorandum and Articles of Association, the committee and decision-making processes, the business plan and recent financial performance of the charity.

In setting the objectives and planning the activity of the charity, the Trustees have given careful consideration to the Charity Commission's general guidance on public benefit.

OBJECTIVES AND ACTIVITIES

The objectives of the charitable company as set out in the governing document are:

The Archaeology and Development Foundation has been undertaking archaeological research in Phnom Kulen since 2008. One of the objectives is to understand the extent of this first capital as well as to define the various settlements during the period of time, from pre angkorian period to the post angkorian period. Working in close collaboration with the APSARA National Authority (National Authority in charge of Angkor region), the Ministry of Environment and other institutional partners, ADF is the main institution working on both development and archaeology in Phnom Kulen.

ADF is also disseminating the archaeological knowledge of the findings. Reports and conferences are regularly given and specific publications on archaeological research are also published in specialised reviews.

Historically, geographically and from a hydrologic point of view, Phnom Kulen is very closely linked with Angkor World heritage site. The Royal Government of Cambodia has registered Phnom Kulen on the indicative list of the world heritage site, and ADF is working closely with UNESCO and APSARA to move toward the recognition of this site and to meet the standards of a world heritage site.

Additionally, ADF is strongly collaborating with the Ministry of Environment, in charge of the Phnom Kulen National Park, for the management of the protected areas. Other activities in the environmental protection field are implemented such as reforestation, environmental awareness campaigns, demarcation of protected areas, training and supporting to ranger patrols in the National Park, mapping etc.

Conservation and protection of the sites

In the post war years (1990's) Cambodia suffered from endless looting. It is well known that archaeological site protection goes hand in hand with an increased local awareness that arises as a result of research and conservation programmes.

The Phnom Kulen programme is providing APSARA Authority with better knowledge of the archaeological value of the plateau, in order to extend its activities on the Phnom Kulen. ADF is also helping the Ministry of Environment by providing information relative to protected area, forest cover, and illegal activities (encroaching, illegal logging etc).

The programme is also helping to define demining areas and specific archaeological protected areas. The regular cleaning of vegetation and the maintenance of the monuments can then occur. Curators and guards/workers have been appointed by APSARA in order to follow up this initiative. The Archaeology and Development Foundation provides APSARA advice and expertise to improve the management of the sites in terms of conservation and tourism management. ADF has regularly asked APSARA to increase the human and technical resources, to fulfil these missions. For the last years, the Archaeology and Development Foundation is also sponsoring the activities from the APSARA Stone Conservation Unit (transports, salaries, materials) to restore the sandstone artefacts and bas reliefs discovered during the excavations.

Training of Khmer specialists

One of the long-term outcomes of this project is the training of Cambodian specialists, in providing them with knowledge, expertise and know how to preserve these sites.

This project provides an opportunity to train young Khmer specialists in specific search processes. All stages of the archaeological research process, beginning at the preparation phases then field work phases (prospecting to diagnostic trenches or open area excavations, conservation of monuments, inventories) all the way through to annual and final report and publication, is done working closely with ADF and APSARA archaeologists. The project also provides young students graduated from the Royal University of Fine Arts, faculty of archaeology, with their first fieldwork experience.

ADF also provides regular training to the Provincial Department of Environment of Siem Reap staff and the rangers in charge of the Phnom Kulen National Park.

Economic and social impact on local populations

Cambodia has been devastated by civil wars which were fought from 1970 through to the 1990's; this period saw one of the largest genocides in the world which killed between 1.7 to 2 million people. Fighting, aerial bombardments and minefields had a significant impact on the lives of three generations.

Phnom Kulen region was the scene of violent fighting between Khmer Rouge and government troops; the consequences are still evident today. It was one of the last Khmer Rouge strongholds to surrender in 1996.

This project provides jobs for seasonal workers and, consecutively, full-time activity for guards and specialised workers. In providing the villagers with heritage and conservation knowledge it is helping to prevent further looting and is creating a safe archaeological zone by initiating a land mine removal programme and archaeological protected areas.

An important effort is also made towards the villagers from the Phnom Kulen region for food security/nutritional health, medical and health support, hygiene and sanitation (particularly in primary schools), alternative livelihood generating incomes, as well as environmental education and protection.

These initiatives have an important impact on the social and economic development of Phnom Kulen and especially improve the level of education and health care of the inhabitants.

FINANCIAL REVIEW

Income for the year ended 31 December 2024 was $219,535 with expenditure totalling $179,349. At the year end, the charity was holding restricted reserves of $67,894 and the unrestricted reserves were in a deficit position of $5,769.

As the Charitable company has minimal fixed costs its policy is to hold approximately $5,000 in reserves to use as much of the funds received each year for charitable purposes. The Trustee will continue to work to bring reserves to this the target level. In the meantime, ongoing financial support will be provided by the Trustee.

PLANS FOR FUTURE PERIODS

For the archaeological activities (maintenance and conservation program), there is no plan to coordinate demining operations in 2025. However, and if the budget and work plan allow it, ADF will decide if excavations are possible in 2025. They would most probably take place on a site already secured over the previous years.

ADF will continue to maintain a regular coordination with APSARA National Authority and provide assistance and advices for a better heritage management of the archaeological sites in Phnom Kulen. This involves advices for the general maintenance of the sites and the control of the Archaeological Protected Areas. ADF will continue to encourage APSARA to increase the material resources for these tasks. ADF will provide any recent and old documentation on archaeological sites to be restored by APSARA in 2025. For the Kbal Spean and 1000 linga sites, the ADF team will intend to finalize the signboards and with their text and submit them to APSARA, so information panels can be edited and set up by ADF and APSARA, providing APSARA a better tool to manage this area and a better knowledge of the site for the public. The maps and their study will also be published in a specialised review in 2025 or 2026.

In the restoration field, only small sandstone fragments from previous archaeological campaigns were requiring complementary restoration in 2019. As our requests from 2018 to 2019 were left unanswered, ADF will have to ask again if this small operation can be done.

ADF will continue to encourage the Cambodian authorities (APSARA National Authority, Ministry of Environment, Provincial Authorities) to officially recognise the Archaeological Protected Areas and to allocate more resources for their effective protection. In 2025, ADF will encourage APSARA to maintain the posts and their signs around each CPA with a new project.

ADF will also organise public awareness meeting to local authorities, villagers, and students to raise their knowledge about the archaeological features discovered with the Lidar and threaten by recent development, in particular in Preah Ang Thom and Anlong Thom villages.

The archaeological research, diffusion, communication and training will continue. ADF will intend to finalise the publication about the ceramic of the Royal Palace, the 1000 linga and Kbal Spean sites with the most recent maps of these two sites, on Prasat Rong Chen mountain-temple and on the earth mounds fields, discovered thanks to the Lidar and excavated by ADF and APSARA in 2013.

Further studies and analysis from previous excavations archaeological samples and artefacts could also be undertaken such as ceramic or roof tiles studies, charcoal analysis for radiocarbon dating and tree identification, or phytolith analysis.

As in 2024, the continuation of our collaboration with EFEO/Dharma project and APSARA will allow additional surveys for the recording, rubbing and studies of unregistered ancient inscriptions in Phnom Kulen. Similarly, the collaboration with two other EFEO projects (Archaeoscape.ai for Lidar and CHAMPA in Laos) will continue for reports and publications.
Additional surveys to check specific archaeological features will also be undertaken.

ADF will also continue working with the Ministry of Fine Arts and Culture of Cambodia to gather previous documentation and submit reports on artefacts that appeared to be left on site before the Cambodian civil war and reappeared in private or public collections later on. It will allow the Cambodian government to claim the repatriation of these artefacts, strengthening the dynamic started a few years ago. ADF aims to write one report per artefact coming from Phnom Kulen and reappearing in these collections.

In term of communication and collaboration with APSARA, UNESCO and MoE, ADF will continue to participate to the ICC meetings, APSARA meetings, MoE and other meetings or events related to the Action Plan and the Phnom Kulen Management Program, and any other project related to PKNP.

The ADF Facebook page as well as ADF website will continue to be regularly updated with pictures from our various operations, to share our actions and inform our donors and partners.

Regarding the development activities, the main components will continue to be reinforced and adapted, according to their results.

In ADF's operational year 2025, ADF Income Generation / agroecology team will have to renew the project ending in May 2025. The team will continue to monitor and support (financially and technically) each chicken and pig breeders and will strongly encouraging them to re-invest their profit into their micro-enterprise, in order to create sustainable models, applying a 50% reimbursement rate to ADF. Additional beneficiaries interested in pig and chicken raising will be included if possible.

ADF and AGRISUD teams will continue to develop the agroecology activities in Khnong Phnom commune villages, with the IADA project, proposing alternative livelihoods to more than 200 families, until May 2025. All beneficiaries will be registered and will continue to be monitored. ADF will also encourage its staff to attend technical training and will encourage exposure visit for the beneficiaries.

The Rice bank sub-component in Thma Chruogn village will continue to be monitored, encouraging the local population and authorities to take their ownership. From June 2025, a new phase of this project will be developed in coordination with AGRISUD and ADF will seek funding opportunities.

Regarding the alternative livelihoods related to tourism, ADF will continue to support and the Anlong Thom and Popel CBTC by advising and training his team, with funding from HUMY NGO to support this initiative. The objectives remain to offer tours with stronger sustainable and local impacts. The collaboration with our partner from the private sector Terre Cambodge will continue and the project started in November 2024 with APLC/Sala Bai to reinforce this activity, mostly in trainings and promotion, will be developed along the year 2025.

In 2025, the new WISH 3 hygiene project will be started, continuing the WISH 2 project implemented from January 2021 to December 2024 and which was targeting 5 primary schools (Popel, Khlah Khmum, Sangke Lak, Ta Penh and Phum Thmey). This new project, also funded by Almayuda Foundation, will continue to address environmental, hygiene and health issues in these schools but will be adapted and include the 2 mains schools of Phnom Kulen: Preah Ang Thom and Anlong Thom, and will target the villagers of these communities.

ADF team will continue to work closely with the local Health Centre (Anlong Thom) to assist poor people, facing emergency situation. As per the previous years, an Emergency Relief Fund will be reserved in case of major emergency for the poorest of the people (domestic fire or accident, illness, natural disaster…) and will be included into this WISH 3 project.

ADF will continue to implement the South-East Asian Foundation funded project supporting libraries in the primary schools of Phnom Kulen villages (SEAF 4). A partnership with TDSO NGO (Teacher Development and Support Organisation) to improve the English level of the Phnom Kulen teachers will be set up. ADF will be seeking other funding opportunities to support these schools, possibly with partners from the private sector.

To allow school students from Phnom Kulen a different future, ADF will continue the partnerships with other NGO such as Sourire Angkor (funded) or Sala Bai school (unfunded).

ADF will start in 2025, if technical and financial conditions are gathered, the Veolia funded project supporting a new water system for Thma Chruogn village.

Finally, ADF Environmental Support will continue, as ADF is strongly committed to the environmental protection of the Phnom Kulen National Park, and as the MoE is seeking support from our organisation.

ADF will continue to contribute to the Phnom Kulen Management Plan and the Action Plan, in the framework of the Phnom Kulen working group. ADF will assist the MoE for the completion of documents and studies. ADF will continue to recommend the official recognition of the archaeological protected areas (APA). ADF will seek for donors to implement activities corresponding to the Action Plan. ADF will continue to participate to the PES studies for the PKNP, if required.

ADF will continue the dynamic initiated with the previous HUMY funded projects regarding the Popel and Anlong Thom Community-based Tourism Centres (CBTCs), their related Community Protected Areas (CPA) and the training of their members, with the funding from HUMY (HUMY 4). ADF will continue to improve the management of the CBTCs, in coordination with Sala Bai NGO and within the new project and partnership set up in November 2024. Within the same project to be renewed from January 2025 for 3 years, ADF will continue to improve the management of their related CPAs and the regular patrols in these 2 Community Protected Areas, as well as a support to the Phnom Kulen handicrafts producers. This last activity will be reinforced with the TDS project, rehabilitating workshops and setting up a selling point, as well as organising training for the Phnom Kulen artisans, during the year 2025.

The TREE 3 project focusing on growing saplings in tree nurseries located in three primary schools will be renewed for 2 years from February 2025 to January 2027, as well as the project funded by HUMY in Popel primary school (HUMY 3, renewed for 3 years from January 2025).

ADF will continue to advise and assist the APSARA Authority and the MoE on large project such as the Preah Ang Thom / waterfall area and the road project crossing the PKNP.

ADF will assist tree-planting project with APSARA and MoE. The continuation of the Income Generation activities and the systematic report to the relevant authority of illegal activities (ex. logging, construction, land speculation) will also contributing to assist the MoE for the protection of the National Park. The Soneva project, if implemented, will provide an opportunity to better protect the remote forested areas and reduce the illegal activities, to reforest encroached areas as well as to implement an environmental awareness component.

ADF will continue to stress Phnom Kulen National Park threat's on at every level (local, national, international) and, if funded, to implement the demarcation of additional protected areas, and additional patrolling activities within the park.

If possible, ADF will be associated to the project entitled "Integrated Natural Resource Management (INRM) in the productive, natural and forested landscape of the Northern Region of Cambodia", to the project entitled "Cambodia Sustainable Landscape and Ecotourism Project (CSLEP)" a partnership project between the Ministry of Environment (MoE) and World Bank Group (WBG), working to improve protected areas management and promote ecotourism in the Cardamom Mountains-Tonle Sap landscape, or the GEF-Project "Restoring Ecosystems for Sustainable Development in the Tonle Sap Basin and Siem Reap/Phnom Kulen Landscape.

Every ADF activities will be implemented in accordance with the Khnong Phnom Commune development Plan. To do so, ADF will continue to attend the regular meeting with the local authorities.

ACHIEVEMENTS & PERFORMANCE

1. INTRODUCTION

This report presents the ADF activities in Phnom Kulen during the year 2024. They are implemented by ADF within the framework of the Memorandum of Understanding (MoU) signed with the APSARA National Authority and the Ministry of Environment (MoE), ADF's two principal governmental partners. Other governmental bodies are also involved on a local scale such as the district administration of Svay Leu (Siem Reap Province), the Sotnikum Operational District Office (from the Ministry of Health), the District office for Education, Youth and Sports (in Svay Leu) and the Khnong Phnom Commune Council.

This report is divided in two main parts, presenting the two axes of ADF's activities: the archaeological component and the development component. The last chapter presents the perspectives and the plans for the future.

ADF/ Phnom Kulen Program team for 2024
- M. Chim Sopheap, (Deputy Director / Development and Environment Program Manager), from June 2024
- M. Jean-Baptiste Chevance (Archaeologist, Phnom Kulen Program / ADF Director)

Administration, finance and communication officer:
- Ms. Hoeung Hourapich (ADF)

Archaeological and environmental team
- M. Sakhoeun Sakada (Part time consultant, until May 2024, MoE)
- M. Seng Samry (Environmental assistant)
- M. Yon Sokchea (Tree nursery Supervisor), until June 2024
- Mr Rit Saomao (Tree nursery Supervisor), from July 2024

Development team
- Ms. Mien Mout (Income Generation Supervisor and house manager)
- Ms. Bis Chhoeurng (Income Generation field assistant)
- M. Seng Samry (Hygiene and sanitation Supervisor)
- Ms. Loem Nimul (Hygiene field assistant)
- Ms. Soeng Seath (Hygiene field assistant) until June 2024
- Ms. Morn Pith (Hygiene field assistant) from June 2024
- Ms. Chhun Phirom (CBTC, patrol and handicrafts supervisor, part-time, until December 2024)
- M. Em Lihieng, (English teacher and library coordinator) from June 2024

Logistic team
- Ms. Lay Thol, guard
- Ms. Loch Leach, cook

All fields' activities are implemented with local partners such as the Phnom Kulen National Park rangers from the MoE, the APSARA archaeologists and guards, the Community Protected Area (CPA) members of Popel and Anlong Thom villages, the Community-based Tourism centre (CBTC) teams of Popel and Anlong Thom, the teachers and principals at Sangke Lak, Khlah Khmum, Popel, Anlong Thom, Ta Penh and Phum Thmey primary schools and the Anlong Thom Health Centre staff.

2. ACHIEVEMENTS AND PERFORMANCE

ARCHAEOLOGY:

The 2024 archaeological activities are in continuity of the programme launched in 2008 in collaboration with the APSARA National Authority. The 2024 activities can be summarized as below.

a. Maintenance and conservation program:

Land Mine and UXO removal program

As stated in the MoU between ADF and the APSARA National Authority and as implemented from 2008, the ADF team is selecting the sites, after approval by APSARA, and is coordinating the demining operations with the CMAC (Cambodian Mine Action Centre) teams. In the previous years, the annual demining program set up by ADF, in collaboration with CMAC and APSARA, allowed the regular clearing and the maintenance of the archaeological sites in Phnom Kulen. In addition to these demining operations related to archaeological research, ADF team reports and follows up the unexploded ordnances (UXO) founded by villagers to the local authorities.

ADF did not request nor organised any land mine removal campaign in 2024, prior to archaeological excavations, as they were none undertaken in 2024.

Assistance to the APSARA National Authority for heritage management in Phnom Kulen

ADF is continuing its assistance to APSARA for the conservation and the maintenance of the Phnom Kulen archaeological sites. This concerns the ongoing maintenance and conservation of the monuments and sites and their respective Archaeological Protected Areas (APA, 1,600 hectares).

ADF maintains a regular coordination with the APSARA director, deputy directors, heads of departments, archaeologists, workers and guards in charge of Phnom Kulen sites, and provides assistance and advices to improve the heritage management of the archaeological sites.
In 2024, ADF has advised for the temporary reinforcement with sandbags the north-east angle of the Poeng Eisei pond's steps. It was done by ASPARA guards in June 2024. ADF provided pictures during the ADF-APSARA excavations in 2010 and advices for this operation.

In July 2024, the ADF team was informed of the partial destruction of one of the ancient mounds at Anlong Thom school by the students, under the supervision of the principal. ADF visited the site and with the representative of APSARA and the village chief and informed the school principal to stop its destruction. A short report ("Report on ancient mound partial destruction, Anlong Thom school, Anlong Thom Village, Svay Leu District, Phnom Kulen National Park. JB Chevance, July 2024") was addressed to APSARA to summarize the events and plan for conservation measures in the future. This event brings to light the problematic of the conservation of these sites, often considered as "non important" as only made of soils, in the context of the recent development, private or public, and in relation to the new road in Phnom Kulen. ADF recommended two immediate measures, information signboards (design and location) as well as public meetings with local authorities and villagers, to mitigate these destructions. However, and on the longer term, stronger measures could be taken such as zoning and ban on building.

ADF and APSARA also exchanged on conservation issue for the anonymous temple close to the 1000 linga, Prasat Anlong Thom, Prasat Pram, Prasat Rup Arak and Prasat O Paong (under restoration by APSARA in 2024 and with documentation provided by ADF).

Restoration of sandstone, ceramic and metallic artefacts

No ceramic or metallic artefacts required restoration/conservation in 2024.

Archaeological protected areas (APA)

The main objective of the APA is to protect the immediate environment of the archaeological sites in Phnom Kulen from damaging agriculture practices, including deforestation and uncontrolled fires and erosion. The LiDAR previous campaigns (2012 and 2015) allowed identification of archaeological sites and allowed to build awareness towards the population and the local authorities, on their cultural heritage and the natural environment.

After the 2017 assessment of each zone, ADF reminded APSARA National Authority to replace the broken posts demarcating the areas and submitted a report in Khmer to APSARA on the 1st of October 2017. It summarises the number of broken (or missing) posts for each zone. A total of 45 should be replaced, as stated in APSARA-ADF MoU, signed at the end of 2017.

So far, and considering the time passed since this first assessment, ADF consider it should be updated and some posts and signboards replaced. As the last MoU between APSARA and ADF states, the costs for these replacements should be covered by APSARA. This project will be reinitiated in 2025.

After their official recognition by the APSARA, the Ministry of Environment and the provincial authorities of Siem Reap (May and June 2015), these zones still need a jurisdictional framework and a clear definition of the responsible authority. Presently, the APSARA National Authority, in charge of the archaeological sites in Siem Reap Province, manages them. Their exact status was not defined within the framework of the zoning of PKNP, which was adopted in April 2024 by the MoE.

An additional APA (799 hectares demarcated) was demarcated in 2019 within the UNDP-BESD project around the Prasat Krohom 1 and 2 temples, the dike Thnal O' Srae, and a group or earth mounds, north of Khlah Khmum village. The total of all APA overs 1600 hectares.

b. Archaeological research, diffusion/communication and training:

Archaeological Excavation campaign and topographical survey, archaeological research:

Excavations

ADF archaeological research is focusing on the ancient settlements in Phnom Kulen to better define them, from the early capital of Mahendraparvata (late 8th-early 9th century) to later ones during the angkorian and post- angkorian periods.

Among the most important sites of these periods are the rock shelters where hermits settled and sometimes left bas-reliefs, inscriptions and traces of wooden architecture (10th to 13th century). Some of these results were published in 2015, in the journal Aséanie, (« Pœng Tbal et Pœng Eisei, ermitages angkoriens méconnus du Phnom Kulen », Aséanie 32, Décembre 2013, p. 11-76). These excavations, the first undertook for these types of sites in Cambodia, indicated their dates and revealed their importance with associated wooden architecture and hydraulic features. Numerous artefacts were also unearthed, including an important volume of ceramic sherds. Their function was also extended to pilgrim sites, and, eventually, meditation centres and funerary use.

In this perspective, ADF team signed in 2022 an agreement with the École Française d'Extrême-Orient (EFEO) to undertake a common excavation (funded by EFEO) at the Poeng Ta Roet rock shelter site, located on the eastern slope of Phnom Kulen. After the demining of the site, the excavation took place from mid-March to mid-April 2022, and the trenches were filled in May 2022.

The archaeological diagnostic was done with 6 trenches opened close to the rock shelter, bas-relief and the source, and a few meters away on the slope. They covered a total surface of 1694 square meter. The trenches stratigraphy allowed to understand the settlement of the site, its spatial use and its abandonment. Ceramic sherds, charcoals and soils samples were collected for studies and analysis. A complementary rubbing of the K.172 inscription allowed to record it entirely as a line was omitted and several other inscriptions were discovered (K.1574) or rediscovered (previously photographed inscriptions K.1323 and K.1569) and registered. Several sandstone fragments of sculptures and bas-relief were also discovered (bas-relief fragments, grinding table, pedestals, sandstone basins and deposit stones).
During the year 2023, the complete excavation report was written by Ms Chloé Chollet, under the supervision of Dr. Dominique Soutif and Dr. JB Chevance. It was finalised in early 2024 and sent to the APSARA Authority on the 26th of April 2024.

Specialised studies

ADF previous excavations (from 2008 to 2018) provided numerous data. They constitute an ongoing database for ongoing studies and future publications about these sites. More specialised studies with artefacts excavated from these campaigns will be undertaken in the coming years with ceramics and radiocarbon studies.

Archaeometallurgy
Mr. Eng Tola, PHD student since 2022 focusing on ancient Khmer iron archaeometallurgy, is associated with ADF to study the metallic slags from ADF excavations at the Phnom Kulen royal palace (Banteay/Pteah Kruh Chas) in 2010 and 2018. Mr Heng Tola, is under the supervision of Ms. S. Leroy and Ms. C. Robion-Brunner at the Université Toulouse Jean Jaurès (France). He has been making progresses into the classification of the slags from the Royal Foundry at Angkor Thom and comparison with other sites, such as Banteay.

Phnom Kulen Hermit sites
Systematic surveys of 36 hermit rock shelters/sites in Phnom Kulen were implemented in January and February 2024, over a period of 12 days, by JB Chevance in the framework of Ms. Chloé Chollet PhD (École Pratique des Hautes Études (EPHE)-PSL/EFEO and member of the DHARMA project) and ADF's research on these sites: Pœng Preah Pram Preah Ang, Pœng Dap Choun, Pœng Chhat Moha Russei, 1000 lingas river postholes and basin, Pœng Sampan, Pœng Eisei n.2, Pœng Ta Som, Pœng Ta Suot, Pœng Preah Rup, Pœng Tuk Choa, Vat Preah Bat Buon Than, Pœng Preah Chup, Pœng Balang, Pœng Keo Nama, Pœng Ta Has, Pœng Tuk Preah, Pœng Yey Chan, Vat Chas, Pœng Bay Or, Pœng Preah Put Kraom, Pœng Chat, Vat Preah Kral, Pœng Prichiou, Neak Ta Dek Phaeng, Pœng O Top, Pœng Eisei n.3, Pœng Teuk Boun, Pœng Roung Khla Kone, Veal Gok Chen, Pœng Balang, Damrei Puoh/Krap, Pœng Ggnogneat, Poeng Ta Khab, anonymus Pœng, anonymus Pœng close to Prasat Chup.

An important documentation was gathered, mostly photography and notes, which will be analysed and presented into Ms. Chloé Chollet PhD, but also used for conservation measure with APSARA National Authority.

LiDAR mission in Thailand and Indonesia.
In 2024, ADF director was invited by the Ecole Française d'Extrême-Orient (EFEO) to participate in two missions in Thailand (Sukhothai, Kamphaeng Phet and Si Satchanalai from 25th of May to 1st of June and from the 3rd to the 7th of September 2024) and two others in Indonesia (Mount Penanggungan and mount Welirang, East Java from 13th to 21 July and 21st to 29th of September 2024), at no costs for ADF.

The objective was to bring ADF's expertise of Lidar, in particular field verification and identification of archaeological features under tropical forest cover, for these various archaeological sites, in the framework of the Archaeoscape.ai project, a European Research Council Grant (#866454) to EFEO.

Several field verification surveys pre- and post-acquisition were done with the local partners and on the 15th of July, in Indonesia, JB Chevance gave a lecture ("Lidar & Cultural Landscapes, Phnom Kulen / Cambodia; Recent results of Lidar acquisitions and field verifications") to the different Indonesian partners (BRIN and BPK) at the Ubaya Training centre from the University campus in Trawas.

Diffusion of the archaeological research and communication:

Publications
For the next publications, ADF team is focusing on the ceramic of the Royal Palace from the 9th century's capital, Kbal Spean and the 1000 linga sites, Rong Chen mountain temple and the ancient mound fields.

Communications/outreach

On the 12th of March 2024, ADF director gave an online lecture entitled "Phnom Kulen: de l'exploration à la recherche" within the seminar co-organised by the Sorbonne University (Faculty of Arts, Department of Art History and Archaeology) and the École française d'Extrême-Orient, for the Academic year 2023-2024.

On the 14th of March 2024, ADF director presented ADF activities to the 38th technical session of the International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor (ICC-Angkor). ADF director also attended the 39th technical session on the 11th and 12th of December and the 31st plenary session on the 13th of December 2024.

On the 13th of June 2024, ADF director gave a lecture at the Siam Society in Bangkok, entitled "Debunking the myth of a lost city: Mahendraparvata on Phnom Kulen", in the framework of "The Archaeology of Sites and Landscapes" seminar, in honour of our late college Dr. Damian Evans entitled, co-organised by the Siam Society and the École française d'Extrême-Orient.
ADF team regularly update our website (www.adfkulen.org) and our Facebook page where the last pictures and short texts of our main activities are shared (www.facebook.com/adfkulen).

Training of Cambodian archaeologists

The collaboration between the APSARA Authority and ADF archaeologists provides a platform for field training to the APSARA local staff (archaeologist and local workers) during all activities (excavations, surveys, APA surveys and management, site management…).
However, since there was little field activity in 2024, this training component was limited to regular exchanges on the conservation issues for several archaeological sites.

DEVELOPMENT:

Overview:
Since its conception, ADF has closely linked the two main components of its action, archaeology and development. The population of Phnom Kulen, beneficiaries of the development activities, particularly suffered from the darkest chapter in Cambodia history and civil war, since this area was a Khmer Rouge stronghold in the early 1970's and until 1997.

The side effects are still tangible today with little public infrastructures, difficult access to education, healthcare, nutrition and sanitation facilities, difficulties to bring products to market, low resources from the governmental bodies (Health dpt, Education dpt, Police, Ministry of Environment…). Some of the schools are facing an important turn over as qualified teachers are reluctant to work in Khnong Phnom commune, and facilities are poor as compared to other communes in Siem Reap province. This results in inadequate education for the children. There is only one secondary school and one health centre for nine villages of the commune (5,056 inhabitants in February 2024, Khnong Phnom data).

For a significant percentage of this population, peace and stability is enough and they don't see the need for further change and development. Breaking the poverty cycle in any context is challenging. For this population located on a plateau with a difficult access to some of the villages, it is even more problematic. A proportion of the population in Khnong Phnom commune live in extreme poverty or poverty, surviving on 'day to day' bases. Others are now wealthier thanks to the illegal cultivation of cashew nuts.

Seasonal food shortages continue to affect some of the population of Phnom Kulen. The ramifications of food shortages are numerous, the most notable being family health and wellbeing. Sickness exacerbates the multitude of issues that poor families have to endure, further interning them into the poverty cycle. A proportion of the poorest population is suffering from the lack of liquid assets. They are subsistent farmers and have little to no money to buy the necessities: soap for hygiene, fundamental household materials, or material to build or fix their dwellings.

However, the road built between 2017 to 2022 from Svay Leu to Preah Ang Thom village, on the east side of Kulen, has changed this general dynamic. The southern villages of Anlong Thom, Thma Chruogn and Ta Penh are now accessible by car. Tourist (national or foreigners) can now visit these villages and the archaeological sites nearby. The C-19 pandemic halted all international tourism in Cambodia, international tourism slowly started again in 2022 and many Cambodians are now visiting national parks and sites in their country. In December 2024, the section of this new road from Svay Leu to Preah Ang Thom was achieved but not the western section, controlled by a private company who benefits a tourism concession. This second section, from Preah Ang Thom to the western checkpoint of the park could start in a second phase. The northern villages (Popel, Khlah Khmum and Sangke Lak) remain isolated with a difficult access road. They now benefit, apart from Popel, of an access from Anlong Thom village.

Other government bodies, for example the Ministry of Environment (MoE) and the police, have limited resource. The result is a lack of law enforcement, illegal logging, poaching, illegal building, a general depletion of the environmental natural recourses, which are having serious consequences for the water of Angkor Park and Siem Reap town, as Phnom Kulen is the natural water tank of the region.

For the last 30 years, Phnom Kulen National Park faced a very important deforestation mostly due to the slash and burn practice, combined with the illegal cultivation of cashew nut. Illegal logging of large trees and hunting are still observed. However, and for the last few years, ranger patrols have been more active, and these practices have reduced, at least in the southern part of the plateau, where the population is concentrated. However, in the northern part of the park, these illegal practices are still very much observed.

Under the development program, ADF has set up four main components to address these issues: 1) Income Generation/alternative livelihoods, 2) Hygiene and sanitation/Emergency Relief, 3) Educational support, and 4) Environmental component.

They are all tailored-made to the Phnom Kulen problematic and are implemented in coordination with the Khnong Phnom Commune Development plan, the Ministry of Environment, the APSARA National Authority and the local authorities (Svay Leu District and Khnong Phnom Commune).

The 2024 activities are presented below.

c. Income generation /Alternative livelihood program

This component falls under the IADA 2 project, implemented since 2019 in partnership with Agrisud-International NGO, in the Khnong Phnom commune. The donor for ADF's contribution was Terre Cambodge travel agency until April 2022. While the IADA 2 project was extended for 3 more years from May 2022 (with the IADA 3 project) by Agrisud, ADF secured funds from the Southeast Asia Foundation for the extension of our contribution, with a project entitled ALIVE ("Alternative Livelihood for villagers in PKNP"). The following reports presents the results from May 2024 to April 2025.

The objective remains the same as the previous years: to enhance and develop alternative income generation activities, with the purpose of encouraging the Phnom Kulen population to move away from their current unsustainable, illegal and destructive practices (monoculture of cashew nuts and slash-and-burn) to sustainable and environmentally friendly income generation activities. Even though this practice in forbidden by the MoE since 2019, this activity represents the main alternative option on Kulen plateau. As behaviour change is a process taking time, this component must aim towards positive examples and repetition. It is therefore one the most challenging component of ADF within the development component.

As of April 2025, a total of 256 farmers is effectively in agroecological transition (including 50 farmers who have combined activities and varieties (black ginger, pepper, pig, chicken, and/ or fruit trees). At the end of year 2, the project was supporting 283 farmers. The decrease of 27 beneficiary is explained by farmers who discontinued but overall, the number of activities per beneficiary has increased as some farmers are implementing 2 activities from 2025 (black ginger + chicken raising), and there are 21 families who started by themselves black ginger production.

Animal raising alternative livelihood project

Reminder: As for the previous years (since 2010), ADF continued in 2024 the support to local communities and villagers from Khnong Phnom commune. ADF propose technical assistance and materials for the families to undertake animal raising (chicken and pig). This was completed by families reached by the other related project started in 2019 (ADF/ AGRISUD project; see below).
In 2024, ADF IG team continued to monitor these animal raisers and their incomes, and provided material if needed (piglets and chicks, nets, nails, cement, bricks, water tanks and feeding tanks).

ADF also invited veterinarian (from the Agriculture Dpt, Svay Leu District) to monitor pig farmers and to vaccinate the animals 3 times per year for each farmer.

With the objective to transform these producers into independent local entrepreneurs, ADF encouraged them to contribute with their incomes to the costs. This allows taking ownership for their business, ensuring sustainable alternative incomes. Beneficiaries were previously asked to repay back to ADF's IG accounts 50% of the amount spent for the materials and equipment they received from ADF. From January 2019 to December 2020, ADF applied the 75% rate for the reimbursements, to encourage the beneficiaries to be responsible. As in 2022 and 2023, ADF collected in 2024 these reimbursements on a 50% rate again as most of farmers had difficulties to pay back a higher rate. They were collected from pig farmers, only when they get benefit for this source of income.

Pig Raising Activity:
This activity has been going on for some years and is a core component of ADF's alternative livelihood project. We currently have two groups, as ADF starting this activity with the prior UNDP funding in 2019 and funding support from the SE Asia Foundation from May 2022 to April 2025. The ADF team monitors the pig raising activity to ensure that the conditions are favourable, including hygiene, health, and food.

In May 2024, the first group of pig raisers remained 22 families from 5 different villages in Khnong Phnom Commune: 9 in Sangke Lak, 1 in Anlong Thom, 1 in Ta Penh, 6 in Khlah Khmum, and 5 in Popel village.

The second group of pig raisers initially funded by UNDP in 2019/ 2020 and of 27 pig raisers (21 in Khlah Khmum village and 6 in Anlong Thom village), has dropped progressively from 27 in 2021, 23 in February 2022, 18 in May 2022, 19 in August 2022, 17 in October 2022, 15 in February 2023, to 13 families in May 2023, and to 7 families in May 2024 (5 in Khlah Khmum village and 2 in Anlong Thom village). This was largely the result of an infection in the villages, lack of long-term vision, and financial resources lacking from these villagers. The total of pig raisers from both groups in May 2024 was therefore 29 families.

The owner can have piglets, when the adult female pig can mate, but the pig raisers who are in need of immediate cash frequently sell it before they have piglets. To ensure that the existing pig raisers are not giving up during the report period, the ADF team continue to encourage families to build cages, organize vet's visits, and record pig raisers' expenses.

In 2024, there were 4 families who failed to successfully raise pigs, or the animals died within the reporting period. Even though, the ADF team had provided the family with vaccinations and disinfectants, the animals became sick and eventually died, and the families simply gave up once they are unable to raise pigs or the animal died. 5 more families have decided to discontinue pig farming activities after paying their share contribution to the project for its sustainability in 2024.

In September 2024, 5 new families requested to join the pig raisers group, and in February 2025, 1 new family requested to join the pig raising group. The project supported them with pigs, materials to build the pig pen, pig raising technique, vaccination, and disinfectant inside pig pens.

In March/April 2025, the ADF team distributed 4 packs of vitamins and medicines to all pig raising families. The total of pig raisers from both groups in April 2025 is therefore 25 families.

Chicken Raising Activity:
In April 2024, the total number of chicken raisers was 10 families in 4 villages: 1 in Sangke Lak, 4 in Thma Chruogn, 3 in Anlong Thom, and 2 in Khlah Khmum village.

To ensure that the existing chicken raisers are not giving up, during the report period, the ADF team continue to encourage families to build cages, organize vet's visits, and record chicken raisers' expenses.

In July 2024, there were 3 new families who requested to join the chicken raisers group (1 in Thma Chruogn, and 2 in Khlah Khmum village).

In September 2024, 5 new families requested to join the chicken raisers group (1 in Sangke Lak, 1 in Ta Penh, 1 in Thma Chruogn, 1 in Anlong Thom, and 1 in Khlah Khmum village). ADF provided the new families with male and female chickens, chicks, materials to build the chicken pen, chicken raising technique, vaccines, and helped them with vaccinations.

In 2024, 2 of the chicken raisers lost their chickens: one family's chicken died, while another's family, their chicken got stolen. However, if we receive further funding from our donor in 2025, ADF will continue to support them in buying more chicken.

During the reporting period, 3 of the chicken raisers discontinued their chicken raising activities since all the animals died and they did not want to continue with the project.

In May 2024, the ADF team vaccinated chickens for 4 chicken raising families (3 in Thma Chruogn and 1 in Anlong Thom village), totalling 228 chickens.

In March/April 2025, the ADF team distributed vitamins and chicken medicine to 6 chicken raising families. Vitamins, eye drops, and diarrheal medications are all included. Track and record income and expenses are recorded in every chicken farmer's book.

In April 2025, the total number of chicken raisers is 15 families in 5 villages: 2 in Sangke Lak, 1 in Ta Penh, 5 in Thma Chruogn, 4 in Anlong Thom, and 3 in Khlah Khmum village.

AGRISUD and ADF joint-project in Khnong Phnom Commune (IADA-3), agriculture alternative livelihood project

Reminder: The partnership between ADF and AGRISUD International started in may 2019 with a signature of a Memorandum of Understanding and the beginning of the field activities. AGRISUD International is active in Cambodia since 1995 on supporting family farms to improve their activities for a better and sustainable livelihood. The project "Agroecological and diversification family farming in peri-urban of Siem Reap Province" (IADA-2) started in May 2016 supporting 820 small agricultural family enterprises to help them increase their income and living conditions.

The concept developed with ADF and AGRISUD was to expend this project to more beneficiaries offering various alternatives to the population, adapting it to the commune of Khnong Phnom specificities, and including ADF existing direct beneficiaries.

The partnership of both organizations commenced in June 2019 with a joint rapid assessment, closely followed by an introduction and dissemination meeting in the 5 legal villages of Anlong Thom, Thma Chruogn, Ta Penh, Sangke Lak and Khlah Khmum. The main purpose of the village meetings was to explain to the existing beneficiaries and the potential new beneficiaries the partnership of ADF and AGRISUD, the benefit of the new synergy of the combined experience of both organizations, and finally the strategy for new agriculture / IG activities. The agreement between ADF and AGRISUD consists in a partnership where both organisations join their funds in the same project. ADF continues to pay for the costs of ADF IG component (salaries of both Ms. Mien Mout and Ms. Bis Cheung, their operational cost: transportation costs, monitoring / reporting costs, stationery, material for ADF beneficiaries, etc…). AGRISUD covers their staff operational costs, all material for the new 120 families, and AGRISUD staff salaries. AGRISUD benefits from ADF's extensive knowledge of Phnom Kulen National Park (PKNP), its population and their local agricultural habits, the local network of influential people and local authorities (village chief, Commune chief), the provincial authorities and the national authorities (Ministry of Environment, Provincial Department of Environment and APSARA National Authority). ADF staff gains in professionalism, learning from AGRISUD long experience in this field of agro ecology, from the producers, to the group then to the market linkage. The beneficiaries will benefit with AGRISUD approach of organizing the farm families into groups / cooperatives, with prospective new products: black ginger, premium fruit trees and pepper. These new products have a higher value per kilogram, and markets in Siem Reap and Phnom Penh are willing to purchase them. The project aims to set up a marketing chain, from the family to the market.

From 2022, the agricultural production of family farms was strengthened and diversified. 130 new beneficiary farmers from Khnong Phnom and Banteay Srey communes were trained and supported to intensify and diversify their agroecological production system in pig raising, market gardening, spices and fruit crops. 202 farmers from Khnong Phnom commune supported in the previous phase (IADA 2) were supported, diversified and strengthened through master farmers and socio-professional organization. 332 farms in total are effectively in agroecological transition.

Black Ginger and ginger growing Activity
Black ginger is a seasonal crop. Growing techniques are similar to those used for other species such as ginger, turmeric, and galangal. The growing season runs from April to May, while the harvest season lasts from November to January. The only requirement is to grow the black ginger at an elevation of 350 meters above sea level. It grows nicely in sandy soil that is not wet, and the soil is not waterlogged. It can be grown in the shade of trees, particularly cashew nut trees.

To ensure that the black ginger growing activity by the families in Phnom Kulen is successful and sustainable in the future, from 2020, the ADF/AGRISUD team assisted the farmers from the 5 villages in establishing a group of producers and a group of transformers under the official names of "Phnom Kulen Black Ginger Producers Group and Kulen Mountain Spice Drying Group", as well as a group of Master Farmers (MFs) who play an important role as trainers to help train all the farmers on needed techniques.

As of 2024-2025, Phnom Kulen Black Ginger Producers Group has 110 members (73 women). The Phnom Kulen Black Ginger Producers Group has grown from 102 to 110 since 8 families that growing fruit trees have also begun to plant black ginger in 2025 and joined the group. As of 2024-2025, the Kulen Mountain Spice Drying Group has 13 members (12 women). As of 2024-2025, the Master Farmers has 15 members (4 women).

At the beginning in 2022, 102 families, including 64 women, grew black ginger in 5 villages: Sangke Lak (13), Ta Penh (12), Anlong Thom (49), Thma Chruogn (12), and Khlah Khmum (16). In early 2023, 11 families gave up or did not grow due to issues such as plant rot or a lack of suitable ground. The remaining 91 families continued to grow black ginger. In late 2023, 24 other families also gave up or did not grow due to similar issues, leaving only 67 families growing black ginger. Among the 67 families, 56 families successfully harvested the black ginger in January 2024, whereas 11 other families failed to grow or had no harvest.

In March/ April 2024, among the total families of 102, 97 families continued to grow black ginger, which means that 30 of the 35 families that gave up or did not grow in early and late 2023 have resumed this activity, with only 5 families did not grow due to the same issues as previous years (plant rot or a lack of suitable ground to grow).

In April 2024, the ADF/ AGRISUD team have selected 7 families from among the 97 who volunteered to grow black ginger (3 in Sangke Lak, 1 in Ta Penh, 2 in Thma Chruogn, and 1 in Anlong Thom) to experiment with a planting technique in plastic bags. This year, we did not need to distribute black gingers to the 7 families for experiment with a planting technique because each family had enough ginger to grow on their own. The team assisted 4 families in preparing land for the planting of black ginger (a total of 310 bags), while 3 other families did it on their own.

For the year 2024, the ADF/ AGRISUD team did not need to distribute the black ginger to the 97 families who continue this activity because they planted the black ginger with their ginger seeds to grow, and / or the Phnom Kulen Black Ginger Producers Group had enough ginger seeds to lend to the families that did not have enough ginger seeds.

In December 2024, the ADF/ AGRISUD team collected data on black ginger growing in 5 villages (Sangke Lak, Ta Penh, Anlong Thom, Thma Chruogn, and Khlah Khmum). There were 75 families who still had ginger growing on their farms, and the total amount of black ginger collected was estimated to be 1,600 Kg. At the same time, the team also discovered that the number of 22 families did not grow due to issues such as plant rot or a lack of suitable ground, and the ginger was devoured by cows or pigs.

75 families successfully harvested black ginger in late 2024 and early 2025, yielding 1,478.5 Kg and earning a total of 20,994,700 riels (5,248.675 $). This figure represents the total amount that the Kulen Mountain Spice Drying Group bought from farmers for processing; however, the ADF/ AGRISUD team believed that the actual harvest of black ginger may have been greater than the provided figure because some of the families sold gingers to wholesalers who paid a higher price.

In late 2024, 4 out of the 7 farmers that grew black ginger to experiment with a planting technique in plastic bags achieved good productions, while the other 3 families achieved a lower production. The ADF/ AGRISUD team recommended that farmers who grow black ginger should start practicing this planting technique more frequently and/or start to grow ginger on shelves/terraces to reduce insect damage. The ADF/ AGRISUD team also advocated the usage of cement shelves/terraces for black ginger planting among farmers in the 5 villages. As a result, in early 2025, farmers from 4 villages (25 families) requested cement shelves/terraces for planting black ginger (3 families in Khlah Khmum; 4 families in Sangke Lak; 3 families in Thma Chruogn; and 15 families in Anlong Thom village), equivalent to 124 cement shelves/terraces for 30 million riels (7,500 US$), for which the AGRISUD project will provide 15 million riels (3,750 US$). 50% of these costs are covered by AGRISUD and the other 50% by each farmer.

On January 14th and 15th, 2025, the ADF and AGRISUD conducted a data collection on Kulen mountain to monitor economic data and farmers' technical practices in 2024. They observed farmers' improvements in their practices, including less root rot and better harvest yields. However, challenges arose when villagers' livestock destroyed some black ginger crops, causing partial or near-total losses for some farmers. Interviews revealed high demand for black ginger this year, leading many farmers to reserve harvested crops for replanting in the next cycle to ensure a successful season. The data collected provides both quantitative and qualitative insights into the farmers' practices and the economic impact of the cultivation of 2024.

In March/ April 2025, 23 families requested to borrow 100 kg of black gingers to grow in the next season from the Phnom Kulen Black Ginger Producers Group.

In March/April 2025, among of the 102 families who joined the black ginger growing activity in the previous years, the number of families who continue growing the black ginger reduced to 53 families (estimate about 500kg= 17,000 square meters), However, based on data collected by the ADF/ AGRISUD team in early 2025, the project impact is positive because 21 families who were not supported by the project in previous years have begun to grow black ginger by themselves with their own ginger seeds following the project model (approximately 296kg, 9,866.67 square meters). Furthermore, of the 126 families who benefit from the fruit tree growing activity, 55 families begin to grow black ginger as well (approximately 513kg, 17100 square meters), and 3 families from the chicken and pig raising groups begin to grow black ginger as well in 2025. By April 2025, there are 111 families growing black ginger.

Challenges/ constraints
It is difficult to gather some farmers to come together for meeting or even sometimes the team struggle to meet them at their homes, especially for communication purposes. Some farmers are not following the technical advice from the trainer and agricultural project staff. Some farmers spend a significant amount of time in the forest collecting non-timber forest products, cashew nut plantations, and labouring, among other things. When the short dry season in the rainy season occurs, farmers don't provide water to the black ginger, so it struggles to develop. The project staff's techniques are more limited for the black ginger production as it is growing on the mountain, on a larger scale than previously, with high acidity of soil, erosion of soil, and this protected area).

Black ginger is a type of root tuber that cannot be grown in the same plot, and needs to be rotated year by year. There is no fence to protect the animals from destroying the crop (cows, pigs and chickens, etc.).

Next plan
Strengthen the capacity of the Master Farmers to follow up with the farmers more frequently; Introduce new techniques to all beneficiaries for planting black gingers on cement shelves/terraces and plastic bags / cement/rice bags; Encourage the farmers to build fences to protect from animals (cows, pigs, chickens); Continue cooperation and resolve challenges between farmers, producers, and the team; Project team will continue research to find new techniques to solve the problems.

Pepper/Long pepper/Vanilla growing Activity
In May 2024, 13 families grew pepper and long pepper (10 in Anlong Thom, 1 in Thma Chruogn, and 2 in Sangke Lak), with other 2 families grew vanilla vines (1 in Anlong Thom and 1 in Sangke Lak).

The ADF/ AGRISUD team supervises, monitors, and provides skills to farmers growing pepper, long pepper, and vanilla vines, as well as distributing fertilizer.
During this report period, the number of families who still growing pepper, and long pepper has decreased to 8 families, while 5 other families' peppers have perished or stopped growing.
In April 2025, 8 families growing pepper and long pepper (5 in Anlong Thom, 1 in Thma Chruogn, and 2 in Sangke Lak), with 2 other families growing vanilla vines (1 in Anlong Thom and 1 in Sangke Lak).

Fruit Tree Growing Activity
In March/April 2024, 126 families planted and grew fruit trees orchards in five villages (27 in Sangke Lak, 24 in Ta Penh, 22 in Thma Chruogn, 48 in Anlong Thom, and 5 in Khlah Khmum).
In April/May 2024, the ADF/ AGRISUD team collected data on seedlings damaged during the dry season from 14 families in 3 villages (4 in Thma Chruogn, 8 in Anlong Thom, and 2 in Khlah Khmum village). The team discovered that a shortage of water caused many fruit trees to die and also the fruit trees eaten by cows.

For all the 126 families growing fruit trees in 5 villages, master farmers also assist in providing ongoing training on how to prune the tree branches.

The ADF/ AGRISUD team is supporting, observing, and providing techniques to farmers who are growing fruit trees throughout the duration of the project.

In April 2025, the number of families growing fruit trees in five villages remained unchanged (126 families): 27 in Sangke Lak, 24 in Ta Penh, 22 in Thma Chruogn, 48 in Anlong Thom, and 5 in Khlah Khmum; however, 21 families among them have begun to grow back ginger after seeing that the market price for ginger is better.

For this activity, ADF and AGRISUD will continue to follow and support these 126 farmers. The team will monitor and promote additional techniques for fruit farmers and will distribute fertilizer for fruit trees.

Overall and for the beneficiary in the Khnong Phnom Commune, 256 farms benefit from management advice and their income is improved: 126 fruit tree farmers, 8 pepper and long pepper farmers, 2 families planting vanilla vines, 25 pig raisers, 15 chicken raisers, 97 of the 102 black ginger farmers benefit from their farms. 5 families successfully harvested black ginger in late 2024 and early 2025. 1,478.5 Kg of black ginger and earning a total of 20,994,700 riels (5,248.675 $).

The 102 black ginger farmers are divided as below.

5 farmers' families gave up or did not grow black ginger in March/ April 2024 and other 22 farmers gave up or did not successful grow black ginger at the end of 2024, and 75 families successfully harvested black ginger in late 2024 and early 2025. 21 families who were not previously supported by the project have begun to grow black ginger in 2025 on their own, using the project model (about 296kg, 9866.67 square meters). 55 families (out of 126 who benefit from the fruit tree growing activities) begun to grow black ginger as well in 2025 (about 513kg, 17100 square meters). 3 families from the chicken and pig raising groups begin to grow black ginger as well in 2025.

In 2025, there are 111 families growing black ginger, 126 fruit tree farmers, 8 pepper and long pepper farmers, 2 families planting vanilla vines, 25 pig raisers, 15 chicken raisers. Numerous training sessions and weekly follow up of the farmers and animal raisers.

Master Farmers (MFs) and Socio-professional organisation (SPO)
Meetings, technical and educational training, networking workshops and visit exchanges are used to give support to Mater Farmers (MFs) and Socio-professional Organizations (SPO).
During the reporting period, the Monitoring and Evaluation team did not implement the "OSCAR tool" since AGRISUD had already established the database excel sheets, which were used efficiently for data collection and evaluation. Furthermore, the team also uses an online data collecting app/ tool called "KoBo toolbox" for the team to fill out the information online after they utilised "Beneficiary monitoring database" and "Production monitoring database (techno-economic monitoring)".

The number of families/farms monitored by MFs and SPOs was lower than expected. The aim was for the ADF/AGRISUD team to be able to monitor around 5 families/farms in one day. As a consequence, during a typical farm visit, the team monitored around 3 families/farms, and the team occasionally struggled to meet them at their homes. Furthermore, calls by farmers for support from our MFs and SPOs have been also decreased since some farmers spend a lot of time in the forest gathering non-timber forest products, cashew nut maintaining, collecting and labouring according to the season.

The objectives of the Khnong Phnom commune's market production were not met due to technical difficulties in producing black ginger. During the project's preparation phase (year 1:2022-2023), black ginger producers' margins were negative or nearly zero. After one year of the project's implementation (year 2: 2023-2024), farmers were mostly working on adapting techniques. During the report period (year 3: 2024-2025), technical adaptation for the farmers is getting better with sufficient result.

Based on this year data collection of economic results, the average annual income of the black ginger activity was calculated from the technical and economic monitoring of the 102 black ginger farms. Among them, 97 farmers continued to grow, 5 farmers gave up; and among the 97 farmers, 75 framers successfully harvested, and 22 farmers did not successfully harvest. Therefore, it is possible to estimate the annual average income.

The average income per farmer in Khnong Phnom commune (only for black ginger farmers) was $101 per year. In comparison to the previous year's report (year 2 - 2023-2024= $125), there was a little decrease in average income per farmer despite adequate crop results for black ginger due to crop rot and animal eating the crops (cows, chickens, pigs, etc.). The income from fruit production in Khnong Phnom commune is not yet known, as the support consisted of supporting the establishment of orchards that haven't come into production, given the fruiting time of many of the species planted.

Over the entire project length, the ADF/ Agrisud team and MF is monitoring, providing training and techniques to farmers who are raising pigs, chickens, growing black gingers, peppers, vanilla, and fruit trees (256 farmers).

The socio-professional organisations (SPO) consolidated their governance and adapt their operating methods to develop their capacity to provide services to family farms. The SPO networks of master farmers and technical advisers are service providers to farmers. The interprofessional workshops are biannual and bring together all the players in the sector concerned: farms, collectors, input sellers. They aim to share information about market demands based on figures and trends of the last season. Meeting restrictions made it impossible to organize only 3 interprofessional workshops out of the 6 planned. The support for the development of the activity of Green Farmers Siem Reap Association involves advising its managers, networking actions and the organization of exchange visits.

The Green Farmers Association adapts to changes in demand for agricultural products to secure marketing on the markets. The marketing of agricultural products is improved by a better integration of producers into local sectors. Stable relationships are established between producers and buyers, and new outlets are identified for local products. Local products are promoted to local consumers and tourists.

The multi-actor dynamics initiated at the provincial and commune level lead to the implementation of concrete actions allowing the development of territorialized food systems. These last activities were mostly implemented by Agrisud International team.

A total of 277 families (over 20% of the Khnong Phnom commune's population in Phnom Kulen National Park- PKNP) adopted agroecological principles to generate income and reduce pressure on the park's natural resources. The project is linked with other ADF projects, such as law enforcement support, zoning and demarcation of forested areas, and reforestation, to better protect the PKNP. The project helps to increase the knowledge of the importance of a protected biodiversity for the local population of PKNP through environmental education, ecotourism (community-based tourism centres and handicrafts support), tree nurseries, and reforestation. The project offers an alternative livelihood for local populations, generating sustainable income without deforestation. It also addresses environmental issues by developing agricultural systems to preserve resources and intensify cropping. Agroecological practices improve system resilience and adaptation to climate change. The project promotes carbon sequestration in aerial and underground biomass and increases soil organic matter through fertility management with organic inputs.

Administration, trainings, coordination, visits
The signature of the contract between the Ministry of Environment (MoE), ADF, and AGRISUD International Cambodia for the rental of "Kesorkol product center " store on the foot of Phnom Kulen is slow down at the ministry level. This is due to the changes made in the ministry's teams, after the nomination of a new Minister.

On the 15th of May 2024, the ADF/AGRISUD team collaborated with the Khnong Phnom Commune Administration to organise the Environment Day, attended by 149 persons (95 women) including the Commune Council, Police officials, APSARA Authority guards, MoE Rangers, villagers, teachers and students.

From 16th - 17th July 2024, the ADF/ AGRISUD team held a TREE NURSERY MANAGEMENT training course at Sangke Lak primary school, Khnong Phnom commune, Phnom Kulen National Park to enhance and improve the technical skills of 25 participants (9 women) from community protected area members, park rangers, teachers and students, the ADF team, and the AGRISUD technical team.

During July 2024, the ADF/ AGRISUD team organised a training on fruit tree growth techniques, composting, natural pest control, and pruning tree branches for master farmers and families planting fruit trees. 39 people (29 women) attended this training. The team also provides regular support to all farmers.

On the 24th of August 2024, the ADF/ AGRISUD team hosted a visit to the production site of black ginger, pepper, coconut, as well as handicraft weaving and blacksmithing in with Kulen Crafts products. The visitors included the Siem Reap tourism club association, Cambodian chef association, Department of Commerce, and journalists. They also had the opportunity to participate in the Anlong Thom Community Based Tourism Center's tour program and process black ginger. The event included tasting traditional meals prepared by a community cooking group utilising wild vegetables such as *Chong Som vine* and *Chong Dambang* vine.

On the 3rd and 4th of September 2024, the ADF/AGRISUD team visited black ginger farmers on Kulen mountain to assess crop conditions. They found that heavy rains and improper livestock management caused some crops to rot or be eaten by animals. The team also monitored income, expenses, and farming techniques. Farmers anticipate better crop yields this year if livestock destruction is avoided.

On the 12th of September 2024, the ADF/ AGRISUD team facilitated the account closing of the Kulen Mountain Spice Drying Group of The Green Farmers of Siem Reap are developing a new production strategy as the black ginger harvest begins. There was a total of 13 members (12 females).

On the 15th of September 2024, the ADF/ AGRISUD team hosted a visit of the AFD (Agence Française de Developpement), led by Cyril Bellier, Head of Department - Europe, Middle-East, Asia, along with Sandrine Boucher, director of the AFD agency in Cambodia, and Miss OUK Channita, NGOs' coordinator for AFD, to assess the project and explore the possibilities and potentials of developing ecotourism on the Kulen site.

On the 20th September 2024, ADF team join the workshop focusing on the territorial project for sustainable agriculture organized AGRISUD. The workshop involved stakeholders, including commune representatives, the Department of Agriculture (PDA), the Department of Rural Development (PDRD), and commune agriculture officials. The workshop focused on reviewing territorial projects and defining priority plans for each commune. The participants identified priorities for sustainable agriculture, such as rehabilitating irrigation systems, repairing laterite roads, constructing new concrete roads, and planting trees for ornamental/reforestation. The workshop involved 27 participants, including commune/sangkat chiefs, officials from PDA, PDRD, partner NGOs, and agriculture officials.

On 27th of September 2024, the ADF team participated in a training on mobile video creation for community and associations, led by Thmey media company at the Siem Reap Provincial Department of Commerce (PDoC). The training included representatives from various organizations, including PDoC, AGRISUD Team, weekly market committee, Green Farmers association, Cambodian Chefs Association, and the Provincial Department of Tourism.

On the 30th of October 2024, the ADF team joined an inter-professional workshop on dry season planting for 2024-2025, organized by AGRISUD International Cambodia. This workshop aimed at helping farmers plan cultivation and supply strategies. The workshop focused on identifying supply challenges, identifying market strengths and opportunities, demonstrating vegetable growing in the dry season, showcasing cultivation techniques and economy, and engaging stakeholders in the agricultural supply chain. The workshop included 52 participants, including 33 women.

On the 4th of December 2024, the ADF/ AGRISUD team held a "Field Day" on Black Ginger, to share climate change adaptation techniques with farmers from 5 villages. Master Farmers demonstrated planting methods, yield, production costs, and market chains. The event took place at Ms. Pos Sophoan's farm in Sangke Lak village, Khnong Phnom commune, Svay Leu district, Siem Reap province. 55 participants, including representatives from local authorities (commune and village chiefs), Siem Reap Department of Commerce, Agros Company staff, project partner staff, MFs and farmers, attended the event.

From November 21st to 24th 2024, the ADF team participated in an exposure visit organized by AGRISUD to strengthen and enrich the group leadership committee's knowledge and know-how, review and reflect on the part of the action plan of territorial projects in sustainable agriculture with representatives of all 8 communes/sangkats. The visit aimed to exchange experiences about group management, associations, and communities, learn about market chain, and learn about production techniques (pepper, vegetables) in 2 locations: Kampot Pepper Promotion Association (KPPA) and Prey Ta Prit Samaki Meanchey Community (AC) in Kampot province. The total participants included 43 people, including 16 women (authorities communes/sangkats, group committees, partner staff (PDA and ADF), and project staff).

On the 27th of November 2024, the ADF/ AGRISUD team, in partnership with the Office of Agriculture, Natural Resources, and Environment in Svay Leu district, organized a pig farming techniques training session for new and experienced farmers. There were 12 total participants, 7 of them were women. Even though vaccination activities are not implemented during training, the team will return to train them directly at their homes.

On the 28th of November 2024, the ADF/ AGRISUD team, in partnership with the Office of Agriculture, Natural Resources, and Environment in Svay Leu district, organized a chicken farming techniques training session for new and experienced farmers. In total, 16 people participated, 15 of whom were women. Even though vaccination activities are not implemented during training, our team will return to train them directly at their homes.

On 4th of December 2024, the ADF/ AGRISUD team organized a farmer forum to present on soil mixing, planting black ginger in cement/rice bags at one of the master farmers' farms in Sangke Lak village. Total number of 45 farmers participated in this forum.

From January 15th to 17th, 2025, the ADF/AGRISUD team collaborated with Master Farmers (MFs) to hold a training session focussing on new methods for growing black ginger on cement shelves/terraces and in bags for maximum productivity. This effort sought to assist farmers in the Kulen Mountain in adapting to climate change. The training included 94 farmers (65 women) from five villages: Sangke Lak, Ta Penh, Thma Chruogn, Anlong Thom, and Khlah Khmum.
On the 4th of March 2025, the ADF/AGRISUD team hosted a donor visit from the AGRISUD International organisation in France. The excursion includes the school vegetable garden, black ginger, and fruit tree families.

On the 29th of April 2025, the ADF/AGRISUD team, in collaboration with the Office of Agriculture, Natural Resources, and Environment in Svay Leu district, organized an ongoing training on a pig farming technique for the pig raisers. There were 20 total participants, 18 of them were women. This day's training activities for pig raisers include selecting suitable cage locations, selecting appropriate pig species, providing animal care, cleaning, vaccination, disease observation, understanding medicine for treating and caring for pigs, and providing necessary water and food.

Follow up of the beneficiaries, reminder:
Regularly over the year, ADF team is implementing the following activities: technical advising and follow-up on fruit trees and spices production, technical advising and follow-up on Dry Spice Producer group, Khnong Phnom Kulen (13 members, see below), taking photos of every new farmers and GPS point for archiving data, checking the record of incomes and expenditures data in the book for farmers, arranging the seedlings and materials from the Agrisud office to farmers in Phnom Kulen, collecting reimbursements from farmers (pig and chicken raisers). All these reimbursements (corresponding to 50% to ADF support) are in cash and reinvested in the project.

For each beneficiary of the project, contracts were signed between ADF-AGRISUD and each farmer. They present the roles and responsibilities of each parties (ADF/AGRISUD and the beneficiary), in order to engage the beneficiary to take responsibilities. The organisations commit to provide trainings on strengthening agricultural techniques (production of vegetable crops and fruit trees) and marketing to farmers; to facilitate planning, implementation, revenue recording, production costs, and marketing; to provide assistance, technical advices and regular monitoring; to provide materials to farmers according to the project possibilities and upon request. The beneficiaries must comply with the status of the organization and group of farmers, must collaborate with agri-businesses and agricultural extension officers, have to participate in training programs and follow the instructions from the NGO technicians on agriculture, must follow the best instructions from the technicians and share good techniques with other farmers, must commit to grow crops and fruit trees on their farms regularly and until the end of the project, must record their amount of products borrowed and produced and must allow the visit of international and national guests and provide brief explanations. It is agreed that if a beneficiary does not comply with this agreement, he should pay back the cash equivalents of the investment with equipment.

Follow up of the Kulen Mountain Spice Drying Group:
On the 23rd of May 2024, the ADF/AGRISUD team coordinated the Green Farmers' committee to distribute the financial report to members of the Kulen Mountain Spice Drying Group, discuss the new plan, and introduce the new committee members to some geographical locations and the Kulen Kesorkol shop.

On the 26th of June 2024, the ADF/AGRISUD team hosted a visit of HE YUN Linne, Vice Governor of Siem Reap Province, and Mr. PHOEUN Kimly, Director of the Department of Commerce. They visited the project carried out in collaboration with AGRISUD and ADF. This visit allowed them to demonstrate the development difficulties in the Phnom Kulen National Park.

On the 5th of November 2024, the agro-processing technical team reviewed lessons at the Kulen Mountain Spice Drying Group (and Essential oil producers' group at Phnom Kbal Spean), to prepare for the upcoming new session. The lessons covered food safety, food quality, food hazards, good hygiene practices, 5s (Sort, Set, Shine, Standardize, and Sustain), and "first produced, first sales" refers to the First-In, First-Out (FIFO) method. The marketing staff also integrated marketing communication skills. The participants included ADF team, sales representatives from GFS, members of the Kulen Mountain Spice Drying Group, and the Essential oil producer group.

On the 20th of December 2024, the ADF/AGRISUD processing technical team organized a meeting with the Kulen Mountain Spice Drying Group to teach them about new packaging methods.

On the 8th of January 2025, the ADF/AGRISUD team met with the Khnong Phnom commune chief to discuss the commune's development strategy and the AGRISUD/ADF project that might supplement the commune's community development efforts. On the same day, the ADF/AGRISUD team continues to observe the processing technician as they monitor the production, weighing, and packing of black ginger for the Kulen Mountain Spice Drying Group.

MF and Phnom Kulen Black Ginger Producers Group follow up:
On the 7th of June 2024, the ADF/AGRISUD team met with master farmers and the Phnom Kulen Black Ginger Producers Group to strengthen progress and set up a plan. The agenda includes extracting data on cultivation, holding a general assembly on the 28th of June 2024, and studying and collecting information on water sources for dry season use. The meeting involved a committee of producer groups and a representative of MFs, including 7 people (4 women) from 5 villages in Khnong Phnom commune.

On the 28th of June 2024, the Phnom Kulen Black Ginger Producers Group held a general assembly to select a new committee, show the group's capital, encourage the expansion of black ginger cultivation land, and provide loans for agricultural inputs. The assembly, attended by 60 participants (42 women) from five difference villages (Sangke Lak, Ta Penh, Thma Chruogn, Khlah Khmum, and Anlong Thom village). The purpose of the meeting was to vote for the new committee every four years.

Follow up by MF with KoBo toolbox for vegetables and fruit trees farmers:
Kobo toolbox is a free, open-source data collection tool, used by NGOs, UN agencies, researchers, and government institutions for surveys and monitoring and evaluation. It allows offline data collection using smartphones or tablets, syncs data online when internet is available, and supports GPS points, photos, multiple choice, and text input. The tool is developed by Harvard Humanitarian Initiative. The ADF/ AGRSUD team uses the Kobo collect app to store data. This means that once the team fill out the information in the "Production monitoring database (techno-economic monitoring)" book, they fill out the information to Kobo collect and transmit it to the AGRISUD M &E team to analyse the data.

During July 2024, the ADF/AGRISUD team conducted a refresher training in grafting fruit trees for master farmers and farmers in 5 villages on Kulen Mountain: There were 5 families in Sangke Lak, 3 families in Ta Penh, 3 families in Thma Chruogn, 3 families in Anlong Thom, and 3 families in Khlah Khmum village who participated.

Infrastructures
In late January 2025, the ADF/ AGRISUD team collaborated with the village chief to purchase materials for Sangke Lak village's water system, costing 7,100,000 riels (1,775 US$). This amount was used to build a water system (pipe from the source and cement reservoir). This was funded by AGRISUD (+in-kind contribution from the villagers = 5,590,000 riels/ 1,397.50 US$) using recycled pipes, from a previous ADF project in the school's village. The overall cost of this water system is 12,690,000 riels (3,172.50 US$). The work began on February 1st and was finished on March 15th 2025, with a 7m3 main reservoir at the source, a 8m3 reservoir (of 8 ring wells) in the village, and a 1,770m pipe (including 500 m of HDPE pipe) that benefits 55 families.

The ADF/ AGRISUD team collaborated with one of the MFs/ construction workers to build the cement shelves/ terraces for the families/ beneficiaries who requested them to grow the black ginger in 2025. There was a total of 25 families in 4 different villages who requested cement shelves/ terraces (3 families in KK; 4 families in SL; 3 families in TCH; and 15 families in AT village). This represents 124 cement shelves/ terraces.

Retailing shop next to Orchid Garden, at the western entrance of PKNP
On the 9th of June 2024, H.E. Sok Soken, Minister of Tourism, and other excellencies, along with the officers from the Ministry of Tourism, visited the Orchid center (Kesorkol Sok An), a research and conservation centre at the foot of Phnom Kulen, and next to it the Kesorkol shop that sells processing products for Kulen Villagers supported by the project as well as traditional handicrafts from Kulen Crafts.

Workshop, Communication and participation to fairs
On the 3rd of April 2025, the ADF team attended a series of workshops held by AGRISUD that focused on "Co-construction" of action plans for sustainable commune/sangkat development. The seminars aimed to review the implementation of the Agro-ecological Intensification and Diversification of Family Farming project in Peri-urban Siem Reap, examine the monitoring and evaluation table of the action plan from eight communes/sangkats, and provide saplings, canal rehabilitation, and office supplies to the communes/sangkats. The session, attended by 30 people (8 women), was held in the Provincial Department of Commerce conference room in Siem Reap city.

On the 8th of April 2025, the Siem Reap Green Farmer participated in the exhibition "A Special Day Dedicated to Sustainable Development and Solidarity," which was hosted at the Institut Français du Cambodge in Phnom Penh.

Schools and agro-ecology activities
On the 13th of February 2025, the ADF/AGRISUD team delivered information and know-how on agricultural life skills such as crop association and crop mulching and highlighted the benefits to students at Ta Penh Primary School in Khnong Phnom commune, Svay Leu district.

Various
In 2024, ADF continued to be part of the "ALiSEA", the Agroecology Learning alliance in Southeast Asia, a network of Agroecology practitioners and supporters (sharing and supporting common goals on agroecology) that actively engages its members into information/knowledge sharing and vibrant collective actions promoting an agroecological transition and providing meaningful benefit for all participants.

Related websites
https://greenfarmerssiemreap.com

Rice bank for the households in need in Thma Chruogn village

Reminder: The ADF input and support for the Rice Bank, set up in 2013 in Thma Chruogn village, is now mainly of a technical nature, guidance, monitoring and recording. The objective of this project is to alleviate food insecurity during the dry season amongst the target population. The concept is similar to a bank: beneficiaries can borrow rice when they have a shortage of supplies and have to give it back with a low interest, after the harvesting season (usually in November each year).

The beneficiaries are divided into 8 groups of household members, an equivalent to 37 families, and the borrowing policy lasts 11 months. The rice bank committee consists of 4 permanent members who are organizing in-house activities, ranging from administration to the maintenance of the rice bank. They are also responsible for lending to and collecting rice from the household members. 22 families borrowed rice in 2023, 19 families borrowed rice in 2022, 10 families borrowed rice in 2021, 13 families borrowed rice in 2020, 18 families in 2019, 24 families in 2018, 27 families in 2017, 39 families in 2016, 23 families in 2015 and 34 families in 2014. Less families tend to borrow over the years. This shows food security in this village is less a problem than before.

The rice bank committee and ADF team collected and distributed rice to the households in need in Thma Chruogn village, with the following data:
In February 2024, the villagers requested to borrow rice paddy. This represents 33 families, 184 people (including 81 women, 107 of whom can work), and a total of 8,900 kg of rice paddy provided to the loan group. Additionally, the rice contribution to the four committee members was 48 Kg per person, for a total of 192 Kg. The total rice paddy given in February 2024 was 9,092 Kg.

At the end of 2024, 32 families of the loan groups returned rice paddy to ADF, totalling 8,900 kg plus interest of 1,602 kg, for a total of 10,502 kg. One of the 33 families in the loan groups, the father passed away, so the rice bank committee members agreed with the ADF IG team not to ask this family to repay the rice loan in 2024, and they are also agreed to have the family's son become a new member of the rice bank in Thma Chruogn village.

In January 2025, villagers requested to borrow rice paddy. This includes 29 families, 167 people (69 women, 94 of whom can work), and a total of 9,700 kg of rice paddy delivered to the loan groups. Additionally, the rice contribution to the four committee members is 48kg each person, for a total of 192kg. The total rice paddy distributed in January 2025 was 9,892 kg.

The HUMY 4 project: Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion

HUMY 4 backgrounds and rationales and objectives

The previous HUMY 2 project was implemented by ADF from October 2021 to March 2022 and the HUMY 2 bis was implemented as a continuation, from April 2022 to December 2022. In continuation and at the end of the year 2022, the HUMY 4 project was designed for 2 years (2023-2024) to continue the support to the Eco-tourism alternative livelihood, patrolling activities and handicrafts promotion and training.

The HUMY 4 project is entitled "Building Capacities and promotion of the Phnom Kulen Community-based Tourism Centres, Community Protected Areas (Popel and Anlong Thom), and Handicrafts producers" by providing training for CPA members of Popel and Anlong Community-based Tourism Centers (CBTCs) and Community Protected Areas (CPAs), and promoting local handicrafts, Phnom Kulen National Park (PKNP). The main objectives of this project are in line with the two previous ones (HUMY 2 and 2') and are therefore:

- to provide the necessary training for the two CBTCs members and their related CPA members, in PKNP, Siem Reap Province, Cambodia. The project aimed to develop the capacities of these villagers by providing training sessions regarding tourism management, environmental education, protection, law enforcement and patrolling. The project also aimed to support the capacities of these villagers by providing a minimum incentive per month for the 2 CBTC leaders.
- to organize, train and financially support mixed patrols in both Popel and Anlong Thom CPAs (rangers and CPA members), to prevent illegal activities and raise environmental awareness (from January 2022).
- to support and promote the PKNP handicrafts producers. The project aimed to transmit the knowledge of making these products by providing training from the elders to the younger generations. The project should promote the products with the setting up of a brand, selling points in Siem Reap or Phnom Penh and at the CBTCs, promotional material (video, catalogue, leaflet…). Additionally, it should provide incomes for these vulnerable villagers as well as for the CBTC.
- Finally, the project should also facilitate the administrative procedures prior and during the bio-diversity's assessment of PKNP by Vincent Romera from HUMY, assisted by Claire Zagala, from September 2022 to March 2023 (HUMY 5 project in ADF 2023 activity report).

HUMY 4 activities and outcomes

Training and management of the Popel (PP) and Anlong Thom (AT) CBTC members.

Reminder for 2023:

The training sessions for Popel and Anlong Thom Community-Based Tourism Centers (CBTC)/Community Protected Area (CPA) members were organized thematically and delivered by various partners, including TC tour operators with expertise in PKNP, PKNP rangers and the director, as well as experienced community-based tourism stakeholders from other provinces. Key topics covered the park's geography, history, local life, health care, education, population, and tourism impact. The training highlighted the goals and benefits of the (CBTCs), fostering community pride and ownership. Guiding principles taught included hospitality, responsibility, honesty, and research, alongside practical skills for engaging visitors. The training provided local guides with essential knowledge and skills, enabling them to enhance sustainable tourism and visitor experiences in the park. The training documents in Khmer were designed for the local community to enhance understanding of Phnom Kulen National Park. They included visuals and interactive exercises for accessibility, addressing literacy challenges.

The ADF team conducted two trainings in late 2023. On October 03rd, beginning with a session on Khmer History and hospitality management. Subsequent sessions focused on Khmer History and archaeology, particularly the Phnom Kulen archaeological sites, led by ADF's director for local guides of the CPA and CBTC. This program, spearheaded by Mr. Heng Puthea, aims to equip guides with essential knowledge and skills to enhance tourist experiences. A simplified archaeological guide was developed in Khmer for CBTC members, providing a foundational overview of Phnom Kulen's significance. The training included on-site sessions at key archaeological locations to deepen understanding of their cultural and historical importance. This initiative promotes sustainable tourism and local empowerment, positioning guides as community ambassadors. On November 09th and 10th 2023, further training for CBTC local guides and Apsara National Authority guards emphasized site protection and maintenance, enhancing the knowledge transfer crucial for safeguarding these cultural treasures.

In 2024, the simplified archaeological guide was finalized both in English and Khmer and shared among the AT-CBTC guides. Additionally, the ecotourism supervisor and the two CBTC managers continually adjust to visitor feedback and recommendations, discuss improvements directly with CBTC members during their monthly meeting at the beginning of each month.

The training for the CBTC members was facilitated by the ecotourism supervisor, who organized a monthly meeting in the first week of each month, along with working sessions throughout the year. Financial incentives were provided to the two CBTC managers, ensuring a consistent connection between ADF and the CBTCs, thereby maintaining oversight on the objectives of centres. In the near future, the projective is that these incentives will be supplemented by the revenue generate from tours sold by the CBTCs.

In 2023, following the model of the AT CBTC, rules for the PP CBTC were established and communicated to its members, covering essential areas such as safety, hygiene, and environmental considerations for visitor tours in the PP Community Protected Area (CPA). A printed notebook was also created to document all incomes and expenditures associated with each tour. Furthermore, the PP-CBTC booklet was designed and printed to serve as an informational guide for visitors upon their arrival at the center. This booklet includes photographs, tour maps, and various relevant information about the tours available.

The ABA bank account opened in March 2023 for AT CBTC, to facilitate the cash flow management. However, since it has no legal status, it was opened on the name of Ms. Chhoun Phirom and Mr. Heng Puthea until the CBTC get legal status. The incomes and expenditures in 2024 for both CBTCs were followed up by the ecotourism supervisor and CBTC managers and recorded in the corresponding Xcel documents.

Additionally, in 2024, ADF finalized the bilingual (Khmer and English) descriptions for each tour offered by the two CBTCs, which were posted on their respective Facebook pages.

On the 15th of January 2024, Ms. Chhoun Phirom organized and led a training for the Anlong Thom CBTC cook members on hygiene cooking and packaging at Kulen basecamp, the Terre Cambodge camping site in PKNP.

The contact list of both CBTCs members was updated in June 2024.

On the 5th and 6th of March 2024, Ms. Chhoun Phirom organized and led a training for the Popel CBTC members on 1) hygiene cooking and packaging, at the PP-CBTC kitchen 2) Being a local guide on the CBTC tracks, 3) Being a guide for camping visitors at KULEN basecamp, for AT CBTCs.

Ms. Chhoun Phirom met in August 2024 Discova and Hanuman travel agency for 3 days/2 nights camping program.

Ms. Chhoun Phirom organized in October 2024 training to set up new trails for these 2 new agencies for camping groups from Wat Phnom Bey to Thma Chruogn and Sangke Lak, Anlong Thom then Wat Preah Kral, For AT guides.

From November 2024 onward, a new partnership was set up with APLC/Sala Baï NGO to support the 2 CBTCs for the training of their members and their promotion. A new ecotourism supervisor was hired by Sala Baï (Ms Sean Sreymom) to take over Ms Chhoun Phirom who stopped working for the project for personal reason, at the end of the year 2024. The overlap period allowed to transmit the knowledges about the context, the activities and the challenges between the 2 supervisors.

In December 2024, AT CBCT cooks (3 cooks and 2 assistants) came for a vegetarian food training in Siem Reap and inspection at Banlle Restaurant.

<u>Promotion of the CBTCs:</u>
Reminder: in 2022, two short videos of about 5 minutes long were produced to promote each CBTC and shared on ADF website, ADF, CBTCs, and KC Facebook pages:
https://www.facebook.com/reel/426867702550357
https://www.facebook.com/reel/4868139259962848
In 2023, 2 leaflets were designed by ADF to promote the 2 CBTCs during events. The Popel CBTC organization chart was designed and displayed at the CBTC and responsibilities were defined. Signboards were placed at entrance and other key point visible to visitors. Signboards of camping prices and services were designed and placed at each camping places with QR code for their respective Facebook pages.

In 2024, the team continue to post and share this video on social medias as part of CBTCs promotion. As in 2023, the promotion of the two CBTCs was mostly done through their Facebook pages. Additionally, the promotion was posted on the TC, ADF, and KC Facebook pages. The promotional activities included regular posts about the CBTCs' activities, pricing information, contact details, and promotional videos.

Furthermore, CBTC chiefs frequently post on pages when groups join trips with CBTCs.
On 24th August 2024, in partnership with ADF, the AGRISUD team organized the event "Visit Phnom Kulen", under the theme "Territory and agro tourism," for Siem Reap Tourism Club Association (STC), Cambodian Chef Association (CCA), the Siem Reap Department of Commerce, and journalists. They visited the Phnom Kulen production site of black ginger including its processing, pepper, coconut, traditional handicraft weaving and blacksmith from Kulen Crafts, learn more about Anlong Thom CBTC, which are all products of farmers from other project developed by ADF, HUMY and Agrisud International. The visit resulted in one published article on 24th August 2024 and two compelling videos being released online on 26th August 2024, highlighting the Kulen Crafts project and its commitment to supporting local artisans and promoting sustainable livelihoods in Phnom Kulen National Park. They are available through the following links:
https://www.facebook.com/reel/7924337114328052
https://www.facebook.com/reel/1518930415408891
https://cambodianess.com/article/local-communities-can-play-a-major-role-to-promote-cambodia-as-a-unique-tourism-experience?fbclid=IwY2xjawNMJFJleHRuA2FlbQIxMQABHrMvXBEhOfTzMCtcyJnVOYCMj9Be7u7umpDWD4FYGMqGLbwMyd4r41C8SXgR_aem_TH7gvDd0KU9-t7VL-zdB8Q

In November 2024, the Anlong Thom CBTC had the opportunity of hosting a team of journalists from the Cambodianess, a highly regarded newspaper based in Siem Reap and Phnom Penh, Cambodia. Mr. Heng Puthea (Srel), the leader of CBTC, and Ms Sean Sreymom, the new ecotourism manager, welcomed them and engaged in fruitful discussions. This visit resulted in the creation of two videos, which was uploaded online on 26th November 2024. These videos clearly demonstrated the CBTC project's consistent commitment to empowering local communities and improving sustainable livelihoods inside the Phnom Kulen National Park, and the archaeological sites researching and conservation in the park: https://www.facebook.com/reel/925443315756604, https://www.facebook.com/reel/1040705964498703

Exposure visits and training for CPA/CBTC to other community areas:
ADF selected a community forest/CPA site in northwest Cambodia to engage local communities in conservation efforts and community-based ecotourism initiatives. Thanks to HUMY funding, on 20th and 21st December 2024, the ADF team organized an exposure visit for CPA/CBTC committees to Sanga Rukha Vonn Community Protected Area, a former Monks Community Forest (MCF) in Anlong Veng and Samrong Districts, Oddar Meanchey province (18,261 hectares of evergreen forest, semi-evergreen forest, and deciduous forest….).

The agenda and planning for the visit were coordinated with the head of the community, venerable, Tho Thouros, and the head of the community network in Oddar Meanchey province, Mr. Sar Thlai. The 2 days exposure for 12 Phnom Kulen CBTC and CPA committees and 3 ADF team involved a brief presentation about the community's conservation efforts, key fauna/flora, patrolling, law enforcement, communication systems, and relevant laws/ regulations, and a field visit inside forest (day 1) and day 2, on the river which also part of the community forest (6,000 hectares in the dry season, and about 8,000 hectares in the rainy season).

The presentation discussed conservation issues, community involvement, environmental awareness, tourism revenue sharing, CPA member training, and NGOs and government support for conservation in specific areas. Cross-learning and information exchange between the among CPA and CBTC groups, as well as with the MCF committees, were made possible by this two-day field exposure. It contributed to a better understanding of community-based conservation and tourism activities in the region.

Training for local patrol by PDoE, ADF and other partners:
Following the success of the two training sessions held in 2023 by ADF in collaboration with BeTreed and the Provincial Department of Environment (PDoE), the groundwork was laid for equipping Community Protected Area (CPA) committees and park rangers with skills for effective park patrols and the prevention of illegal activities, particularly poaching and habitat destruction.

Building on this foundation, an additional training session took place on 6th and 7th February 2024 and aimed at refreshing knowledge of the CPA members and park rangers on key topics. During this training session, participants acquired skills in patrolling techniques, law enforcement procedures, and the legal framework for CPAs.

Practical field exercises were included, covering tracking, surveillance, data collection, and reporting methods. The training also refreshed the use of the Avenza mobile application, which is designed to improve patrol efficiency and the accuracy of violation recording.

In total, 40 participants attended this significant training program, which engaged the committees from the Anlong Thom and Popel CPAs, as well as park rangers.
The ongoing project is set to build upon this experience by implementing future training sessions, continuous monitoring, and enhanced collaborations with stakeholders, all aimed at ensuring the long-term sustainability of the park's conservation efforts.

During the training session, several issues regarding ongoing patrols were discussed, including the establishment of a consistent number of patrol members, with specifications of 4 patrol members for daytime (1 ranger and 3 CPA committees) and 5 patrol members for nighttime (2 rangers and 3 CPA committees). There was a call for the systematic presence of rangers during these patrols. It was emphasized that follow-ups on illegal activities should be conducted via the Telegram group by the park rangers of PDoE.

Furthermore, adjustments in the patrol schedules were recommended, taking into account the HUMY team's observations of significant poaching incidents noted early in the morning, particularly between 5:30 AM to 7:00 AM. It was highlighted that information regarding all observed illegal activities should be included in the report generated after each patrol. Lastly, improvements were suggested for the patrol reports for both CPAs (PP and AT) to enhance their utilization of the Avenza app, ensuring more effective monitoring and reporting mechanisms for the ongoing efforts.

See more information below in the Patrols chapter of this report

Support to local patrols in CPA by CBTC and CPA members:
In 2024, in collaboration with the Siem Reap Provincial Environmental Department, ADF has set up and supervised 166 patrols, carried out by rangers in Khnong Phnom commune, Phnom Kulen National Park and the committees of the 2 Community Protected Areas (CPAs), Prey Thom Anlong Thom (AT) and Prey Thom Popel (PP). These patrols were organized both during the day and at night. The night patrols conducted based on the assumption that most illegal activities occur at night. As a consequence, there were 4 occurrences of illegal logging, 4 cases of forest encroachment for farming, and 2 cases of poaching, totalling 10 cases for the two CPAs. See details below:

For the AT- CPA:
From January to December 2024, there were 78 patrols conducted (33 during the days and 45 during the nights), averaging 6.5 monthly patrols. There were 5 participants in each patrol (3 AT- CPA committees and 2 rangers). There were 339 individual payments of 7$ (day patrols) or 10$ (night patrols) to 3 AT- CPA committees + 2 rangers, for a total of 3,003 $. Results: 1 Illegal logging evidence, 2 cases of forest encroachment for farming, and 2 Poaching evidence in AT- CPA.

For the PP- CPA:
From January to December 2024, there were 88 patrols conducted (44 during the days and 44 during the nights), averaging 7 monthly patrols. There were 5 participants in each patrol (3 PP- CPA committees and 2 rangers). There were 517 individual payments of 7$ (day patrols) or 10$ (night patrols) to 3 PP- CPA members + 2 rangers, for a total of 4,357 $. Results: 3 Illegal logging evidence (including 2 chain saws seized), and 2 cases of forest encroachment for farming in PP- CPA.

In February 2024, the bonus incentive for apprehending illegal activities designed and suggested by ADF was agreed by the Siem Reap PDoE.

In July 2024, following a meeting organised by ADF (on the 3rd of June 2024) to reassess the patrolling system with PDoE, ADF provided a concept note summarizing the situation, activities and challenges since the start of the HUMY project supporting patrols. In December 2024, ADF team gathered the data on every implemented patrol since 2022 for a meeting on the 10th of January 2025, which objective was to reorganise the patrol system for 2025 onward. The presentation given by during this meeting is presented in this report and summarized below, as well as in the following chapter: "next steps, challenges and risks analysis for HUMY 4 project".

Challenges from 2022 to 2024:
Organization / coordination of patrols (dates, locations):
Reminder: prior to March 2023, patrols organized by CPA members, after March 2023, patrols organized by rangers; Rangers are often busy with other tasks (meetings, other patrols, official visits…); CPA committees are sometime busy with cashew nut harvesting, wild fruit collection and festivities (Khmer New Year…).

CPA committees have reported pressures from other villagers while they are patrolling and preventing hunting and other illegal activities.

Patrolling activities were requested to be scheduled in accordance with illegal activities; however, this was never done, resulting in reduced efficiency: at night during illegal logging and early morning (5h30-7h00) for hunters. Fruit season is also a period where bird hunters are more active. Every illegal activity should systematically be reported, there are no "small or not important" illegal ones.

Avenza App is still wrongly used by rangers and CPA committees. More training is therefore requested from both, the rangers and CPA committees in 2025

Many patrols but no perpetrators apprehended: Over 3 years period, from 2022 to 2024, HUMY funded 455 patrols with a total payment of 17,470 US dollars, and there were 59 illegal activities observed, however there was no perpetrator apprehended.

Positive points: Patrols are preventing and reducing illegal activities in both CPAs (Anlong Thom and Popel). CPA committees take more responsibility for their CPA management and raise environmental awareness in their communities.

The management of the patrol within the ADF team has been taken over by Mr Chim Sopheap, deputy director, from January 2025, due to Ms. Chhoun Phirom in December 2024, resigning for personal reason.

PKNP Zoning report by ADF and HUMY:
Please refer to the ADF-HUMY zoning report for PKNP (April 2024) in the Environment chapter below.

Training by handicrafts producers from PKNP to villagers and young students:
Reminder: The HUMY 4 project is a crucial initiative aimed at preserving traditional handicrafts of PKNP handicraft producers, focusing on the skills of vulnerable elders in Phnom Kulen villages. It aims to transmit knowledge to younger generations, ensuring these techniques, including mats, baskets, cutlasses, and knives, are not lost to future generations. Additionally, promoting these environmentally friendly products at Community Based Tourism Centres (CBTCs) and other selling points in Siem Reap or Phnom Penh expands the market for artisans, providing them with income opportunities and sustaining traditional arts and crafts. This approach promotes cultural preservation and economic empowerment within the community.

Artisan Identification:
The continuing identification and training of handicraft producers in Phnom Kulen villages is crucial for preserving traditional crafts and empowering local artisans. Mat weaving is exclusively done by women, while basket weaving and blacksmithing are male dominated. The total member of the artisans joined with Kulen Crafts (KC) are 103 members from seven (7) villages: Phum Thmey, Anlong Thom, Thma Chruogn, Ta Penh, Sangke Lak, Khlah Khmum, and Popel.

The first survey conducted by the Kulen Crafts team (Ms Chhoun Phirom, the project supervisor and Sreymom, the project assistant) in 2021, updated in 2022 and 2023 in the above mentioned 7 villages, there were 56 artisans were identified and trained. In 2024, 37 more artisans were identified and update in the list. In September 2024, 42 artisans had signed a contract with KC. In 2025, 10 more artisans were identified.

Artisans were categorized based on their crafts, including mat weaving, blacksmithing, basket weaving, making brooms, cotton thread making, bamboo straw crafting. The census includes their age and phone number if they have one.

Training sessions in villages:
Reminder: In June and July 2023, three separate 4-day training sessions (12 days in total) were organized for 22 women artisans from 3 different villages (4 in Anlong Thom, 13 in Khlah Khmum, and 5 in Phum Thmey), with a focus on mat weaving techniques. The training was led by Aunty Hai and Hon, trainers from Anlong Thom Village. Trainees were encouraged to bring their own dried *romchek* (Pandanus pierrei) for practice. The HUMY 4 project supported the costs for the training: Per Diem at 7 US$ per day for the trainer, transportation costs for the trainer, complementary tools and equipment, and raw material (ex: pigments for mat dyeing).

No training was organized for artisans in 2024 (apart from 1 in Popel in August), but the Kulen Crafts team visited the artisans at their homes on a regular basis to ensure the quality of the products and the number of productions required for customer orders.

Training sessions in primary schools:
The training programs for students at schools in Khnong Phnom commune are served to enhance awareness and appreciation for traditional handicrafts, particularly mat and basket making. The programs aim to preserve and promote these traditional handicrafts in the Phnom Kulen area, with its objective to instil an awareness of traditional weaving techniques rather than teaching children to become future weavers. Importantly, Kulen Crafts does not purchase products made by children, as engaging in this practice could be seen as exploiting child labour, and financial incentives are avoided to keep students' educational commitments. Furthermore, financial incentives could detract from their educational commitments. Items from the fist training were collected by ADF team from the students and were given as gifts to ADF donors. They are now kept by each student.
Before the training for the school children started, on 23rd February 2024, the Kulen Crafts team organized a visit for 18 students and 2 teachers from Anlong Thom and Sangke Lak primary schools in Phnom Kulen to see the Cambodian Products, Fruits, and Vegetables Exhibition at Siem Reap Royal Garden. On the same day, ADF invited students and teachers for a guided tour at the Angkor National Museum.

Between March and October 2024, the training was conducted at 2 primary schools (Ta Penh and Popel), engaging a total of 59 students (24 males): 1) at Ta Penh Primary School, the training was organized from March to June 2025, with 25 students (7 of them were male) from grades 5 and 6. The students were divided into 5 groups. Training in both baskets and mats; 2) at Popel Primary School, the training was organized from August to October 2025, with 34 students (17 of them were male) from grades 4, 5 and 6. The students were divided into 7 groups. Training on mat weaving.

The raw materials necessary for these trainings were provided by the project, with the villages training budget line.

The TDS project:
In 2024, ADF had the opportunity to complete the handicrafts support by an additional project, funded by Tourisme Developpement Solidaire (TDS), a French travel agency, client of ADF's partner, Terre Cambodge. The Kulen Crafts initiative financed by TDS, emphasizes on hands-on training in village settings, complemented by workshops. This project was design and negotiated from March to November 2024 and started in December 2024. The goal is to develop this sector in Anlong Thom village by providing better working conditions in rehabilitated workshops (blacksmithing, mat and basket weaving), capable of offering training by master craftsmen to apprentices (all identified) and promoting these products through a local point of sale, at the CBTC in the village of Anlong Thom. Please refer to the TDS chapter for more details.

Promotion and distribution of the handicraft's products from PKNP to the market
Reminder:
In 2022, banners, leaflets, and catalogues in Khmer and English were produced, printed and distributed to selling points and customers, along with promotions on ADF, Kulen Crafts, and CBTCs' Facebook pages. In 2023, Kulen Crafts team updated and reprinted all promotional materials, including the logo, catalogue, and leaflet, to feature new products. No updates or reprints were required in 2024, and the Kulen Crafts team continued to distribute these materials to selling points and customers during workshops and product exhibitions in Siem Reap and Phnom Penh.

In 2022, a short video around 5 minutes long which was produced as a tool to promote Kulen Crafts products on ADF, Kulen Crafts, and CBTCs Facebook pages: https://www.facebook.com/Kulencrafts).
In 2024, the ADF team continue to post and share this video on social medias as part of Kulen Crafts promotion.
In 2024, more than 10 short videos (around 2 or 3 minutes) were produced by using a smartphone. The Kulen Crafts team using these videos to promote the products on Facebook pages.

The item list was defined, with their corresponding prices, season availability and care instructions were also updated in 2024. The contacts with potential buyers or retailers were also updated in 2024.

In 2024, Kulen Crafts team participated to several fairs and exhibitions. They provided a platform for showcasing and selling Kulen Crafts products, contributing to the promotion of traditional handicraft from Phnom Kulen. Mats, knives, baskets, and brooms were available for sale. The Kulen Crafts team demonstrated its dedication to sustainable development by supporting local artisans. The project aims to preserve traditional skills and promote sustainable livelihoods in Phnom Kulen National Park. The goal is to promote the efforts of the ADF to help local people in preserving Phnom Kulen National Park for future generations, and to reach a larger audience interested in Cambodian culture and traditional handicrafts from Phnom Kulen.

An online article mentioning Kulen Crafts was published by Khmer Times newspaper in April 2024: https://www.khmertimeskh.com/501479391/unlocking-the-potential-of-cambodias-handicraft-products/

From 22nd to 25th February 2024, the Kulen Crafts team, along with the artisans from Phnom Kulen, participated in the 17th Cambodian Products, Fruits, and Vegetables Exhibition at Siem Reap Royal Garden with the goal of promoting local products more widely, and engaged local and international visitors to support and promote local products.

From 10th to 12th July 2024, the ADF team, along with the Kulen Crafts team from Phnom Kulen, participated in a three-day exhibition to promote and distribute saplings under the theme "Green Sprouts" and the 4th National Orchid Forum. The event hosted by the Ministry of Environment, in front of the Morodok Techo Building, Ministry of Environment, Phnom Penh. The ADF team distributed 500 tree saplings from school tree nurseries in Phnom Kulen National Park, including litchi trees, while the Kulen Crafts team brought a variety of handicraft products to display and sell.

On 24th August 2024, in partnership with ADF, the AGRISUD team organized the event "Visit Phnom Kulen", under the theme "Territory and Agro Tourism," for Siem Reap Tourism Club Association (STC), Cambodian Chef Association (CCA), the Siem Reap Department of Commerce, and journalists. They visited the Phnom Kulen production site of black ginger, including its processing, pepper, coconut, traditional handicraft weaving, blacksmith with items form Kulen Crafts, learn more about Anlong Thom CBTC, which are all products of farmers from other project developed by ADF, HUMY and Agrisud International. The visit resulted in one published article on 24th August 2024 and two compelling videos being released online on 26th August 2024, highlighting the Kulen Crafts project and its commitment to supporting local artisans and promoting sustainable livelihoods in Phnom Kulen National Park. They are available through the following links:
https://www.facebook.com/reel/7924337114328052
https://www.facebook.com/reel/1518930415408891
https://cambodianess.com/article/local-communities-can-play-a-major-role-to-promote-cambodia-as-a-unique-tourism-
experience?fbclid=IwY2xjawNMJFJleHRuA2FlbQIxMQABHrMvXBEhOfTzMCtcyJnVOYCMj9Be7u7umpDWD4FYGMqGLbwMyd4r41C8SXgR_aem_TH7gvDd0KU9-t7VL-zdB8Q

On the 29th, 30th November and 1st December 2024, the Kulen Crafts team, and artisans from Phnom Kulen participated in a three-day exhibition of the 2nd Siem Reap Agro-business expo, which was held at the Royal Residence Garden in front of the Victoria Angkor Hotel in Siem Reap town. The event included several entertaining activities, and displays of agricultural products, traditional handicrafts, weaving, and a variety of local food products. https://www.facebook.com/reel/556743693731487

An interview of ADF director during this fair is available here:
https://cambodianess.com/article/kulen-crafts-keeping-old-tradition-on-mount-kulen-alive-video
On 21st and 28th December 2024, the Kulen Crafts team participated in "the Siem Reap Artisan Wonderland", an event at FCC Hotel to promote Siem Reap's Local Craftsmanship with display of Kulen Craft products to promote and sell.

Production and incomes follow up:
In 2024, a comprehensive record of all sold items was meticulously updated and stored in an Excel file. This record includes details such as the date of sale, item description, size, quantity sold, selling price (with any applicable discounts), profit margins, expenses, information about the buyers, and the relevant villager. A total of 492 items and 93 rolls of *Khunmea* leaves (431.56 square meters) were sold in 2024, including mats, placemats, brooms, various types of baskets, knives, and *Khunmea* leaves.

The capital fund brought forward from 2022 (1,862 US$) was reserved for January 2023 to purchase handicraft items before selling them in CBTCs (AT and PP) but mostly other retailing places in Siem Reap. In 2023 and 2024, this capital fund was all spent to purchase items.
The transportation costs for products from Phnom Kulen to Siem Reap or Phnom Penh were covered by the ADF pickup truck, typically used for small quantities. For larger quantities and particularly the *Khunmeas* leaves rolls, the Kulen Crafts team hired a truck for transportation to Siem Reap, after which the products were shipped to Phnom Penh via a shipping company in town.

In 2024, a stock list was updated, including the following information for each item: item number, size, unit, unit price, total, village, producer name, and remarks.

From January to December 2024, the Kulen Crafts team sold 492 items and 93 roles of *Khunmea* leaves (431.56 square meters), these included the 3 main orders in May, August and September 2024: 1) In May 2024, Ponlei Thammacheat in Phnom Penh placed a significant order with Kulen Crafts for a total of 49 rolls of *Khunmea* leaves (253.87 square meters), and another order in August 2024, 44 rolls (177.69 square meters); 2) In September 2024, Angkor Grace Residence and Wellness Resort placed a significant order with Kulen Crafts for a total of 50 set of plate mats.

The following details describe the income and profits of Kulen Crafts in 2024:
The total selling price for 492 items and 93 roles of *Khunmea* leaves was 7,389.91 USD$; the total cost of purchasing 492 items and 93 roles of *Khunmea* leaves was 5,138.76 USD$, this amount is the direct income for the artisans; the gross profit totalled 2,251.15 USD$. Other operation costs and expenses totalled $1,192.56 USD, including $500 for KC business registration. The net profit totalled 1,058.59 USD$.

Redistribution of profit:
The profits from Kulen Crafts are used to purchase new products and cover operating expenses such as pigments, coconut oils and transportation costs. Additionally, other necessary expenses include company registration, patent, monthly taxes, exhibition cost in Siem Reap and Phnom Penh, bringing 20 students to visit Angkor Museum, and buying a wood-cutting equipment for the blacksmith.

In 2024, there were 13 groups (129 visitors) visit KC artisans, these visitors from Terre Cambodge, our main partner, and some of them from other tour operators and individual groups booking through Community Based Tourism Centres. Each artisan receives 5 US$ per group for each visit and 10 US$ per group when the tourists participate to a full day workshop. These amounts are charged by KC to the travel agency TC. For other travel agencies (very few occasions), this offer is provided by CBTC, who pays KC which then pays the artisans. In 2024, the KC retailers with consignment sale: Eric Stocker workshop, Kesakol shop (Green farmers association) and Chomrok in Phnom Penh. Sala Baï shop buy the products of KC.

Monitoring the HUMY 3 & 4 project activities:
Monthly meeting with CPA/CBTC committees to update project activity from the previous month and prepare for the upcoming month and monthly payments to CBTC leaders, patrolling members, and the project supervisor encouraged a sense of ownership and responsibility, which contributed to the overall success of the project.

Throughout the HUMY 3 & 4 projects, the park rangers, villagers, and CPA committees were actively involved, ensuring that the project was tailored to their needs and empowered their participation in conservation efforts. This approach fostered a sense of ownership and responsibility for the project's success, building the capacity of the local communities to continue conservation efforts long after the project's completion.

The success of the project was built upon a collaborative spirit, with the ADF team actively working with key stakeholders on a weekly basis to ensure timely progress and address challenges. The ADF team meetings facilitated open dialogue, allowed for prompt problem-solving, and ensured that all stakeholders were aligned with project objectives.

A robust system of documentation was implemented using Telegram groups, allowing for clear tracking of each project step and facilitating the creation of comprehensive reports. This documentation system ensured transparency and accountability throughout the project, providing a clear record of progress and allowing for continuous monitoring and evaluation.
From October 2024, ADF set up a quarterly reporting system for CBTC, KC, and patrol, including the workplan updated on each project activity as required by Mr. J.-M. Civière, HUMY. Mr Jean-Marc Civière, Development Manager and founder of HUMY, visited the two projects and the beneficiaries from the 15th to the 17th of February 2024.

Collaboration with stakeholders:
ADF worked during the HUMY 3 and 4 projects in close collaboration with the local authorities (village chiefs, commune chief); Ministry of Environment (in charge of PKNP) and particularly with the PKNP rangers and the Provincial Department of Environment (PDoE); Popel principal, teachers and children; Monks Community Forest/ Sanga Rukha Vonn Community Protected Area; CSLEP team (MoE and World Bank). However, the MoE and World Bank representatives were not always involving ADF in the meetings. On 24th and 25th October 2024, ADF was invited to participate in a familiarization (FAM) trip organized by the Ministry of Environment (MoE) with support from the World Bank as part of CSLEP project. The FAM trip invited tour operators and media deep into Phnom Kulen National Park to visit a mix of existing and new destinations and attractions on the sacred mountain.

Administration, activity and financial reporting:
ADF finalized and signed a Memorandum of Understanding (MoU) with HUMY NGO. It formalizes all responsibilities of the two parties. It was signed for a 3-years period, from 2021 to 2024. It should be renewed and signed from 2025. The HUMY 3 and 4 report for 2024 was submitted to HUMY in October 2024. All expenses per budget lines were closely monitored and receipts are checked and recorded into the HUMY 3 and HUMY 4 projects Xcel spreadsheets, on a weekly basis, to ensure the correct spending of the budget per activity: by ADF Finance, admin. and communication officer. Monthly financial report. Yearly financial report (from January to December 2024). Quarterly report, set up from October 2024.

Next steps, challenges and risks analysis for HUMY 4 project:
Training and management of the Popel and Anlong Thom CBTC members within the newly implemented pilot project (Destination Eco-Talents) in partnership with Sala Baï NGO:

Create job descriptions for CBTC managers and Assist managers in developing internal community rules for CBTCs. Diagnosis of the CBTC's capabilities: strengths, weaknesses, needs, definition of a capacity-building strategy and business plan (SWOT). Development of the tourism offers already proposed by the CBTCs and adaptation of the pricing policy based on the business plan. Possibly set up an association for the 2 CBTCs: Interface with a consultant to register the NGO with the Ministry, work closely with the authorities such as village chiefs, commune chief and council, district office, the provincial department of environment and the Ministry of Environment for all necessary authorizations.

Development of an offer for travel agencies and creation of a network of clients: Arrange a familiarization (FAM) trip for travel agencies to immerse themselves in the activities and services offered by CBTCs; Promotion of the ecotourism site and CBTC tour itineraries, explore possible ways to register CBTCs activities and services on Lonely Planet and guidebooks; development of the communication strategy both digital and non-digital to be implemented by the CBTC team members; establish online promotion by setting up a website, boosting Google rating, creating a TripAdvisor page, and optimizing Facebook pages.

Strengthen the skills and knowledge of local guides through ongoing training based on their requests and visitor recommendations: Conception & coordination of the training planning for CBTC members; Basic training in IT, administration & communication to 3 CBTC staff members.

Archaeological training for AT and PP CBTCs and the guards from the Authority for the Protection and Safeguarding of Angkor and the Region of Angkor (APSARA) in Phnom Kulen national park: To enhance archaeological and heritage awareness for the CBTCs (Anlong Thom (AT-CBTC) and Popel (PP-CBTC) local guides, ADF will recruit an archaeologist in charge of the archaeological training; to promote and improve sustainable management practices, as well as deepen archaeological knowledge, within the communities of the two CBTCs and among the Phnom Kulen temple APSARA guards; there are 18 sessions scheduled, starting from May to October 2025. The session runs once a week, every Tuesday, and there are 3 sessions per month: the 18 sessions for this archaeological training covering 43 archaeological sites. These includes the ancient temples, the urban network (dikes, plots, ponds) and mounds fields.

Basic accounting training for AT and PP CBTC: Prepare cash book for both CBTCs (2024 and 2025); Opening the joint bank accounts for both CBTCs in 2025; provide basic accounting training to CBTC leaders and members, including quotations, invoices, income and expenses of the centres recording and cash book management for both CBTCs; training for CBTC leaders on the use of bank App, receiving income and payment for CBTC suppliers through bank transfer.

Hospitality Training for AT and PP CBTCs: Provide a refresher training session on hospitality and hygiene practices to improve service quality; conduct a refresher training session on the archaeological history of the sites for the local guides; provide a refresher training session on rule and guideline of local guide; provide a refresher training session on rule and guideline for cook; provide a refresher training session on rule and guideline for moto taxi; regular maintenance of the tracks along the O'Thom River (between the four waterfalls) and from Veal Ta Lo to Poeng Gnogneat will be organized; the financial incentives provided by the project for the leaders of the two CBTCs have established a lasting connection between ADF and the CBTC teams. These incentives ensure ongoing oversight of the centers' objectives. These incentives might be taken over and paid by the Sala Baï project funds in 2025. In the future, the income generated from tours sold by the CBTCs is expected to fully replace these financial incentives over time.

The next project should focus on "having the centre self-sustaining through cost control and better planning of its objectives", as the December 2022 ICC-Angkor recommendations (n.21.1.2.ii).

Both CBTCs were designed as alternatives rather than permanent sources of income. However, their economic model should evolve towards more stable and long-term revenue streams. This involves considering expenditures related to sustainable jobs and maintenance of facilities. It is essential to leverage voluntary work and subsidies to assess the "profitability" of operations and prepare for their eventual empowerment.

Popel village faces significant challenges due to its remote location and high levels of poverty, including issues like illiteracy, alcoholism, and food security.

Coordination with the CSLEP project
The World Bank/UNDP funded project has selected Phnom Kulen National Park (PKNP) and the two Community-Based Tourism Centers (CBTCs) established by ADF and TC as the foundation for developing the Cambodian Sustainable Landscape and Ecotourism Project (CSLEP). In 2025, ADF and Sala Baï team will attend Virtual Consultation Workshop on Trial Standards Development organized by Ministry of Environment / CSLEP in 2025; conduct presentation about the joint Ecotourism project of Sala Baï and ADF to support CBTCs at Siem Reap Provincial Department of Environment and at the Ministry in Phnom Penh in 2025; Participate in the CPA network of Northern Tonle Sap Terrestrial Protected Area workshop at the Siem Reap Department of Environment by the MoE 2025.

Promotion of CBTC (AT & PP) tours to Travel Agencies, within the newly implemented pilot project (Destination Eco-Talents) in partnership with Sala Baï NGO:

Previously, Terre Cambodge was the only travel agency offering CBTC tours to foreigners. Starting in 2023, the CBTCs, in agreement with ADF and Terre Cambodge, began promoting their existing services—half-day and full-day tours, as well as camping—to other receptive travel agencies. It is important to note that homestays for foreigners are not proposed to avoid competition with Terre Cambodge's package offerings.

ADF and Sala Baï will promote CBTCs tour packages within local tourist with school, NGOs, Company, Hotels, as not many people get to know those attractive sites yet during low tourist season; Developing new pricing strategy and media channel such as simple website, booking.com, Airbnb, TripAdvisor, Ecotour app.; promote CBTC's service and products to tour agents for foreign tourists. These includes the existing ones: Angkor Grace, So Kool Travel, Discova, Hanuman Travel, but also new ones such as Asia Travel à la carte, Kiri tour, All Dream Travel, About Asia Travel, Asian Trail Travel, Asev Travel, ViVu Journey, Apsara tour. Others potential clients such as Sam Veasna Conservation tour, Baby Elephant Hotel, Free to Shine, Siem Reap Toastmaster Club, Sala Baï support group in French, Khmer guides in Siem Reap, be like Khmer school, and a wellness center Ketanak Yoga should also be contacted.

For a better promotion of both CBTCs, ADF and Sala Baï will update the banners, leaflets, and posters to share online or display and distribute during fairs (ex. National Forum on Eco-tourism) and to reach new partnering agencies and clients.

Other tailored trails should also be designed for special clients such as schools and university. They could focus on other activities such as trees planting, agro-ecology visit, bee / bird watchers, to showcase activities implemented by ADF and its partners (Agrisud International…).

In addition to travel agencies, CBTC should maintain contacts with several private partners and NGOs working with the CBTCs, such as the School for Field Study (SFS).
Writers of widely distributed guided books (Lonely Planet, Petit Futé, Guide du Routard….) should also be contacted to reference the CBTCs.

The tours offered by the centres should also be more promoted on social media to attract local tourism.

The next steps for improving the quality of the CBTC include: training for Local Guides: Provide comprehensive training to all local guides at both AT and PP, and improve archaeological knowledge for the AT ones; training for Cooks: Offer specialized training for cooks at and PP to enhance food preparation and hygiene; training for Camping Team: Educate the camping team on hospitality and quality service to improve the camping experience for visitors.

Training sessions in PKNP by other local Community members to CPA/CBTC members:
There is no plan for the training by other local Community members (such as Be Treed) to CPA/CBTC members in 2025.

Exposure visits and training for CBTC to other community areas:
There is no plan for the exposure visit in 2025.

Training for patrols by PDoE and ADF
A refresher training on the Avenza application will be conducted for CPA members and some PKNP Rangers. The training will be delivered by the ADF team, PDoE, and experienced park rangers for 30 members from PP and AT. It will focus on patrolling techniques, law enforcement procedures, and the legal framework for protected areas, including field exercises to protect PKNP. A new application, Earth ranger, could also be used by the teams, if all partners agree.

Patrols in CPA by CBTC and CPA members
Patrols in 2025: Perspective:
New patrolling system: longer and more effective patrols, with the park rangers, composed by 2 rangers + 2 CPA committees + 1 Commune Council (CC) member. Frequency: 2 times per week for 1 CPA during 1 year in 2025 (dates should be flexible), for example week 1 in PP- CPA and week 2 in AT-CPA. AT and PP- CPA committees and rangers benefiting from this system would rotate. Some of these patrols should continue to be done inside PP and AT- CPA to continue preventing illegal activities. ADF need to define this framework and agree with partners (PDoE, CPA, CC) before requesting funds to HUMY. Allowance for patrol would be increased (41$ per patrol member/ per 3 days 2 nights patrol). Patrol equipment and materials will be requested to HUMY.

After 3 years (2022-2024) of patrols in both PP and AT CPAs, there are a few conclusions for better law enforcement. These should be mandatory requirements for the future patrolling project: An Avenza map with the trek, length, and duration of the patrol, has to be provided, with each report through the Telegram group. The 2 forms (report and presence list), the activity pictures, and the Avenza screenshot map must be sent to the Patrolling Telegram group, on the same day of the patrol. Patrols are possible in CPAs, APAs and anywhere else in PKNP.

Patrol Leadership Structure:
The objective is to encourage patrol members and increase law enforcement efforts, each CPA has now 4 designated patrol leaders, the other patrol members change according to availability, the patrol leaders for each CPA are: Popel CPA: Mr. Las Chat, Mr. Prin Chatt, Mr. Las Vanna, Mr. Nan Thei; Anlong Thom (AT) CPA: Mr. Phan Phon, Mr. Thy Then, Mr. Noch Nev, Mr. Mean Chhoeun.

Bonus System for Patrols:
In 2025, the bonus system agreed in Feb. 2024 by the Siem Reap Provincial Department of Environment (PDoE) is validated. The objective is to encourage patrol members and increase law enforcement efforts. The bonuses would only be provided when facing illegal activities, under certain conditions, and shared equally among all patrol participants. Higher payment of patrols in April and May could ensure more patrols during this festive period.
With this improved system, ADF believes the CPA members will prevent more environmental illegal activities and crimes, will take more ownership of their protected areas and will enhance their environmental awareness.

From January 2025, Mr. Chim Sopheap responsible for the coordination of patrols and data, in coordination with the 2 CPA chiefs and rangers, as Ms. Chhoun Phirom resigned.
In late 2025, patrols could be integrated into a larger project, to be confirmed.

Training by handicrafts producers from PKNP to villagers and young students:
There are no plans to provide training for the primary school students in handicraft weaving techniques in 2025.

Training Initiatives planned for 2025 in the villages:
Mat Weaving Training: In 2025 (during the rainy season), there is a plan to provide mat weaving training to women in Anlong Thom village. Basket Weaving Training: In 2025, there is also a plan to provide basket weaving training to men in Anlong Thom. Knife Making Training: In 2025, there is also a plan to provide knife making training to 3 men (1 from Anlong Thom, 1 from Ta Penh, and 1 from Sangke Lak villages). This project will be mostly implemented in 2025, and the trainees for these programs will be identified and paid within the fund support from the TDS project.

Promotion of handicrafts from PKNP:
The management tool that has been developed to better follow the production, the stock and the sales of Kulen Crafts will continue to be used. Kulen Crafts team will continue to sign the contract between each artisan and Kulen Crafts to engage them to respect prices and quality. Kulen Crafts team will continue to enrol more artisans in the project such as the one producing *Khunmea* roof, and cotton thread. ADF and Kulen Crafts team will continue to work with PDoE park rangers to define protected areas for raw materials (pandan, bamboo, and rattan) and submit them to the MoE for protection.

In 2025, ADF will continue to participate to fairs and exhibitions to promote this project, and handicrafts form Phnom Kulen.

From 27th, 28th February to 1st and 2nd March 2025, the Kulen Crafts team will join the 18th Cambodian Products, Fruits, and Vegetables Exhibition at Siem Reap Royal Garden with the goal of promoting local products more widely and engage local and international visitors to support our local products from Phnom Kulen.

In April 2025, during the Khmer New Year (from 13th to 15th April), Kulen Crafts products will be represented at the Angkor Sangkran ceremonies in front of Angkor Wat Temple. We will also bring our 5 mat weavers from Phnom Kulen to demonstrate their talents for the whole 3 days event.
Kulen Crafts products will be represented at the "One Village, One Product" trade fair under the "Producer-Buyer Matching Platform" which will take place over three days, from 4th to 6th July 2025, at Heritage Walk Market. This event will be organized by the Siem Reap Provincial administration and invite national and international tourists to participate in large numbers to support Khmer products.

To ensure that all the shop consignments (Eric Stocker, Sala Baï, Sacha, and the Kesor Kol shop) or retailer shop (Sala Baï) effective display and sales of Kulen Crafts products, periodically review displays for product availability, cleanliness and attractiveness, and constantly add new products to replace stock and keep options fresh for customers.
The Kulen Crafts team will ensure there is sufficient stock and a variety of products available for these new shop openings.

In 2025, Kulen Crafts artisans will try to set up as an association similar to the Siem Reap Green Farmers Association, set up by Agrisud International to sell farmer-grown products. This will foster long-term sustainability and transparency for artisans. As a result, Kulen Crafts acts as a corporate buyer of association products.

Upcoming Shop Openings and workshop buildings for Kulen Crafts with the TDS project: a shop will be built at Anlong Thom CBTC to display and sell various products from Kulen Crafts; two other workshops will be built in Anlong Thom village for the mats; baskets weaving and knifes making artisans.

TDS handicraft support project

Project Objectives:
This project (started in December 2024) aims to strengthen a component established by ADF in 2022: the support and development of a local crafts sector. The identified artisans work in precarious conditions, their opportunities are limited, and their know-how is rarely passed on to younger generations. Based on this observation, ADF initiated a program and now aims to strengthen it by locally supporting the training and sale of these artisanal products.

This project aims to establish a local sales point in the local community tourism centre (CBTC) in the village of Anlong Thom and to develop two local production workshops in the same village, to promote and share the work of pandanus mat weavers, basket makers, and blacksmiths. The Anlong Thom CBTC attracts several hundred visitors each year, and these artisans are already included in the tours offered by the centre. However, their working conditions are difficult and do not allow the transmission of their know-how.

This sales point and workshops for local craft products will generate more income for artisans and enable the training of more villagers with master craftsmen and students already identified and eager to receive training. The income that some artisans have earned since the beginning of this project has motivated several villagers to be trained in these endangered skills. These products have been marketed since the beginning of 2022 by Kulen Crafts, a company formalized by ADF in February 2024, whose profits are already being used to promote this sector and purchase certain raw materials and equipment. Ultimately, the profits should ensure the autonomy of this organization and allow for the hiring of a manager, currently paid for by ADF thanks to funding from the French NGO HUMY.

Context/Diagnosis:
Today, the Kulen Plateau is populated by over 4,900 inhabitants, spread across about ten villages. Most of the villagers are subsistence farmers who practice slash-and-burn cultivation to grow upland rice. Over the past 15 years, this practice has been replaced by permanent cashew nut cultivation, further threatening the park's biodiversity. Some of the older villagers create high-quality handmade crafts, sold at low prices and in very small quantities: mats, baskets, brooms, rattan and bamboo fishing traps, as well as blacksmith knives and cutting tools. This tradition will quickly disappear if it is not passed on to the younger generation and supported by a larger market. Each product is unique; some are made seasonally, but all are the result of several weeks of labour and passion.

As part of ADF's alternative livelihoods program for the villagers of Phnom Kulen, these local, environmentally friendly handicrafts have been identified as a source of income. Thanks to support from the NGO HUMY and the incoming travel agency Terre Cambodge, ADF has been supporting these vulnerable villagers since January 2022 by introducing these items to a wider market through five points of sale in Siem Reap: the ADF office in Siem Reap, Frangipani Spa, Atelier Eric Stocker, Satcha, and Sala Bai – Hotel and Hospitality School (the latter opened in September 2024). This program also organizes training sessions so that elders can pass on their knowledge to younger generations, through training sessions in primary schools and among artisans.

By 2024, ADF has identified more than 70 artisans spread across eight villages, including 15 in the village of Anlong Thom: five mat weavers, two basket makers, three blacksmiths, four cotton spinners, and one bamboo straw maker.

The goal now is to develop this sector in one village, Anlong Thom, by providing better working conditions in rehabilitated workshops (blacksmithing, mat and basket weaving), capable of offering training by master craftsmen to apprentices (all identified) and promoting these products through a local point of sale, at the CBTC in the village of Anlong Thom. Support for cotton spinners could be further developed, based on the results of this project. Similarly, a similar workshop could also be set up in the village of Sangke Lak. It also aims to promote artisanal activities that generate income for elderly and often disadvantaged populations, while presenting an alternative to destructive crops taken from the forest, thus reducing human pressure on the biodiversity of Phnom Kulen National Park. The plants collected for these artisanal objects are non-timber products (pandanus, bamboo, etc.) or fragments or stumps of already cut wood (knife handles or sheaths).

Local Partnerships:
ADF will be responsible for project implementation, selecting contractors for the work to be carried out, ensuring the proper execution, ensuring regular use of the created spaces, regular training of apprentices by master craftsmen, and social media communication.
Kulen Crafts will be responsible for marketing the products produced and ensuring the proper management of profits so that they can be reinvested in promotion and any additional equipment needed, as well as social media communication.

Members of the Anlong Thom village CPA (a community protected area, a village forest they manage) will be responsible for sourcing and transporting the timber needed to renovate the two workshops. This timber will be harvested from fallen trees, not cut down for this purpose. Local contractors will be consulted to prepare quotes and selected by ADF to carry out the planned work.

The incoming and solidarity travel agency Terre Cambodge already has several tours that systematically use CBTC services and visits with artisans. These tours are notably used by TDS clients. These tours will therefore continue under improved conditions, with the creation of these workshops, offering travellers the opportunity to participate in short training sessions and interact with artisans. The CBTC in Anlong Thom will offer a sales point, and its teams will lead visitors to the two workshops during the treks chosen by the visitors.

Direct and indirect beneficiaries:
14 people: 4 master craftsmen (2 for mats, 1 for baskets, 1 blacksmith) identified in the village of Anlong Thom) and 10 apprentice craftsmen (3 for mats, 3 for baskets, 4 blacksmiths). They will be supported with a per diem for each training given and received. Members of the Anlong Thom CPA (17 people, including 3 women). Members of the Anlong Thom CBTC (12 people, including 3 women): 9 local guides, 3 cooks, and 60 motorcycle taxis.

Involvement of local communities:
The master craftsmen identified by ADF have agreed to make the two spaces dedicated to the workshops available. The CBTC has agreed to transform the unused office space into a point of sale for artisanal products. Local contractors were consulted to prepare the quotes. All of these stakeholders will be involved in the project's completion.

Nature of the investment:
Creation of a point of sale at the CBTC in Anlong Thom:
This involves transforming an unused office into a point of sale for artisanal products. This involves opening a large window in a wall (with a locking system) to provide greater visibility from the CBTC reception area, installing fixed and movable furniture (shelves, tables, hooks, etc.), laying floor tiles, and designing and printing promotional materials (signs, brochures, catalogues, etc.). The CBTC must be able to open independently from the shop. The CBTC office, if necessary, will be relocated to the CBTC's existing storage area. The contractor will be selected locally in the village, and materials will be sourced locally.

Renovation of a traditional house into a mat and basket weaving workshop in Anlong Thom:
The project involves transforming a traditional house into a workshop for mat and basket weavers, for the production and training of apprentices. This involves replacing some wooden posts and raising them on concrete bases, opening up a south-facing facade with a canopy, closing off the old access points, replacing the roof with a sheet metal roof, laying tiles on the ground floor, installing fixed and removable furniture (shelves, tables, hooks, etc.), and designing and printing promotional materials (signs, brochures, catalogues, etc.). The contractor will be selected locally in the village, and materials will be sourced locally.

Renovation work on the blacksmith's workshop in Anlong Thom:
This project involves renovating a shelter serving as a blacksmith's workshop into a proper workshop for the production and training of apprentices. This includes replacing some wooden posts and raising them onto concrete bases, replacing the roof with a sheet metal roof, purchasing equipment (anvil, pliers, hammers, etc.), and connecting the equipment to the village's electrical grid.

Training costs:
These will be partially covered by the project (per diem for apprentice blacksmiths, basket makers, and mat makers + per diem for one mat weaving instructor) and then funded by HUMY in 2025 and profits generated from the sale of handcrafted items.

All of the construction work and training-related expenses will be supervised by the ADF team.

d. Hygiene and sanitation program/Emergency Relief

The WISH 2 project: Hygiene and sanitation program in five primary schools

WISH 2, 2024 (=year 4) summary report.
The main purpose of this report is to outline the activities of the WISH-2 Project funded by the Almayuda Foundation, carried out by the ADF team, together with our stakeholders (community members, school principals, teachers, and school children) at five primary schools in Phnom Kulen National Park (PKNP).

The previous report, the "WISH 2 Jan 2023-June 2024 report" provides an overview of the project's progression from January 2023 to June 2024, incorporating feedback from principals and teachers. It also offers suggestions for future enhancements.

This report details the activities of the WISH-2 Project from July to December 2024, funded by the Almayuda Foundation, carried out by the ADF team and stakeholders at five primary schools in Phnom Kulen National Park. The project involved community members, school principals, teachers, and children. This report outlines the activities completed, specific objectives from 1 to 9, and the results of each one.

Reminder: the WISH 2 purpose
Access to clean water, proper sanitation, and effective hygiene practices are crucial for children's well-being, as water and sanitation-related diseases are leading causes of illness and death globally and in Cambodia. Promoting good hygiene and sanitation can protect children and prevent serious health challenges.

Schools are ideal for promoting WASH practices due to their concentrated environment, allowing for long-term positive behaviour change. These programs develop sustainable hygiene practices, reduce disease transmission, and improve child health. They provide a platform for delivering WASH messages and establishing long-term healthy habits, making them crucial for promoting healthy habits among children.

Projects Goals
None to low cases of water-borne diseases leading to a reduction in student absenteeism in school. The promotion of preventative hygiene. Inclusive environmental education methodologies, in five village primary schools. In combination with increased upgraded water systems, the project plans to increase sanitation and hygiene facilities to foster health hygiene behavioural changes in five villages.

Project inception, introducing the project to all stakeholders
RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in detail in the first progress report, covering the period from January to October 2021. The WISH 2 project is conceived as a 4-year project, from 2021 to 2024.

Conduct a baseline survey
RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in detail in the first progress report, covering the period from January to October 2021. It was implemented from November 2020 to January 2021.

WISH 2 Project management, oversight and accountability
RESULTS:
The WISH 2 project has achieved its objectives, as detailed in progress reports from 2021 to 2024. These reports cover various periods, from January to October 2021, November to December 2021, January to October 2022, November to December 2022, and as well as a summary report in October 2023. Additionally, the detailed progress report from January 2023 to June 2024 provides a comprehensive narrative of the activities and results achieved during those periods. The WISH 2 project, which aimed to improve access to clean water, and sanitation facilities, and promote effective hygiene practices among children in target schools, underwent improvements and adjustments from July to December 2024. Management promoted accountability through monthly reports, fostering trust and confidence in its operations. The project's commitment to transparency is evident in its progress reports.

The second part of 2024 focused on providing additional WASH skills to the ADF team members, as suggested in the previous reports and evaluations.

In June 2024, the ADF team conducted a field exposure for principals and teachers from target schools, including Anlong Thom with a total of 26 participants, to observe successful school management practices and create a clean, healthy learning environment at Kravan Primary School in Angkor, with the aim of improving hygiene and environmental standards at schools in PKNP.

TRAININGS of ADF WISH Team and key stakeholders of the WISH project:
During the reporting period, after the school vacation in October 2024, the ADF WISH Team and key stakeholders in the WISH project were able to attend two capacity-building training workshops:
On November 20 and 21, 2024, the ADF WISH team (Ms. Loem Nimul and Ms. Morn Phet) attended the "Learning Exchange on Bio-Sand Filter" workshop at Angkor Paradise Hotel in Siem Reap, organized by the WASH Skills Development Organization (WASH SDO). Around thirty persons attended the course, including eleven women. The representatives from the Siem Reap Provincial Department of Rural Development, CAWST Canada, ENPHO Nepal, and a variety of other organizations attended this importance-sharing event. The forum featured presentations, discussions, and sharing about the filters, as well as school and family study tours. All attendees enthusiastically participated and learned a lot about Bio-Sand Filters. We gratefully thank the WASH SDO, and the Provincial Department of Rural Development for organizing this valuable workshop.

On November 26, 27 and 28, 2024, the ADF WISH team (Ms. Loem Nimul and Ms. Morn Phet) attended the Drinking Water Quality Testing (DWQT) training session, which was hosted by WASH SDO at the Biolab Coffee & Office in Siem Reap City. The Centre for Affordable Water and Sanitation Technology (CAWST) is providing this beneficial training. Among the subjects covered in this training session are risk assessment, water sampling, water quality testing, and water quality and health. Seven women were among the fourteen individuals who attended the course.

Procurement of WISH 2 supplies, provisions, materials
RESULTS:
This objective is being successfully achieved. The progress reports from January to October 2021, November to December 2021, January to October 2022, November to December 2022, and January 2023 to June 2024, narrated results and the progression of activities in detail.

Based on the changing needs of the communities and schools, the WISH 2 project continuously improved and modified its WASH practices from July to December 2024. By taking an adaptable approach, the initiative was able to optimize its impact and successfully handle new problems.
The WISH team identified and obtained the necessary supplies for WISH 2 during the reporting period, before the start of the new academic year on November 1, 2024. The tasks involved in the procurement of necessary hygiene materials include (toothbrushes, tubes of toothpaste, soaps, nail clippers, and bottles of disinfectant toilet cleaner) distributing them to five schools (TP, SL, KK, PP, and PT) and 410 students, 196 of whom are female. The steps in the process include locating suppliers, verifying costs and amounts, determining the required materials, and placing the order. Delivery logistics, together with proper packaging, are also crucial.

Rehabilitation, construction and maintenance of the WASH facilities in the targeted schools
RESULTS:
Once installed, maintaining the school's water sanitation, and hygiene facilities is crucial to ensuring their continued functionality. The dedication to continuous maintenance is essential to the success of our WASH infrastructures in five remote primary schools. To keep these essential facilities from deteriorating and to protect the kids' health and safety, they need to be regularly inspected, cleaned and have small repairs made. By giving schoolteachers more authority and training the ADF WISH team in basic maintenance skills, we've encouraged a feeling of accountability and ownership, which will help ensure these vital resources remain sustainable over time.

In April 2024, a new water system with HDPE pipes was set up in Phum Thmey, to connect the main village reservoir to the primary school.

On the 5th of June 2024, a meeting was organized at Khlah Khmum village to address water issues, as villagers regularly blocked the water to go to the school by closing a tab. About 50 villagers attended, as well as the commune chief, the village chief, the teachers of the school, the village security members, the police representatives and the ADF team. The main water systems distributing water to the village were described to the population. Two actions were proposed and implemented in July 2024: 1) Fix the old water system from the source n.2 for the UNEP tree nursery reservoir with changing taps, in coordination with village committee, 2) If budget was available, a HDPE pipes system should be installed from the source directly to the school, with no access permitted to other families, to insure permanent water to the school. As budget was not available, it was proposed in the WISH 3 project proposal (2025-2028).

In June 2024, a new water reservoir with a filtration system was built at the source for Sangke Lak Primary School, and the whole PVC pipe network was rebuilt with HDPE pipes. After the new water reservoir with a filtration system was built in June 2024 at the source for Sangke Lak Primary School, the whole PVC pipe network was rebuilt with HDPE pipes. Nearby households requested that the school and ADF permit a connection from the school's water line to their homes. The ADF WISH team worked with the school and inhabitants to connect water to the dwelling houses in January 2025. The new water filtration system then benefits 22 families (105 persons).

During the October 2024 school vacation, the ADF WISH team examined the hygiene supplies and facilities at the five schools (Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey), paying particular attention to the wash bays, the sources, and the sanitation supplies. The ADF WISH team, working with the principals and teachers, repaired the water taps at the Ta Penh primary school wash bay. In Khlah Khmum primary school, the team replaced the pipes connected to a leaky reservoir behind the wash bay (and destroyed it), allowing the pipe to be connected directly from the upper and more recent reservoir, located to the North-West of the school, to the wash bay. They also installed a protective metallic cover for the source of Phum Thmey Village, capturing water for the benefit of the school and the entire village.

Additionally, to guarantee that the supply of drinking water for schoolchildren is clean and safe, the ADF WISH team assessed the quality of water filters. While the cover and other parts of the water filters were still in good condition, we discovered that the majority of them required the replacement of clay/ceramic pots. In December 2024, 19 clay/ceramic pots were purchased; these pots will be sent to each school for replacement in 2025.

Preventative sanitation hygiene (WASH) health care educational training
RESULTS:
From January to December 2023 and then from June 2024 to December 2024, the implementation of these sessions was done by the teachers at each school and ADF staff (each teacher responsible of his class), using the functioning wash bays. These training sessions are repeated on a daily basis, 6 days per week. Monitoring was undertaken on a regular basis by ADF WISH team, not only to ensure the activities were undertaken, but also to improve the training, making the activities more exciting, user-friendly and relevant.

Health prevention is far more advantageous than cure, as it strives towards student absenteeism, one WISH's 2 objectives. This central objective is being achieved with the support of Phnom Kulen's health centre staff, who visit all 4 primary schools 1 time per month and check on the health and well-being of the students, with their medical expertise and resources.

In order to ensure sustainable behavioural change, ADF is strongly encouraging schools and their communities to adopt regular Hand Washing With Soap (HWWS) as when applied regularly will serve as a barrier for further transmission of communicable diseases including COVID 19 (see below environmental education).

This critical objective is to prevent the spread of infectious diseases and helping children to have long and healthy lives. It also prevents them from missing school, resulting in better learning outcomes. A better hygiene means avoiding illness and spending fewer financial resources on healthcare.

Conduct a mid-term evaluation
RESULTS:
The midterm Evaluation was implemented from 28th of November 2022 for a period of 4 weeks. The midterm evaluation report was sent to ALMAYUDA FUNDACION, together with the "WISH 2 NOV-DEC 2022 Report" in December 2022 (see ADF 2022 report).

Environment education in the targeted schools
RESULTS:
In all 5 primary schools WASH facilities & their surroundings are cleaned every day. The clean-up day happens on every Thursday, where the whole school compound is cleaned & rubbish is burnt in the WISH incinerators. Children collect rubbish, teacher burn them.

There is a system of garbage collection since 2022 for the schools of Ta Penh and Sangke Lak, every Thursday. In these 2 schools, plastics are therefore burnt in the school's incinerator. Access road to Sangke is not possible for the truck, so ADF car brings the Sangke garbage to Ta Penh school. For Popel, and Khlah Khmum schools, wastes are burnt in the school's incinerators. When necessary, at Phum Thmey school wastes are also burnt in the school's incinerators in the event that the garbage collection truck fail to pick up the waste.

The ADF WISH team and schoolteachers continued the promotion of hygiene practices in targeted schools, including tooth brushing and hand washing, as part of environmental education, on a daily basis. Regular Hand Washing With Soap (HWWS) is a crucial practice in preventing communicable diseases like COVID-19, ensuring healthier lives for children and communities. These training sessions are repeated daily, six days per week, to protect children from preventable illnesses and allow them to attend school regularly. By fostering a culture of regular handwashing, following the aims of the WISH 2 project to reduce infectious disease incidence, ease the healthcare system burden, and contribute to a healthier society. The ADF WISH team encourages schools and communities to adopt handwashing as a routine practice, ensuring its long-term impact on health and well-being.

In addition, the ADF WISH team continued to work with schoolteachers and the rangers of the Provincial Department of Environment to promote sustainable waste management in Phnom Kulen National Park. Weekly rubbish collection activities take place at five schools at schools, along village roads as well as the main route in the commune. Teachers and the WISH ADF team teach correct waste collection practices and educate students and communities about plastic pollution. The gathered waste is subsequently transported to the main incineration facility in the commune. When the garbage collection truck cannot reach the villages, the rubbish is disposed of in the school incinerator. During this reporting period, waste collection activities were held 18 times at Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey Primary Schools and villages, with 744 students, including 376 females. For the entire year 2024, waste collection activities were held 37 times at Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey Primary Schools and villages, with 1652 students, including 835 females, participating in this important environmental awareness activity

Preventing environmental pollutants can help to prevent health issues such as respiratory and waterborne infections. These practices teach children about the significance of the environment and give them the tools they need to live eco-friendly, sustainable lifestyles.

End-line evaluation:
RESULTS:
This specific objective was being planned for the end of the WISH 2 project, at the end of the year 2024.

Due to limited budget and the impossibility of having Mr. Dave Sandilands coming for an in-depth final evaluation, ADF addresses this by assessing each school situation.

Water System Issues:
After we put the cover to protect water in the reservoir, the water system at Phum Thmey is adequate and clean. Bathrooms Phum Thmey Phum Thmey have 4 rooms, but only one is used and is not clean. Teachers and students at Phum Thmey often fail to conduct WASH activities when the ADF WISH team is absent. The Khlah Khmum primary school water system being still connected to the village water system and the villagers being careless (connection to these pipes without authorization & no systematic closure of tabs when not used or no tabs at all installed), there are water shortages at school during the dry season.

School Environment and WASH Activities:
Teachers at Popel and Ta Penh are less committed to WASH activities when the WISH team is absent. Teachers are less committed to waste collection activities when the WISH team is not present.

Nail Clipping Materials: Schools often lose or break materials for nail clipping, affecting hygiene. Teachers often do not facilitate nail clipping, unless the WISH team facilitates it.

School Organization and WASH Maintenance:
Schools rely heavily on ADF for maintenance of WASH water systems and equipment. School principals and teachers are not so much responsible for repairing these systems.
Waste Management and Plastic Pollution: School children need more time to understand waste management and plastic pollution. School sellers also lack understanding about waste management.

Following an assessment of the situation in each school and discuss with all stakeholders (school principals, teachers, and the health centre), here are the key themes of the WISH 2 project overview and viewpoint for designing the WISH 3 project:
The WISH 1 and WISH 2 programs enhanced hygiene in five (5) primary schools (Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey).
There were over 419 students and 19 teachers who benefitted from environmental education, illness prevention training, and basic hygiene infrastructure during the last year. The WISH 3 project proposes expanding WASH operations to three primary schools (Preah Ang Thom, Anlong Thom and Thma Chruogn) in Khnong Phnom commune and monitor the previous schools.

At the previously targeted schools:
The WISH team assessed the WASH facilities at five schools (Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey) built during the WISH 1 & WISH 2 (2018 to 2024), and found that they were in good condition, needed only minor adjustments, and yet needed upgrades and modifications.

The Khlah Khmum primary school should be connected to a new water system with HDPE pipelines spanning over 900 meters from the source to the school. This renovation is intended to prevent future water shortages and maintain a consistent, efficient water supply. The principal, teachers, and community members will be invited to help dig the trench. To upgrade the source at Phum Thmey village with a shelter and gates to minimize contamination from roaming animals, especially pigs.

At the three new schools:
The WASH facilities will be constructed/renovated during the WISH 3 project term to support the expansion of three "new" schools (Preah Ang Thom, Anlong Thom primary, and Thma Chruogn).

A 300-meter HDPE water reservoir and system will be built at Preah Ang Thom primary school, including solar panels and a pump. A wash bay will also be improved for 321 kids, with increased facilities and water filter distribution.

The Anlong Thom primary school will be connected to the water system, upgraded with an additional wash bay for WASH facilities and water filters distributed to 309 students.
In Thma Chruogn village, the following work should be done; connect the water system from the Thma Chruogn water committee to the Thma Chruogn primary school, build a wash bay to use as a WASH facility and distribute the water filters to the school (17 students).

Hygiene outreach to villagers:
Selection of Village Health Facilitators (VHFs) in targeted communities (2 VHFs per village) to receive coordination training and ask locals to attend the outreach awareness meeting. Organize a monthly health education for the locals. VHFs assist in monthly following up with villages by evaluating the change in their habits after each training.

An exchange of experiences, such as an exposure visits to another environmental cleanliness community for VHFs. Supporting 15 emergency cases per year for the poor people to other Hospitals in Siem Reap.

<u>WISH 2 project challenges and constraints</u>
For the year 2024, they remained the same as in 2023, please refer to the ADF 2023 activity report.

<u>WISH 2 Conclusion and perspectives</u>
The impactful WISH 2 project has made a significant difference in enhancing the quality of life for 429 students and 2140 indirect beneficiaries, including their parents, relatives, and neighbours, in the Khnong Phnom commune. By concentrating on enhancing water, sanitation, and hygiene (WASH) conditions in five rural primary schools, the project has not only upgraded infrastructure but also enabled 19 local principals and teachers to assume leadership roles in implementing and maintaining these vital improvements. Here's a closer look at our accomplishments:

Providing clean water for healthier lives: ADF has constructed new water infrastructure in Phum Thmey and Sangke Lak primary schools and upgraded existing facilities in four primary schools (Khlah Khmum, Popel, and Ta Penh), ensuring that students have consistent access to clean water. As a result, there has been a noticeable decrease in waterborne illnesses, leading to substantial improvements in overall student health.

Upgrading sanitation for a safe learning environment: By improving sanitation facilities in the five rural primary schools, we have created a significantly safer and healthier environment for students and teachers. This has resulted in a reduction in the spread of infections and a more conducive atmosphere for learning.

Empowering for sustainability: Through training, ongoing support, and involving local principals and teachers in decision-making, we have instilled a sense of ownership over WASH facilities. This approach ensures that the essential improvements will be sustained long after the project's conclusion, guaranteeing a healthier future for countless children.

Improving learning conditions for better futures: The enhanced WASH conditions have directly impacted student attendance and academic performance, creating a more conducive learning environment. This positive impact on education has the potential to empower children to contribute to a better future for their communities.

Looking to the future: Moving forward, we will continue to monitor the impact of the project and leverage these achievements to ensure sustainable, long-term improvements in WASH for schools in Khnong Phnom commune, PKNP. The WISH 2 project serves as a powerful example of the transformative power of community collaboration and the essential investment in a healthier future for all.

With all these points in mind, the ADF team strongly recommends that the WISH-2 project continues to work towards achieving its objectives by a redefined project who could be submitted to Almayuda Foundation at the end of 2024. It has already been discussed with ADF team during and Almayuda representatives visit in October 2023.

For the next phase (WISH 3, 2025-…), a diminution of the supported activities for each school included in the WISH 1 and 2 projects (just a regular follow up and support for materials and equipment maintenance) could be foreseen.

Sustainability by taking ownership (by the teachers) of their equipment's, hygiene habits for children, and waste management activities.

It could also include the Anlong Thom primary and secondary schools (523 students), where there is no hygiene project presently implemented. Additionally, the next WISH project could also include the Thma Chruogn village school (Kinder Garden with only 17 kids).

Training of teachers, particularly the recently appointed ones, and ADF staff.

Disseminate hygiene education to parents: this point will be one of the main challenges for the next years and was raised by most of the principals, mentioning for example and in some cases dirty uniforms and bad hygiene practices at home.

Workshops or training session focusing on proper waste disposal and addressing the issue of plastic pollution in villages.

Monthly disease prevention lessons (by nurse in schools) + menstruation hygiene (both implemented in 2022 by ADF with SEAF funds).

Additional upgrades of existing water system (Khlah Khmum school…) and WASH facilities (dish washing area for the kitchen at schools).

Emergency support budget is always fully used for poor families for extreme health issues. If possible, this support should be continued and eventually expended to support more cases.

Emergency Relief support and collaboration with Khnong Phnom Health Centre in Anlong Thom

The Khnong Phnom Health Centre in Anlong Thom is the only public health facility for the population of this commune (4,926 inhabitants in Dec. 2022). ADF hold monthly meetings to coordinate activities. The Wish 2 project is implemented in close collaboration with the centre. As every year, a coordination meeting with the health centre staff and ADF team was hold (in January 2024) to determine the needs of the centre (both material and financial) and to agree on following the Emergency Relief support.

Since 2024, the ALMAYUDA Foundation has supported a budget line for emergency cases in which poor families face serious health concerns and require transportation and hospitals in Damdaek, Sotr Nikum, or Siem Reap. In most cases, these poor families have no transportation mode to travel this distance, the roads are in bad conditions, and don't have enough financial resources to buy food while in town.

In 2023, it was previously supported by the SEA Foundation. Between January and December of 2024, 11 people received assistance. They include cases of appendicitis, head trauma, fractured clavicula, stomach problems (x 2), miscarriage, follow-up for a prosthesis after a foot amputation, placentation after birth, severe head injury, chest X-ray (broken wood fell over), vaginal infection, and bleeding. During the reporting period, a total of $547.50 was spent.

Finally, ADF was also given on regular occasions some clothes by friends to distribute to the poorest families identified by the team.

The Water for Phum Thma Chruogn project (WPTC)

In 2023, ADF has conceived a project (Water for Phum (village) Thma Chruogn (WPTC) responding to the demand of the villagers from Thma Chruogn, a water system to provide clean water for the households. It was submitted in April 2023 to the Veolia Foundation, whose representatives visited the site on the 28th of November 2023. The starting date was foreseen as 2024.

However, due to missing technical information from the donor, notably the planning of a new water system involving the whole population of the village after a new census, it was not possible to implement it in 2024, despite reviving funds from Veolia in July. The new water system model should be designed by Veolia experts in 2025 and the project started before the end of 2025.

The WPTC is a participatory project to set up a water system for the entire Thma Chruogn village, on the plateau of Phnom Kulen National Park (PKNP). The WPTC project comes to reinforce a dynamic initiated by ADF since 2012, setting up numerous gravity water systems for villages and primary schools in PKNP, in the framework of nutrition and hygiene and sanitation projects. The WPTC project will focus exclusively in Thma Chruogn village in Khnong Phnom commune (9 villages), from the Svay Leu district, in Siem Reap Province, Cambodia; providing clean water to more than 350 inhabitants (73 families).

e. Educational support

The objective is to enhance local school facilities and resources, to provide a favourable educational environment in Khnong Phnom commune. If appropriate, facilities are built to create a conducive learning environment that entices the children to come to school and learn, as opposed to staying at home and/or working on the subsistence farms. ADF provide infrastructures according to the teacher's needs.

The small SEAF 3 K project

ADF received from SE Asia Foundation the amount of USD 2,990.00 US$ on the 27th of March 2023 for a complementary project supporting ADF library (2022 SEAF 3 project, "Quick Impact Library Project Phnom Kulen Primary Schools "). After agreement with SEAF, ADF spent only a part of this budget in 2023 for emergency cases (see above, Emergency Relief support and collaboration with Khnong Phnom Health Centre in Anlong Thom). The left over (2,325.25 US$) was not used in 2024 and still has to be used in 2025.

The SEAF 4 project: Phnom Kulen School Libraries and English classes Project

This project aims to enhance libraries for 6 primary schools (Popel, Khlah Khmum, Sangke Lak, Ta Penh, Anlong Thom and Phum Thmey) and the only secondary school of the Khnong Phnom commune (Anlong Thom), and to support English classes by local teachers in 5 primary schools for 3 years (Phum Thmey, Khlah Khmum, Sangke Lak, Ta Penh, and Anlong Thom). All of them are located in Phnom Kulen National Park, Siem Reap Province, Cambodia.

BACKGROUND: This project was built upon the activities started by ADF thanks to the South-East Asia Foundation (SEAF) support to set up the Popel Library in 2022 and to support English classes from January 2022 until June 2023. It has been developed and follow up by ADF team, with the technical support of SIPAR NGO.

PROJECT DATE and DURATION: Jan 2024 to Dec 2026; 36 months.

PROJECT FOCUS AREA: Libraries upgrades and training of teachers to manage their libraries in 6+1 schools, English classes in 5 primary schools Khnong Phnom commune.

Problem statement and background, reminder:
Phnom Kulen primary schools are often located in isolated villages due to road conditions and there is only one secondary school for the whole population (4926 pers., Dec 2022, Khnong Phnom commune data), providing teaching from 7th to 9th grade only (i.e. not the last three years of the secondary school, from 10th to 12th grade). This secondary school is located in Anlong Thom and kids from other villages located miles away often do not continue their study. These schools do not have the financial resources to upgrade their libraries and facilities, and little support from the Cambodian Government.

Despite 2 important projects funded by SEAF and implemented by ADF (SEAF 1 project in Khlah Khmum and Sangke Lak primary schools, from September 2018 to November 2019; SEAF 2 project in 5 primary schools from March 2021 to March 2023), where many infrastructures where built and English classes supported, there is still a lot to be done. A third project (SEAF 3, Quick Impact Library Project) allowed to build and set up a library in Popel primary school in 2022.

Targeted schools and benefits for the beneficiaries and the area:
This project focuses on enhancing libraries for the young pupils and their teachers from 6 (out of the seven) primary schools on the plateau of Phnom Kulen: Phum Thmey, Popel, Khlah Khmum, Sangke Lak, Ta Penh and Anlong Thom villages; and 1 secondary school (Anlong Thom) located in Phnom Kulen National Park, Khnong Phnom Commune, Siem Reap Province, Cambodia. It would also provide English classes to the students of Phum Thmey, Ta Penh, Khlah Khmum, Sangke Lak and Anlong Thom.

The pupils and teachers of 7 schools (1 secondary, 6 primary) will be the direct beneficiaries of the project. This represents: 90 children (including 31 girls) and 4 teachers at Sangke Lak primary school; 146 children (including 82 girls) and 6 teachers at Ta Penh primary school; 52 children (including 24 girls) and 3 teachers at Khlah Khmum primary school; 95 children (including 42 girls) and 4 teachers at Popel primary school; 27 children (including 17 girls) and 2 teachers at Phum Thmey primary school; 309 children (including 144 girls) and 12 teachers at Anlong Thom primary school; 207 children (including 131 girls) and 5 teachers at Anlong Thom secondary school.

The total number of beneficiaries will be 926 children (including 471 girls) and 36 teachers (including 18 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 12th of November 2024).

To build and expand on these previous projects, this project aims to enhance the existing libraries and support English classes by local teachers for 2 years. To assess the library situation in each school, ADF has invited in January 2023 SIPAR NGO (https://sipar.org/en/; specialized in library set up and management) to visit the 7 schools. This assessment has shown that despite previous activities, the libraries need to be better equipped with proper furniture, books replaced, and teachers trained. SIPAR has provided a budget corresponding to equipment and training which was integrated into this project. English classes at Popel primary school are already supported by Kulen Outreach NGO and Anlong Thom primary school students have classes from the secondary teacher. The other schools do not have any English classes since the SEAF 2 project stopped.

All activities were defined according to the needs of the schools and determined together with the principals and the teachers, after the ADF and SIPAR evaluation. ADF is acting as a relay between the schools' needs and the financial resources.
Schools are the most important places for children to play, learn, and grow, acquiring essential skills, and positive behaviours for their lives. Promoting libraries, reading habits and English classes in schools with a good learning environment, allows children to make the most out of their education.

Teachers benefiting from this environment with associated libraries for which they have been trained to manage will be more motivated to teach and will have less chance to ask for a new assignment, insuring a low turn-over. Children will progress with daily English classes in 5 primary schools.

Project goal, purposes, objectives & results, reminder:
The project goal is to improve 7 libraries (with new books, adapted furniture and training for teachers) in 7 schools in Phnom Kulen (6 primaries and 1 secondary) and to support English classes in 5 primary schools. It will provide an attractive and friendly environment for school children to excel, will ensure schools are becoming a pleasant place to learn and reply to the explicit demands of the children and their teachers.

The project objective is to reach higher education standards in these 7 schools by providing functioning libraries and English classes for 3 years.

The expected results are 7 functioning libraries in Phnom Kulen schools, all furnished with books and furniture, with children regularly reading and borrowing books, and teachers trained to manage their libraries. With the daily English classes given to children in 5 primary schools for 3 years, their English level will significantly improve.

Project Inception:
The project was introduced to all stakeholders (Principals, teachers and school committees, parents) explaining the purposes, objectives, roles, responsibilities assigned.

On 18th January 2024, the ADF team (Rapich, finance, admin & Communication, and Samry, school program supervisor) attended a full-day training workshop organized the CLLC Network/ SE Asia Foundation at Mémoire hotel in Siem Reap on the topic "Fueling Your NGO." The workshop aimed to teach leaders of successful Cambodian NGOs about sustainability, focusing on leadership, engaged staff, and funding as three crucial pillars. Leaders shared ideas and learned from other NGO team members.

On the 27th January 2023, the SIPAR team from Phnom Penh was invited by the ADF to visit the 7 schools in Khnong Phnom commune, Phnom Kulen National Park, to assess the need and resources for the seven libraries to be setup in 2024.

During January and February 2024, the ADF team held different meetings at each school to disseminate the objectives and activities of the English and Library project to relevant stakeholders such as local authorities, school principals, teachers, school committees, and parents (all seven target schools). This ensured effective and sustainable project implementation by involving all stakeholders, including relevant authorities, schools and villages.

ADF Director and Admin officer prepared a job description and a contract for the library & English coordinator position and put job announcement on ADF's website and social media page. The library & English coordinator was interviewed, selected and recruited.

A telegram group was created with all school principals and teachers and ADF and a telegram group for only English teachers (in case English teachers require fast support when giving English classes). The objective is to exchange and report on daily activities with pictures and figures.

Library project:
The ADF team contracted a local builder for the construction in February 2024 of a storage room for the Sangke Lak school. The existing library was also used for storing materials, rice and tin cans for breakfast, and occupying a large section of it. In order to free this space and allocate the whole building solely to the library, the SEAF supported this construction within this project.

The ADF team organized a four-day training on library setup and administration at Anlong Thom Primary School, supervised by SIPAR NGO, from 11th to 14th March 2024. There were 27 participants, including school principals and teachers from 6 primary schools and 1 secondary school. The purpose was to help school principals and teachers/ librarians improve their library management abilities as well as their understanding of libraries.

The ADF team coordinated with school principals and teachers to install library materials (shelves, tables, chairs, books, posters…) at 7 libraries of the 7 schools. The total library items and supplies for the 7 libraries included 3,135 books, 9 reading tables, 2 librarian chairs, 2 librarian tables, 4 one-sided bookshelves, 4 two-sided bookshelves, and 1 cabinet, as listed in the "indicators" table for each school.

On 26th of June 2024, the ADF team hosted an exposure day for school principals and teachers from the 7-target primary and secondary schools in Khnong Phnom commune at Kravan Primary School in Nokor Thom commune, Siem Reap. This exposure brought 27 participants together, including the ADF team, to learn about school management and cleanliness, as well as an exchange visit to the school library. This exposure is funded by Eau Kulen. It is relevant to the "Phnom Kulen School Library and English classes Project" since it assisted instructors in discovering new ideas about how to manage and take action in the library in order to create a more favourable environment for the project.

The ADF team monitored the library activities for each school as detailed below: Organize and assist the teacher to decorate the library for primary schools and the secondary school; Help teacher to organize the library schedule for each grade; Teachers/librarians track student engagement with books by recording the number of students reading on a "library student attendance list". This data is then compiled and reported to the ADF team, often on a weekly and monthly basis; The ADF team did the short presentation on library and English project about the ongoing activities at each school since we had started until now; The ADF team joined the annual library meeting with all the teachers for each school; The ADF team edited, printed, and shared to each library the 2 recording books to the seven-library to record attendance and borrowings; The ADF team assisted to give a colour code to the books by applying what we had learnt from the library training with SIPAR. A colour represents each grade; The ADF team assisted the teacher to install 7 library signboards outside each library, mentioning the name of SEAF and ADF in both Khmer and English; The ADF team followed up the 7-library weekly activities for each school; The ADF team recorded the 7-library entrance for each school both reader and borrower into one reliable Excel File (Borrower and Reader); The ADF team assisted the teachers to prepare and re-organize the library when it is untidy. An additional 50 books were given by SIPAR's Team and distributed equally to the 7 libraries.

When the team joined the CLLC Network's monthly online meeting, we update the SE Asia Foundation on the progress of ADF's Phnom Kulen School Library and English Classes Project.
The results can be detailed as below:
Popel Primary School: 436 reading books, 1 two-sided bookshelf, and 2 reading tables.
Phum Thmey Primary School: 288 reading books, 2 one-side bookshelves.
Khlah Khmum Primary School: 288 reading books, 2 reading tables.
Ta Penh Primary School: 288 reading books, 2 two-sided bookshelves, 3 reading tables, 1 librarian chair, and 1 librarian table.
Sangke Lak Primary School: 520 reading books, and 2 reading tables.
Anlong Thom Primary School: 989 reading books. 1 cabinet, 1 one-side bookshelf, 1 two-side bookshelf, 1 librarian table and 1 librarian chair.
Anlong Thom Secondary School: 326 reading books, 1 one-sided bookshelf, 2 two-sided bookshelves.

There were 27 participants (11 women) from 7 schools (6 primary and 1 secondary) joined the library setup and management training organized by the ADF and SIPAR teams. There were 27 participants (8 women) that joined the exposure day to Kravan Primary School.
During the school year 2023-2024, there were 1,057 students (503 females) who benefited from the library program.

Using the two data collecting books (reader data and borrower data) collected by teachers/librarians and the ADF English and library coordinator, we have the following data breakdown: from March to October 2024, 6,097 readers (3,472 females) from the 7 schools used the library's books or participated in the reading program; from March to October 2024, 618 borrowers (316 females) from the 7 schools borrowed library's books to read at home
English classes:
Daily English classes given to children in 5 primary schools: Ta Penh, Khlah Khmum, Sangke Lak, Phum Thmey and Anlong Thom primary schools, From Jan until 31st Dec 2024

The ADF team monitored the English class activities for the 5 primary schools (Ta Penh, Sangke Lak, Phum Thmey, Khlah Khmum and Anlong Thom). This includes: checked up with teacher's teaching methodology and strategy; evaluated the teacher's skills and did the classroom observation during the teacher's teaching demonstration; created and shared the lesson plan to the teachers; assisted the teachers with their teaching demonstration; helped teachers to propose some ideas to implement their teaching more effectively; created the course syllabus to follow up the English course book according to the public-school program; assisted the teachers to promote the English class; recorded the student's attendance every month; prepared the certificate for the outstanding students for the four schools four classes; launched an English class for both Anlong and Popel CBTC's members and ADF's team, 3 times per week.

In September 2024, Mr. Em Lihieng (English and Library Coordinator) helped develop the final exams for all four English classes. The test paper has been distributed to all English teachers, who were held the final for all students during September 2024, before the school holiday. As a result, just 21 of the 101 students who joined the English classes had a low score, while 80 received a good score or passed the exam. To enhance student performance in English learning and ensure that more students achieve better scores, future action should include improving English teacher teaching skills through professional trainings with the Teacher Development Support Organization (TDSO), improving teaching demonstrations, increasing student participation in classes (play games, reading, writing, pair and group work), and ongoing monitoring and follow-up by ADF team in case English teachers require quick assistance when giving their daily/ weekly English classes.

In October 2024, Mr. Em Lihieng had provided the English extra classes for the student who have a low score during their final exam. He joined the meeting with the school principals and teachers to discuss about the English class issues and some changing from the government. He prepared the student's name for outstanding and punctual students to finish the program. He handover the certificates and awards for the outstanding and punctual students during the new academic year (2024-2025) in November 2024. From March to October 2024, there were only 4 English courses in 4 primary schools, with 4 teachers (1 teacher in each school): Ta Penh, Sangke Lak, Khlah Khmum, and Phum Thmey primary school. From November 2024, there were 8 English classes in 5 primary schools, with 8 teachers (2 teachers in Anlong Thom, 2 teachers Ta Penh, 2 teachers in Sangke Lak, 1 teacher in Khlah Khmum, and 1 teacher in Phum Thmey primary school).

The Daily activities are posted by the English teachers in the Telegram group. The Teachers' attendance records for students in each English class.

In 2024, there were 101 students (69 females) who benefited from the program.

There were 12 English extra classes for 1 month (4 weeks) in October 2024 during the school holiday for 3 schools (Sangke Lak, Khlah Khmum, and Phum Thmey) with 3 different classes. There were 21 students (12 females), joined the English extra class, see the breakdown below: Phum Thmey: 8 students (5 females), Sangke Lak: 7 students (4 females), Khlah Khmum: 6 students (3 females).

Monitoring and reporting
This is organised with the following actions/activities: Weekly planning of English and Library by the project coordinator, weekly monitoring and follow up of English and library project, weekly activities briefing for the school program supervisor, monthly report and quarterly report.

The weekly planning has been prepared and shared with each school's teachers, principals, and ADF team. The E&L coordinator does weekly monitoring and follow-up to make sure that everything is operating smoothly and that all the schools are receiving enough support when they need it. The E&L coordinator completes a weekly activity briefing, which is shared with our school program supervisor. The school program supervisor and E&L coordinator prepared and shared a monthly report to the district and community authorities. The E&L coordinator has developed a quarterly report, which is shared with the ADF director and supervisor of the school program every three months to update the project progress.

Complementary projects for the Educational support

Other interventions implemented by ADF are also contributing to the hygiene and education of the students and to the environment of the schools. They are complementary to the WISH 2 project and are made possible thanks to ADF's multiple partners and global approach to the Phnom Kulen National Park. The other institutions, partners and donors contributing to the hygiene of the students and the environment of the schools are the followings.

ADF - AGRISUD International project
Since 2019, the joint project with AGRISUD International (see above, AGRISUD and ADF joint project in Khnong Phnom Commune) has been encouraging primary schools to grow vegetable gardens. In the schools of Ta Penh and Sangke Lak, this involvement was higher with distribution of equipment, seeds and a technical training. It was expended to Popel primary school in 2023. In 2 other schools (Khlah Khmum and Popel), only seeds were given. These vegetables are associated to the morning breakfast distributed by the World Food Program in rural areas, and in the case of Khnong Phnom Commune (except Khlah Khmum village), with the help of the Cambodian government, and previously Plan NGO. The school also purchase vegetables from local producers trained by AGRISUD-ADF team.

ADF tree nurseries: Tree 3 and HUMY 3 projects
Three primary schools are the beneficiaries of the project funded by Kulara Water factory (producing Eau Kulen): Anlong Thom, Ta Penh and Sangke Lak primary schools. Implemented by ADF since 2018 (Tree 1 project) and from September 2020 to October 2022 (Tree 2 project), these projects provided thousands of forest saplings every year for reforestation operations in Phnom Kulen National Park. The water system set up by ADF in these schools are providing water to both tree nurseries and hygiene facilities. The continuation of this project, the TREE 3 project is two 2 years, from February 2023 to January 2025. It was renewed for 2 years from February 2025 (TREE 4 project). These tree nurseries also act as environmental educational tool, as they are managed by the teachers and students. They are complementary of the WISH 2 project as they built awareness about environmental protection and regeneration. Additionally, they provide incomes to the schools. Please refer below for this project.

In the same spirit and with the similar objectives, HUMY NGO supported ADF to set up and to run a tree nursery at Popel village primary school. This project, HUMY 3, was started in April 2022 until December 2022. It was renewed from January 2023 until December 2024, (see below, HUMY 3 project). In January 2025, it was renewed for another 3-year period.

Collaboration with Sala Baï Hotel and restaurant school:
The French NGO Agir pour le Cambodge (APLC), created in 1985, launched the Sala Baï program in 2002 to fight poverty and human trafficking in Cambodia through social and professional training of young underprivileged Cambodians. Every year, Sala Baï Hotel and Restaurant School trains 150 students in hospitality at no charge to them. This program is exclusively devoted to helping underprivileged young Cambodians, with priority given to girls (70%) who are more vulnerable and who have less access to education.

As in 2023, in 2024 ADF and Sala Baï agreed on a common project: Sala Bai present its activities to the remote villages of Phnom Kulen in order to recruit disadvantaged students for the next scholar year starting and ADF help to disseminate the information to the local communities through their network. ADF Kulen also provide a place to do the presentations and help to identify interested candidates.

Sourire Angkor partnership
Sourire Angkor (SA) is a French association founded in 2001, and whose main objective is the schooling and professional training of disadvantaged children in the Siem Reap region. Through a system of sponsorship and donations, children in great social difficulty, identified locally, are financially supported, kept in their family, and followed by a tutor throughout their schooling. In 2023, ADF was approached by SA to support children in Mount Kulen region of Cambodia. The project has started in January 2024 with the signature of an agreement then funds transferred to support five impoverished students from Khnong Phnom commune, by providing them with rice, school uniforms, and essential educational materials as needed, so they can have the resources to attend school and succeed in their studies.

Kulen Outreach NGO coordination:
This NGO is offering free English education to students and constructed a new Learning Centre at Popel village's primary school. They also welcome students originally from Phnom Kulen in their campus in Siem Reap to attend secondary and high school. ADF had several meetings in 2024 with their team to facilitate the implementation of their activities, in particular with the local authorities, the Dpt of Education in Svau Leu Commune and the principals.

ENVIRONMENT

Environmental and social studies

During the year 2024, there was no collaboration with the School of Fields Studies (SFS) for defining and facilitating studies. The research collaboration program is focusing on natural resource governance and management; livelihoods; and the environment interface. No students came to PKNP since no studies were implemented in this area. However, ADF team facilitated the visit in PKNP for one group from SFS students the 25th and 26th of September 2023.

ADF was involved in the environmental protection of Phnom Kulen National Park by combining data to the geo-database about the environmental threats, and by disseminating them to the relevant authorities (Ministry of Environment, APSARA Authority, District and commune authorities…). ADF continued in 2024 to integrate in our GIS system all illegal-logging points and recently burned plots of forest for cultivation purposes within the Phnom Kulen National Park and has reported them to the Ministry of Environment (MoE) and APSARA. This was particularly the case in 2023 within the biodiversity assessment of Phnom Kulen National Park (HUMY 5 project, see below).

ADF continued to support the Provincial Department of Environment (PDoE) with mapping for specific projects, or the PKNP general zoning (see below). ADF team has continued to be one of the main actors to provide information from the field for the implementation of the Phnom Kulen Management Plan, and the Phnom Kulen action plan both under the supervision of the MoE.

Meetings, workshops and events

In 2024, ADF management team met representatives from the Ministry in Phnom Penh and Siem Reap, and attended to various meetings at national level, organised by the Provincial Department of Environment or the Ministry of Environment (MoE), within the IRNM, CSLEP, GEF8 projects. ADF participated to the 3 days event organised by the MoE in Phnom Penh, from the 10th to the 12th of July 2024, with a booth offering 500 trees from our tree nurseries and selling Kulen Crafts items.

The TREE 3 Project: tree nurseries in Ta Penh, Sangke Lak, Anlong Thom primary schools

The goal of this project is to continue to grow and plant indigenous trees from Phnom Kulen National Park (PKNP) to regenerate the forest in targeted areas. A participatory education component is also included for the teachers and pupils of the 3 participating primary schools to contribute to the sustainability of the project. The project is providing tree saplings to the Kulara Company (Eau Kulen) compound, as well as deforested areas within PKNP.

The primary objective is to provide indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP). The secondary objective is to promote the regeneration of the forest with indigenous trees of PKNP with the following effect of restoring the natural environment and resources that a thriving environment provides and increasing the amount of surface water.

The third objective is to increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools. The pupils and teachers are the direct beneficiaries. The pupil's families and the village communities are the secondary beneficiaries
This project is a continuation of the successful TREE 1 and 2 projects, implemented from June 2018 to September 2019 (27 months) and from September 2020 to October 2022 (26 months), in 3 primary schools in Phnom Kulen National Park (PKNP). The TREE 1 and 2 projects allowed to grow about 121,430 saplings and contributed to reforest 63.3 hectares in Phnom Kulen National Park. The project raised environmental awareness for more than 600 children and 25 teachers from the 3 primary schools of Ta Penh, Sangke Lak and Anlong Thom village.

Reminder: The TREE 2 project was implemented from September 2020 to October 2022. The goal, objectives and activities were very similar to the TREE 1 project but it included the main constraints and recommendations from the first project such as field maintenance in the reforested areas to improve survival rate, maintenance and upgrade of the water systems to the three tree nurseries, continuation of the environmental education and awareness of stakeholders, the better monitoring of the revenue of each school, to introduce a better monitoring system, to diversify as much as possible the tree species but only with trees represented and identified within the 2013 PKNP bio-diversity survey, to increase as much as possible, depending on the number of saplings produced, the number of reforested areas, focusing on the water catchment areas within PKNP.

The TREE 3 project duration is two 2 years (February 2023 - January 2025, 24 months).

Activities and results:
Activity 1: Orientate the village schoolteachers in all aspects of the project outlining roles & responsibilities, Purchase project resources; mainly tree seeds & other necessary tree nursery tools etc.

Reminder:
To reinforce the TREE 1 & 2 project's dynamic, another tree nursery at Popel primary school was built in 2022 under the fund supported by HUMY. The school was selected because of its potential as a source of income and an educational tool. Since 2018, ADF has been actively involved in the village, expanding the Community Protected Area (CPA), installing a water system, building a Community Based Tourism Centre (CBTC), carrying out sanitation and hygiene projects, and building additional infrastructure like a playground, library, and incinerator.

Prior to the TREE 3 project started in February 2023, the accounting system for the project was set up by ADF accounting person with monthly expenses updated for better financial monitoring, and a meeting was held on January 9th, 2023, between teachers and the ADF team at Ta Penh school to introduce the TREE 3 project to all stakeholders.

The system of percentage benefits for tree sales has been confirmed, with 20% allocated for nursery maintenance, 40% for school maintenance, and 40% for teachers as an incentive, and the cash generated by the sales of saplings and destinated to the tree nursery maintenance is managed by ADF.

The ADF team followed the planning throughout the reporting period, from February 2024 to January 2025, to visualise and monitor the main activities to be completed by all stakeholders.
During the reporting period, the tree nursery project staff underwent changes, with the integration of Mr. Rit Saomao, who was recruited in late June 2024 with a 3-month probation period (June to August) and a contract until the end of the TREE 3 project. He was hired after Mr. Yon Sochea left the ADF team due to personal reasons. Mr. Saomao arrived following Mr. Sochea's departure. His arrival demonstrated his commitment to the TREE 3 project and his collaborative spirit, which has strengthened the team's ability to effectively implement it at target schools. This smooth transition has ensured the TREE 3 project continues to operate efficiently and effectively.

Activity 2: Continue collecting indigenous tree seeds, Upgrade the tree nurseries at Sangke Lak, Ta Penh & Anlong Thom primary schools, ensuring they are efficiently & effectively producing strong healthy saplings, Plant the tree seeds & nurture the tree saplings until they are ready to be planted into designated priority areas.

Reminder:
During the first TREE project in 2018-2019, we were able to design and set up water systems for the 3 schools (Anlong Thom, Ta Penh, and Sangke Lak), which required hundreds of meters of buried PVC pipes and reservoirs for tree nurseries. Students and teachers were involved in the construction process, which allowed them to take ownership of the systems.

During the reporting period, the ADF team frequently checked the water systems of the 4 schools to ensure water distribution to the tree nurseries and schools' facilities. The ADF team resolved the issue as soon as it was identified:
The Anlong Thom water system experiences water shortages during the dry season, as well as a short dry season during the rainy season. It was fixed twice in August 2024 (by replacing the broken pipe, repairing the leaking water reservoir, and cleaning the water reservoir).

Because the Sangke Lak water system's old PVC pipe network had broken in many different pieces, a new water reservoir with a filtration system was constructed near the source in June 2024 (using funds provided by the Almayuda Foundation, funding ADF's Hygiene project in this school) and the entire PVC pipe network was rebuilt and replaced with HDPE pipes.

For the Ta Penh water system, the broken old PVC pipe was replaced, and the leaky water reservoir was repaired and cleaned in November 2024. These water systems also serve the hygiene facilities (toilets, wash bays) that ADF built or renovated in these three schools, as well as the implementation of a complementary hygiene project (WISH project, funded by Almayuda Foundation, ongoing since 2018) in 4 primary schools (Sangke Lak, Ta Penh, Khlah Khmum, and Popel).

Tree nurseries were upgraded on a needed basis with proper tools, equipment, and gravity-fed water systems. ADF takes special attention to ensuring that each tree nursery and school has permanent access to water. Climate change and deforestation make this increasingly important during the dry season. However, tree nursery water systems are designed to gather and store sufficient water reserves until the end of the hottest season. Future modifications could include increasing storage capacity as the situation gets more difficult to sustain each year, as well as replacing PVC pipes with tougher HDPE pipes.

From February 2024 to January 2025, significant maintenance work was done for the 4 tree nurseries, including the one in Popel, funded by HUMY: In June 2024, 28 signs describing various tree species, including common (in Khmer, transcribed in Latin) and scientific names, were printed, and displayed at 4 tree nurseries; in August 2024, the old green shades net of the roof and the wall of Anlong Thom tree nursery was replaced with new ones. The front gate has been fixed, and the back gate has been changed, as well as the wire mesh surrounding the tree nursery to prevent the ball to enter, when the kids play football at the playground in front of the tree nursery; in August 2024, the old green shades net on the wall at Popel tree nursery has been replaced by the new one, and a plot in the school vegetable garden has been built to keep the bigger tree saplings once they have been relocated out of the nursery. The tree branches that covered the roof have been trimmed down to prevent harm to the green shade net roof; in November 2024, the old green shades net on the wall (west side) at Sangke Lak tree nursery was replaced by a new one; in December 2024, the broken hole on the Ta Penh tree nursery's old green shade net wall was strengthened with a new piece of net and zip ties.

Some old sprinklers have been replaced with new ones for Anlong Thom, Ta Penh and Sangke Lak tree nurseries.

Activity 3: Village schoolteachers & children are taught in fundamental aspects of tree planting & tree growing, nurturing & raising trees.

Reminder:
The ADF organized trainings for teachers in Anlong Thom and Ta Penh in January 2019 and 2020, focusing on seed preparation and soil composition for plastic bags. The training improved seed preparation and soil composition. In May 2022, ADF team trained teachers in Popel primary school on tree nursery management, covering general nursery planning, nursery arrangement, seed sourcing, seed growing, and income management. All teachers from Ta Penh, Anlong Thom, Sangke Lak, and Popel participated. In 2023, no further training was needed as most teachers remained appointed to these schools.

From July 16th to 17th 2024, the ADF team held a tree nursery management training course at Sangke Lak primary school, Khnong Phnom commune, Phnom Kulen National Park, in collaboration with AGRISUD, to enhance and improve the technical skills of teachers and students from the three targeted schools. A total of 25 people (including 9 women) attended, including teachers, students, members of the community protected area, park rangers, the ADF team, and the AGRISUD team.

During the year 2024-2025, the regular participation of children and teachers in the tree nurseries in the 3 primary schools continued as in previous years for this activity

Activity 4: Village school children have practical lessons in tree cultivation & it becomes part of their school activities.

The 3 targeted schools have operational tree nurseries that are actively growing trees.

The tree-growing activities in the nurseries are part of the everyday routines of 3 schools. They receive special attention from teachers and students every Thursday on the "labour day" when children do community work.

All children from grade 1 to 6 are participating to the activities: planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary, planting activities on the plateau.

During the school year 2024-2025, the project raised environmental awareness for 545 children (including 257 girls) and 22 teachers from 3 primary schools, divided as follows: 146 children and 6 teachers in Ta Penh, 90 children and 4 teachers in Sangke Lak and 309 children and 12 teachers in Anlong Thom. These figures do not include the children and teachers from Popel primary school where a fourth tree nursery is supported by HUMY.
Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project (Mr. Yon Sochea, replaced in 2024 by Mr. Rit Saomao).

To monitor the project, ADF used the tree nursery monitor tool with an Xcel document to follow up: the movements of the trees within the tree nurseries (production and sales), the stock and production per tree species and tree nurseries, the sales for each client per tree species and tree nurseries and the plantations per location and per species. Villagers are aware of the existence of the tree nurseries, and a network of seed collectors is being developed.

Activity 5: Indigenous tree saplings are transported to designated target areas: Kulara Water Company land, PKNP protected areas (APA's, CPA's) or other designated areas of PKNP, Trees are planted appropriately, reforesting the target areas.

From February 2024 to January 2025, tree seeds were purchased or collected and grown in the 3 tree nurseries that funded by Eau Kulen. However, for accountability of the trees, areas reforested and incomes for schools, the figures sum up with the 4 tree nurseries, including the tree nursery funded by HUMY at Popel Primary School.

Types of trees produced per school in 2024:15,424; Types and number of trees produced per month in 2024: 11,370; Types and number of trees sold per schools in 2024: 11,370; Types and number of trees sold per month in 2024: 11,370; Incomes from the sales of trees per school, from each client in 2024: 2,296 US$.

Reminder:
2020: 12,094,400 riels=3,023.6 US$ (941.2 US$ for Anlong Thom school, 1,021.2 US$ for Ta Penh, 1,061.2 US$ for Sangke Lak); 2021: 8,877,600 riels=2,219.4 US$ (531.4 US$ for Anlong Thom school, 1021.2 US$ for Ta Penh, 1061.2 US$ for Sangke Lak); 2022, 7,768,800 riels=1,942.2 US$ (621 US$ for Anlong Thom school, 520 US$ for Ta Penh, 801 US$ for Sangke Lak, 0$ for Popel school, trees not sold yet); 2023, 8,816, 000 riels=2,204 US$ (478 US$ for Anlong Thom school, 504 US$ for Ta Penh, 467 US$ for Sangke Lak, 755$ for Popel school).
In 2024, the income for schools from tree sales= $2,296 US$ (418 US$ for Anlong Thom, 783 US$ for Ta Penh, 570 US$ for Sangke Lak, and 525 US$ for Popel primary school). From February 2024 to January 2025, 459.20 US$ of income were given back to the maintenance of each tree nurseries. This represents 20% of total tree sales. This includes Popel Tree Nursery.

Trees planted inside PKNP in 2024
On the 27th of September 2024, ADF in partnership with the Siem Reap Provincial Department of Environment (PDoE) to organise a tree planting event in Tahan Village, Phnom Kulen National Park. The plot reforested after being deforested to grow a cassava plantation by a farmer the previous year covered 1.34 hectares, with 2,000 trees from ADF / Eau Kulen nurseries. A total of 272 people, including 60 youngsters from local schools and government officials, attended the event planning day. The goals were to regenerate and protect eco-systems and biodiversity, to mitigate climate change, and educate the people about the value of forest cover.
During October and early November 2024, ADF and PDoE planted 6,150 trees in 12 deforested plots (5 plots in Tahan Village, 2 plots in Popel CPA, 2 plots near Preah Bram Preah Ang, 1 plot on the road to the waste storage site, 1 plot on the road to the Chere ancient staircase, 1 plot on the road to Wat Preah Ang Chub, and another large plot in Poeng Chat village. The 12 plots totalled 24.25 hectares.

Several individuals bought trees to plant on their land inside the park or in public spaces: 60 trees, Keo Sopheak, private land at O' Lahor, in PKNP; 215 trees, Chhun Phirom/ Heng Puthea, Anlong Thom CBTC and at west side of Kok Chen 200m in PKNP; 107 trees, Ven. Heng Hak, Wat Anlong Thom; 34 trees, Keam Ahmnot, Sangke Lak primary school principal, Sangke Lak village; 5 trees, Hean Bunthen, Anlong Thom primary school principal, Anlong Thom primary school; 50 trees, Roeun Saro, Ta Penh primary school principal, Ta Penh primary school; 20 trees, Rath Mach, farm in Anlong Thom village.

For the year 2024, the total reforested area inside PKNP is more than 25ha (10,676 trees from Eau Kulen tree nurseries planted in 18 days between late September and early November, during three main reforestation activities) + 491 trees on lands inside the park = 11,167 trees.
Trees planted outside PKNP in 2024

In order to respond to some demand and to promote ADF/Eau Kulen tree nurseries, some trees were sold to clients for plantation outside PKNP: 62 trees, JB Chevance, private land at Wat Athvea and in Banteay Mean Chey; 55 trees, Seng Samry, private land at O' Svay in Svay Leu district; 11 trees, Lisa Ros, French school in Siem Reap; 50 trees, Chhun Phirom, Banteay Meanchey; 100 trees, Mean Mout, Wat Preah Teveak in Romchek Commune, Beanteay Srey district; 500 trees, MoE Ponlok Baitong event in Phnom Penh; 20 trees, Chim Sopheap, Wat Tamum in Battambang; 30 trees, Simean from FAO, private land at O' Mean Chey, Svay Leu district; 400 trees, Yath from Control Union Cambodia, private land/ cashew nut farm (4.5ha); 15 trees, Chim Sopheap, Svay Thom, Siem Reap.

A total of 1,243 trees were sold and planted outside the park. The total number of trees planted is 12,410 for the year 2024. In 2024, the Kulara Company did not need any trees to be planted in the compounds of its two water factories. The total number of trees produced in 2024 is 15,424. This figure comprises trees growing before and following the sales and plantations. Since the TREE 1 project began in 2018, the total number of trees grown and planted has been 121,430+20,620+15,424 =157,474.

Activity 6: Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture & sunlight they need to grow & thrive.
As recommended in the final report of the first TREE project (recommendations n.5), the maintenance of the reforested areas was continued during this third project.
This requires the employment of local villagers as day labour, to cut with brush cutters the weeds around the small saplings planted in the target areas.

This allows 1) to give them the trees light and moisture they need, giving them a "fighting" chance to grow and develop into mature forest; 2) to better monitoring the reforested areas, the survival rate of the trees, and eventually to replace the dead ones.
In 2024, the ADF team in collaboration with the PKNP rangers visited 5 different previously reforested plots.

One plot has been maintained; local villagers were hired to cut weeds and plant new trees where the tree seedling had died. Additionally, another plot has been maintained by hiring local villagers to cut weeds without the need to plant additional tree saplings. It was observed that maintenance was not required for 3 other visited plots.

Previous recommendations and actions taken
Learning from the previous years, ADF submitted this TREE 3 project to Kulara Water for the years 2023 and 2024 in January 2023, including previous project recommendations. They are reminded below, with comments for the year 2024.

Tree growing:
The collect of seeds and growing of sapling should continue in every tree nursery during the coming months, so saplings can be ready to plant for the next rainy season (June-October 2024). This was done in 2024 and will continue in 2025.

According to the seeds available and their confirmed presence in PKNP, ADF should look to diversify the saplings if possible, according to the recommendations n.8 of the final TREE report. New species, recorded in PKNP, were being introduced in the tree nurseries in 2021 such as *Tro Yeng, Pring, Phneav, Krolanh*. In 2024, the ADF team succeeded to find the seeds of Pring and *Phneav*, but *Tro Yeng* and *Krolanh* were more difficult to get. This will be tried again in 2025. In order to attract cashew nut farmers to diversify their production, ADF will encourage them to plant other fruit trees in these plots.

ADF will endeavour to use fewer plastic bags for the sapling growing as well as for the transport of saplings to the reforestation areas. The white bags are a solution to extend for the sapling production (the provider in Phnom Penh was contacted) and the rattan baskets for the sapling transportation. This issue remains hard to address because it is difficult to find alternative materials for sapling growth instead of plastic bags. However, for sapling transportation, ADF team did minimise the quantity of plastic bags in 2024 by recycling them and replaced them with large blue baskets. This is a point where ADF can still improve in 2025.

ADF will install small durable (metallic) signboards to identify saplings in the 3 tree nurseries (with Khmer, English and Latin names). This was done in 2024 and will be continued in 2025 if any signs need to be changed or updated.

The monitoring of each tree nursery will continue to ensure a good production and diversification. The new "Tree Nursery Monitoring Tool" that was set up in 2022 currently improves the accountability of trees grown, sold and planted.

The ADF team, in collaboration with the teachers of the schools, will make sure the water systems are viable and that incomes from the sales of trees are properly used for their maintenance when needed. Some of the water system (buried pipes) tends to be broken by animals (pig, cows) during the dry season. ADF will take preventative measures to avoid this. For the water system in Sangke Lak, the entire PVC pipe network was rebuilt and replaced with HDPE pipes, using funds supported by the Almayuda Foundation. For Anlong Thom, and Ta Penh it will be tried in 2025 with durable pipes if the funds are available.

Reforestation:
ADF will continue to better monitor the number of hectares reforested exclusively with the saplings produced by the ADF-Eau Kulen tree nurseries. The PKNP reforestation operations sometimes include trees that are purchased from other tree nurseries. This corresponds to the recommendation n.4 of the final TREE report. It was done in 2024 and will be in 2025.

Additional areas will be reforested during the 2024-2025 rainy seasons within PKNP involving teachers, pupils and local stakeholders and authorities, in collaboration with PDoE. This will depend, as stated in the recommendation n.9 of the final TREE report, 1) on the number of saplings produced, 2) on the available reforested areas within PKNP and 3) on the PDoE capacity of re-taking illegally deforested plots for reforestation. It was done in 2024 and will be in 2025.

Since 2018, this has never been an issue. Moreover, the UNDP-BESD-PES project has introduced a new type of reforestation providing more options for reforested areas: tree planting within existing cashew nut farms (with a lower density per hectare), with an agreement from the farmer to take care of the growing trees and to give back, on a long term, the land to the State (20.9 ha in 2021). This could be an option in the future project. It was not done in 2024 but several owners of land in villages requested trees for their lands in the villages. In 2025, some cashew nut farmers want to plant forest trees with fruits (*Kulen, Phneav* or *Pring*) in their farms. ADF will grow these seeds to provide them these saplings and therefore diversity the biodiversity in these plots.

ADF will monitor the forest cover of the park with satellites images to identify the deforested location, so new reforestation activities could take place in rainy season. It was done partially achieved by November 2023 within the biodiversity survey of the park, in collaboration with HUMY NGO. From 60 to 70 hectares were seen as recently illegally burn for cultivation in March 2023. Due to long administrative procedures, these areas could be reforested in 2025.

If needed, additional trees will be sold to Kulara Cie compound, to continue the reforestation of the new factory land (Preah Vihear province). The company did not request trees for the year 2024.

Systematic maintenance activities after reforestation should be done once every 6 months for 2 years (e.i. 4 times), on each reforested area. The systematic maintenance activities were done at 2 plots in 2024. This will be improved in 2025.

Costs for reforestation activities and maintenance activities should be included in the next project. It was done in the TREE 3 budget.

Environmental Education:
ADF will organize in 2023-2024 visits of the involved teachers at Kulara Water Cie factory and tree nursery. Depending on the budget, some students could be involved.

Reminder: On the 24th of May 2023, a group of 52 persons (10 children and 2 teachers from each of Anlong Thom, Ta Penh, Sangke Lak and Popel primary schools) visited the factory and the surrounding planted areas, with the trees grown by the schools from 2018 to 2020. They achieve the visit by visiting Banteay Srey temple, under the generous guidance of Ms. Sanh Sophoan, professional guide.

On 26th of June 2024, the ADF organized a field exposure for principals and teachers from the target schools (Anlong Thom, Ta Penh, Sangke Lak, Khlah Khmum, Popel, and Phum Thmey). A total of 26 participants visited Kravan Primary School, located in the Angkor Archaeological site, to observe its successful school management practices and learn how to create a clean and healthy learning environment. The goal was to increase cleanliness and environmental standards in participating schools while also enhancing program promotion activities. On the 05th of September 2024, ADF team hosted the Eau Kulen/ Kulara team at the Ta Penh and Sangke Lak tree nurseries/ primary schools, and one of the reforested areas.

ADF could organise environmental education sessions in schools to stress the importance of the PKNP Bio-diversity and the natural environment in general. Educational material will be sourced and disseminated with videos at each primary school. The data from the ADF/HUMY ongoing biodiversity survey could also be used to reinforce the message. Due to time and human resources constraint, this was not done in 2024 but will be tried in 2025.

The HUMY 3 Project: Popel Tree Nursery Project (PTNP)

As for the TREE 3 project, the core of the HUMY 3 project is to grow and plant indigenous trees from PKNP that will regenerate its natural environment. The project provides young saplings to reforest targeted areas within PKNP by building and running a tree nursery in Popel primary school (95 children, including 42 girls and 4 teachers, including 1 woman in 2025). The practical participatory education (learning by doing) of the young generation, the pupils of this school, will further contribute to the sustainability of the project.

This project is based on the successes of the TREE 1 and 2 projects, supporting 3 tree nurseries in the primary schools of Sangke Lak, Ta Penh and Anlong Thom villages, and implemented by ADF for the last 4 years. This project also reinforces the dynamic to support the Popel Community-based Tourism Center (CBTC), set up by ADF and now funded by HUMY. This center's objective is to generate incomes for villagers by promoting tourism in the Popel recently enlarged Community Protected Are (CPA). Finally, the project come to reinforce the reforestation of the PKNP, initiated by ADF since 2015.

Inception of the project and construction of the tree nurseries at Popel primary school:
Reminder:
In June 2022, the village schoolteachers and all stakeholders were oriented in the project with a participatory meeting (project cycle, project objectives and project goal). The tree nursery materials were procured. The accounting system for the project set up by ADF accounting person to update expenses on a weekly basis for a better financial monitoring of the project. The tree nursery and its water system were built from April to June and inaugurated on the 14th of June 2022, in the presence of the students and teachers, representatives from local authorities and Mr. Jérôme L'Hour, Humy's representative in Cambodia. The project also implies the installation of 2 additional reservoirs.

Continue collecting Indigenous tree seeds, Upgrade the tree nursery at Popel primary schools, ensuring they are efficiently & effectively producing strong healthy saplings, Plant the tree seeds & nurture the tree saplings until they are ready to be planted in designated priority areas:
From January to December 2024,
Reminder:
To reinforce the TREE 1 & 2 project's dynamic, another tree nursery at Popel primary school was built in 2022 with the fund supported by HUMY. The school was selected because of its potential as a source of income and an educational tool. Since 2018, ADF has been actively involved in the village, expanding the Community Protected Area (CPA), installing a water system, building a Community Based Tourism Centre (CBTC), carrying out sanitation and hygiene projects, and building additional infrastructure like a playground, library, and incinerator.

The system of percentage benefits for tree sales has been confirmed, with 20% allocated for nursery maintenance, 40% for school maintenance, and 40% for teachers as an incentive, and the cash generated by the sales of saplings and destinated to the tree nursery maintenance is managed by ADF.

During this reporting period (from January to December 2024), the tree nursery project staff underwent changes, with the integration of Mr. Rit Saomao, who was recruited in late June 2024 with a 3-month probation period (June to August 2024) and a contract until the end of the TREE 3 (Trees nurseries supported by Eau Kulen in 3 other primary schools) and HUMY 3 projects. He was hired after Mr. Yon Sochea left the ADF team due to personal reasons. His arrival demonstrated his commitment to the TREE 3 and HUMY 3 projects and his collaborative spirit has strengthened the team's ability to effectively implement it at target schools. This smooth transition has ensured the TREE 3 and HUMY 3 projects continues to operate efficiently and effectively.

The ADF team followed the planning throughout the reporting period to visualize and monitor the main activities to be completed by all stakeholders. The ADF team diligently conducted regular checks on the Popel water systems throughout the whole year of 2024 to ensure uninterrupted water distribution to the tree nursery and schools' facilities. Fortunately, no issues were encountered during these evaluations, demonstrating the reliability of the water systems for the school.

Additionally, the ADF team undertook necessary upgrades for the tree nurseries, providing essential tools, equipment, and gravity-fed water systems as required. Significant maintenance work was done at the Popel tree nursery in 2024:
The old green shades net on the wall at Popel tree nursery has been replaced by the new one. A plot in the school vegetable garden has been built to keep the bigger tree saplings once they have been relocated out of the nursery, allowing more space to grow others.
Another water storage was built behind the school building to ensure that there was enough water for both the vegetables in the school garden and the saplings moved from the tree nursery, before planting them in the park. The tree branches that covered the roof have been trimmed down to prevent harm to the green shade net roof.

It is crucial for ADF to prioritize consistent access to water for the tree nursery and school, especially during the increasingly critical dry seasons attributed to climate change and deforestation. To address this, the tree nursery water systems were thoughtfully designed to capture and retain sufficient water reserves until the conclusion of the hottest seasons. However, as this challenge intensifies annually, future upgrades may focus on expanding the storage capacities to better sustain these institutions in the face of evolving environmental conditions.

Village schoolteachers & children are taught in fundamental aspects of tree planting & tree growing, nurturing & raising trees and village school children have practical lessons in tree cultivation & it becomes part of their school activities.

Reminder: the ADF organized trainings for teachers in Anlong Thom and Ta Penh in January 2019 and 2020, focusing on seed preparation and soil composition for plastic bags. The training improved seed preparation and soil composition. In May 2022, ADF team trained teachers in Popel primary school on tree nursery management, covering general nursery planning, nursery arrangement, seed sourcing, seed growing, and income management. All teachers from Ta Penh, Anlong Thom, Sangke Lak, and Popel participated. In 2023, no further training was needed as most teachers remained appointed to these schools.

On 16th and 17th July 2024, in collaboration with AGRISUD International Cambodia, the ADF team held a "tree nursery management" training course at Sangke Lak primary school, Khnong Phnom commune, Phnom Kulen National Park to enhance and improve the technical skills of teachers and students from the 4 targeted schools with Tree nurseries. A total of 25 people (9 women) attended, including teachers, students, committees of the community protected area, park rangers, the ADF team, and the AGRISUD team.

From January to December 2024, the regular participation of children and teachers in the tree nursery in the Popel primary school continued as in previous years for this activity.

The Popel primary school has an operational tree nursery that are actively growing trees.
The tree-growing activities in the nursery are part of the everyday routines of their schools. They receive special attention from teachers and students every Thursday on the "labour day" when children do community work.

All children from grade 1 to 6 are participating to the activities: planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary, planting activities on the plateau.

From January to December 2024, the project raised environmental awareness for 95 children and 4 teachers in Popel. With the 3 other tree nurseries supported by Eau Kulen, this figure reaches 640 children (including 299 girls) and 26 teachers from 4 primary schools divided as follows: 146 children and 6 teachers in Ta Penh, 90 children and 4 teachers in Sangke Lak and 309 children and 12 teachers in Anlong Thom.

Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project, Mr. Yon Sochea (from January to June 2024) and Mr. Rit Saomao (from June to December 2024).

To monitor the project, ADF used the tree nursery monitor tool with an Xcel document to regularly follow up: the movements of the trees within the tree nurseries (production and sales), the stock and production per tree species and tree nurseries, the sales for each client per tree species and tree nurseries and the plantations per location and per species. Villagers are aware of the existence of the tree nurseries, and a network of seed collectors is being developed.

Indigenous tree saplings are transported to designated target areas: PKNP protected areas (APA's, CPA's) or other designated areas of PKNP; Trees are planted appropriately, reforesting the target areas:

From January to December 2024, tree seeds were purchased or collected and grown in the Popel tree nursery funded by HUMY. However, for accountability of the trees, areas reforested and incomes for schools, we provide here the figures of the 4 tree nurseries, including the tree nursery funded by Eau Kulen at 3 other primary schools.

Reminder:
2020: 12, 094,400 riels= 3, 023.6 US$ (941.2 US$ for Anlong Thom school, 1, 021.2 US$ for Ta Penh, 1, 061.2 US$ for Sangke Lak); 2021: 8, 877,600 riels=2, 219.4 US$ (531.4 US$ for Anlong Thom school, 1021.2 US$ for Ta Penh, 1061.2 US$ for Sangke Lak); 2022, 7, 768,800 riels=1, 942.2 US$ (621 US$ for Anlong Thom school, 520 US$ for Ta Penh, 801 US$ for Sangke Lak, 0$ for Popel school, trees not sold yet); 2023, 8, 816, 000 riels=2, 204 US$ (478 US$ for Anlong Thom school, 504 US$ for Ta Penh, 467 US$ for Sangke Lak, 755$ for Popel school).
In 2024, the income for schools from tree sales= $2, 296 US$ (418 US$ for Anlong Thom, 783 US$ for Ta Penh, 570 US$ for Sangke Lak, and 525 US$ for Popel primary school). From January to December 2024, 459.20 US$ of income were given back to the maintenance of each tree nurseries. This represents 20% of total tree sales. These include Eau Kulen and Popel Tree Nurseries.

Trees planted inside PKNP in 2024
On the 27th September 2024, ADF in collaboration with the Siem Reap Provincial Environmental Department to organize a tree planting event in Ta Han Village, Phnom Kulen National Park. The plot reforested after being deforested to grow a cassava plantation by a farmer the previous year covered 1.34 hectares, with 2, 000 trees from ADF / Eau Kulen and HUMY nurseries. A total of 272 people, including 60 students from the primary and secondary schools and government officials, attended the event planning day. The goals were to regenerate and protect eco-systems and biodiversity, to mitigate climate change, and educate the people about the value of forest cover.

During October and early November 2024, ADF and the park rangers planted 6, 150 trees in 12 deforested plots (5 plots in Ta Han Village, 2 plots in Popel CPA, 2 plots near Preah Bram Preah Ang, 1 plot on the road to the waste storage site, 1 plot on the road to the Chere ancient staircase, 1 plot on the road to Wat Preah Ang Chub, and another large plot in Poeng Chat village. The 12 plots totalled 24.25 hectares.

Several individuals bought trees to plant on their lands inside the park or in public spaces: 60 trees, Keo Sopheak, private land at O' Lahor, in PKNP; 215 trees, Chhoun Phirom/ Heng Puthea, Anlong Thom CBTC and at west side of Kok Chen 200m, in PKNP; 107 trees, Ven. Heng Hak, Wat Anlong Thom, in PKNP; 34 trees, Keam Ahmnot, Sangke Lak primary school principal, Sangke Lak village, in PKNP; 5 trees, Hean Bunthen, Anlong Thom primary school principal, Anlong Thom primary school, in PKNP; 50 trees, Roeun Saro, Ta Penh primary school principal, Ta Penh primary school, in PKNP; 20 trees, Rath Mach, farm in Anlong Thom village, in PKNP.

For the year 2024, the total reforested area inside PKNP is more than 25 ha (10, 676 trees from HUMY and Eau Kulen tree nurseries planted in 18 days between late September and early November, during three main reforestation activities) + 491 trees on lands inside the park = 11, 167 trees.

Trees planted outside PKNP in 2024
In order to respond to some demand and to promote ADF/ HUMY and Eau Kulen tree nurseries, some trees were sold to clients for plantation outside PKNP: 62 trees, JB Chevance, private land at Wat Athvea and in Banteay Mean Chey; 55 trees, Seng Samry, private land at O' Svay in Svay Leu district; 11 trees, Lisa, French school in Siem Reap, 50 trees, Chhoun Phirom, Banteay Meanchey; 100 trees, Mean Mout, Wat Preah Teveak in Romchek Commune, Beanteay Srey district; 500 trees, MoE Ponlok Baitong event in Phnm Penh; 20 trees, Chim Sopheap, Wat Tamum in Battambang; 30 trees, Simean from FAO, private land at O' Mean Chey, Svay Leu district; 400 trees, Yath from Control Union Cambodia, private land/ cashew nut farm (4.5ha); 15 trees, Chim Sopheap, Svay Thom, Siem Reap. A total of 1, 243 trees were sold and planted outside the park.

The total number of trees planted is 12, 410 for the year 2024. The total number of trees produced in 2024 is 15, 424. This figure comprises trees growing before and following the sales and plantations. Since the TREE 1 project began in 2018 and HUMY project in 2022, the total number of trees grown and planted has been 121, 430 + 20, 620 + 15, 424 = 157, 474.

Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture & sunlight they need to grow & thrive:

As recommended in the final report of the first TREE project (recommendations n.5), the maintenance of the reforested areas was continued during this project. This requires the employment of local villagers as day labour, to cut with brush cutters the weeds around the small saplings planted in the target areas. This allows 1) to give them the trees light and moisture they need, giving them a "fighting" chance to grow and develop into mature forest; 2) to better monitoring the reforested areas, the survival rate of the trees, and eventually to replace the dead ones.

In 2024, the ADF team in collaboration with the PKNP rangers visited 5 different previously reforested plots. One plot has been maintained; local villagers were hired to cut weeds and plant new trees where the tree seedling had died. Additionally, another plot has been maintained by hiring local villagers to cut weeds without the need to plant additional tree saplings.

The HUMY 4 Project: Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion

Please refer to the HUMY 4 project above, in the Income generation (ig)/Alternative livelihood program chapter.

The HUMY 5 Project: PKNP biodiversity assessment

Reminder:
HUMY support to ADF started in 2021 (HUMY 1 and 2 projects). It was reinforced in 2022 then 2023 with the continuation of the HUMY 2 project (with the HUMY 2 bis and 4) and the HUMY 3 project (see above).

This involvement in the preservation of PKNP biodiversity was also illustrated in 2022 and 2023 by the study of the park's biodiversity, a project funded entirely by HUMY, with the strong involvement of ADF. In September 2022, Mr. Vincent Romera, HUMY's ecologist, came to Cambodia for a 11-month mission with the objective of updating the last PKNP biodiversity assessment, dating from 2013, and propose recommendations for a better conservation of key species and species in danger (IUCN classification, international and national).

ADF assisted HUMY with its official administrative request to the MoE and has assisted Mr. Romera with all questions concerning existing data and literature, supplies and logistics for field surveys. He was assisted by Mr Tony Yon, and Ms. Claire Zagala. On some occasions, PKNP rangers or ADF director JB Chevance joined the field surveys.

The report is entitled "Phnom Kulen National Park: an update on the biodiversity status with an assessment of environmental threats; naturalistic summary, assessment of threats and conservation prospects" was written by Vincent Romera, in collaboration with Tony Yon and ADF Director, JB Chevance. It was finalised in October 2023, 10 years after the last biodiversity assessment of this park (Hayes et al., 2013, A biodiversity assessment of Phnom Kulen National Park, with recommendations for management) and sent to the Ministry of Environment on the 3rd of November 2023.

The objective was to assess the biodiversity in PKNP with a previous reference. This report presents an inventory or ecological assessment of PKNP with some good news, such as the observation of a third of the bird records in Cambodia (including a first record for country) or the observation of bear claws indicating their presence in PKNP. Some of the species' groups studied are particularly diverse within PKNP, demonstrating the importance of the park for biodiversity conservation in Cambodia.

However, the study confirmed the decline in the number of species and the field surveys gave the opportunity to highlight the threats to species and ecosystems, with a very important level of illegal activities in the remaining forested area of the park (+/- 8000 hectares on a total of 37,370 ha, prior to the park's extension in July 2023). For example, the mapping the illegal logging sites observed between December 2022, and June 2023 reaches more than 1,100 recently large cut trees, with several illegal camps and an omnipresent poaching.

On this specific matter, a separated report was presented to PDoE and to the minister of Environment in June 2023 ("Illegal activities in Phnom Kulen National Park, Report to the Ministry of Environment, 30th of May 2023") which is partially integrated in this biodiversity report.

The ADF-HUMY Report on illegal activities in PKNP, May 2023

While implementing the update of the biodiversity survey of PKNP and observing numerous illegal activities in the remaining forested areas, the HUMY and ADF team have written a report (entitled "Illegal activities in Phnom Kulen National Park, Report to the Ministry of Environment, 30th of May 2023, by Vincent Romera (HUMY), JB Chevance (ADF), in collaboration with Tony Yon) and addressed it to the ministry of Environment. Both teams were received by H. E. Say Sam Al, minister of Environment on the 20th of June 2023, to present this report. It was also the opportunity to present of project addressing the environmental threats observed during the biodiversity assessment.

Executive summary:
Phnom Kulen National Park (PKNP) is the largest forested area and mountain in Siem Reap Province, the source of the entire regional watershed, both underground and surface freshwater, a hotspot for biodiversity, a National Park of 37,373 hectares since 1993 (until its extension from the 17th of July 2023), with a Management Plan and an Action Plan from 2018, a capital of the Khmer empire (early 9th century AD), one of the most sacred mountains in Cambodia, recognised as a high value touristic attraction, included in the regional and national tourism plan, registered by the Royal Government of Cambodia since 1992 (and reviewed in 2020) on its tentative list as a future World Heritage Site.

During the bio-diversity surveys implemented by HUMY, ADF and PDoE from September 2022 to May 2023, at least 1079 trees recently (less than 1 year ago) cut with chainsaw, observed by foot or drone surveys, for a total of 457 UTM locations in PKNP (587 trees cut for zone 1 and 492 for zone 2 to 4), most of them in the potential core zones, an associated network of trails to transport the wood by ox cart or hand tractors, and at least 9 wood drop points to cross the cliffs, about 70 new farms (2023), recently deforested along the Siem Reap River and the O'Kbal Damreï (also called O'Kantuout) River, observed by drone surveys, numerous encroachments in the lower parts of the park, in the plain and on the foothills for agriculture, in some cases linked to illegal logging, a systematic use of poaching tools such as air guns and various types of traps.

Solutions are existing and this report includes recommendations for the urgent implementation a strict law enforcement project, enhancing the PKNP patrolling rhythms, skills and results, to halt illegal loggings, encroachments for agriculture and poaching, to apprehend the perpetrators, if authorized by the MoE, this project could start as soon as funds are available, under ADF and HUMY's management/guidance and in coordination with PDoE. Other experimented partners such as Wildlife Alliance should be involved. The national policy for the conservation of the protected areas by the Ministry of Environment is in line with such a project. Several recommendations are also in the conclusion of this report.

The ADF-HUMY zoning report for PKNP, April 2024

Following the biodiversity assessment in 2023 (see above), the report of illegal activities from 2024 (see above) and the invitation by the Ministry of Environment (MoE) to attend a meeting on the 25th of March 2024 on the zoning of PKNP during which the proposed options were minimalists, HUMY and ADF worked on alternatives.

ADF director and HUMY ecologist submitted alternatives for more ambitious options for the zoning of PKNP. This report, entitled "Note about biodiversity and propositions for the zoning of Phnom Kulen National Park, April 2024, V. Romera (HUMY) & JB. Chevance (ADF)", was submitted in April 2024 to the MoE, while the Ministry was finalising the zoning of the park.

The introduction and the conclusion are presented here.
This note takes place following the request from the Ministry of Environment (MoE) to provide data on biodiversity hotspots after the HUMY/MoE/ADF 2022-23 survey in Phnom Kulen National Park (PKNP), and the invitation from MoE to ADF to attend the IRNM meeting on the 25th of March 2024 in Siem Reap, where the zoning was presented.

First of all, it is important to specify that the majority of species with high conservation issues in PKNP were observed directly in the field and not using camera traps during the surveys in 2022 and 2023. Therefore, very few images of these species are available.

Secondly, the species with high conservation issues were logically observed in the remaining forested areas of the PKNP: the CPAs (and notably Popel and Anlong Thom) and the northern parts of the park (to the east and to the west of Kbal Spean). Through this note we offer a short summary of what is presented in the report sent to the MoE following the wildlife inventories and the threat assessment work carried out on the territory of the PKNP from September 2022 to July 2023 and confront it to the actual zoning. For more information, please refer to the report "Phnom Kulen National Park: an update on the biodiversity status with an assessment of environmental threats - naturalistic summary, assessment of threats and conservation prospects" (Romera, Chevance and Yon, 2023).

In this note, we highlight the results of the biodiversity hotspots, in regard to the ongoing zoning of the park after its extension in July 2023, including Chankran Roy CPA and the northern corridor (see maps), and propose new options for the zoning of PKNP, corresponding to the forest cover and these biodiversity hotspots. The zoning proposed in this note is therefore an updated version of the one proposed in the report mentioned above. In relation to the zoning work in the national park, we propose the most relevant and ambitious scenarios from the point of view of optimal consideration of the biodiversity and wildlife issues of the territory.
Following the ADF-HUMY-MoE biodiversity surveys in 2022-23, the areas of greatest interest in terms of conservation and therefore which can be considered as biodiversity hotspots within the PKNP are the core zones (in their version of scenario 1) and the CPAs and APAs. The zoning project we propose here is ambitious and propose several enlarged areas with a better level of protection (core and conservation zones) and corresponds to the forest cover and the biodiversity hotspots in PKNP.

The cores zones should be extended to their maximum to the east and to the west, and the size of Chankran Roy CPA should be reconsidered accordingly. The conservation zones are determined as they are meant to be, i.e. buffer zones between the core and the sustainable use zone.

Because of their importance in term of biodiversity, CPAs and APAs cannot be considered with an equivalent level of protection as the sustainable use zone and therefore should not be classified as such. Due to the specificities of the CPAs and APAs and because they constitute biodiversity hotspots, we suggest to consider them in the zoning on the park with a special status. The Phnom Hop area should be protected and demarcated as a new APA. Finally, every major river in the park (including in the sustainable use zones) should be protected for their riparian forest on both side and on 20 meters, with a similar special status.

All these proposed areas should be confronted and revised according to the presence of the Small-Scale Ecotourism Development Projects (SSEDP) accorded by the MoE to investors, in the framework of the Cambodian Sustainable Landscape and Ecotourism project (CSLEP). However, no SSEDP should be granted into the core and conservation zones. All this cartographic data is contained in the "ADF-HUMY zoning for MoE-shp-Export" file in .shp. Full lists of all animal species observed during the PKNP wildlife knowledge update are available in the appendices of the 2023 ADF-HUMY report (Romera, Chevance and Yon, 2023). This non-public report is available at the MoE.

The ongoing zoning of PKNP is an opportunity for the MoE to better protect the park by adapting the 4 types of zones to the field reality. In term of image and communication, enlarging the core and conservation zones of the PKNP can only be positive for the MoE.

Finally, this proposed zoning corresponds and backed up by forest cover images and wildlife observation, to the specifications of the 2008 Law on Protected Areas from the Royal Government of Cambodia. ADF and HUMY remain at the disposal of the MoE for the continuation of these exchanges, the establishment of zoning and the demarcation of the different zones.

However, none of the recommendations ADF and HUMY had proposed were followed and adopted by the MoE during a "consultation meeting" held on the 25th of June 2024 to finalise the zoning of the park. Despite providing this report and additional data about wildlife presence spotted during the bio-diversity assessment to the MoE team, the decision to select much less ambitious options for the conservation of PKNP was already taken.

The Save Kulen Forest project & the Regenerate and Protect Phnom Kulen Forest projects

Following the biodiversity survey and the environmental threats of PKNP in 2023, ADF designed two projects to address these issues.

The "Save Kulen Forest" project, finalized in June 2023, aimed to strengthen protection of 8,000 hectares of threatened forest and biodiversity hotspots in Phnom Kulen National Park. It proposed deploying a small MoE ranger team (patrolling 14 days/nights per month), supported by tools like 4G camera traps, SMART training, and law enforcement by PDoE. The project was a response to alarming illegal activities (logging, land encroachment, poaching) recorded during a biodiversity survey in 2022–2023. It built on previous ADF–HUMY initiatives supporting CPA members and rangers in regular patrols since 2022 and aligned with government conservation policies. However, due to administrative and staffing constraints, the 6-month project (July–December 2023) could not be promptly implemented with MoE coordination.

The "Regenerate and Protect Phnom Kulen Forest" project, designed in 2023 by ADF with the Soneva Foundation, is a 3-year (potentially 20-year through carbon credits) initiative aligned with MoE guidelines and ADF's biodiversity recommendations. It combines: Reforestation of 350–500 ha with 418,500 indigenous seedlings and upgraded nurseries; Forest protection of 8,000 ha via improved ranger patrols against logging, poaching, and encroachment; Environmental education for 1,000+ students and local villagers through training and outreach. ADF submitted the proposal in late 2023; Soneva Foundation agreed to fund it, and MoE approval was sought with the minister of Environment, H. E. EANG Sophalleth. ADF team met the Minister of Environment in Phnom Penh on the 22nd Jan 2024, together with Mr Arfinn Oines, representative of the Soneva foundation. However, due to lack of human resource, this project was not started in 2024 and postponed for the following years.

Environmental education programme for Buddhist Monks in PKNP's pagodas

ADF was approached by the Angkor Centre for Conservation of Biodiversity (ACCB) to implement a joint project which consisted in providing a 10-day training workshop for Buddhist monks, laypeople, local authorities and rangers on the environmental issues in Phnom Kulen National Park (PKNP), targeting animal welfare and conservation, from the 20-21 November 2024 to the 08-09 January 2025. The follow up training session was held on the 6 June 2025.
The following text is extracted from ACCB report.

The project was conceived by ACCB who received funds from the Westfälischer Zoologischer Garten Münster GmbH (Allwetterzoo Münster) and WWF. It was organised in coordination with ACCB team and ADF deputy Director, Mr. Chim Sopheap, who was ACCB previous Outreach & Education Manager and head trainer for past similar projects.

ACCB, located close to Kbal Spean archaeological sites in PKNP, hold Buddhist monk outreach program in the past at the Monk Community Forest within the Sang Rukhavoan Wildlife Sanctuary (Oddar Meanchey Province), where monks collaborate closely with community members to protect the forest. The objective was to bring this program in PKNP, to inspire the monks to become spokespeople for conservation and animal welfare, and guardians of the forest they inhabit.

The project focuses specifically on monks and laypeople at the 7 pagodas (Wat Preah Ang Thom, Wat Preah Kral, Wat Anlong Thom, Wat Chas, Wat Phnom Hop, Wat Poeng Ta Eav, Wat Preah Ang Chup) and associated villages within the Phnom Kulen National Park, using the different training modules for training of monks at the Monk Community Forest in the north of Cambodia. The training sessions were organised at the Anlong Thom pagoda in Anlong Thom Village, Khnong Phnom Commune, involving the district authority and the head monk of Svay Leu District in Siem Reap province. In total, there were 25 participants, including 20 monks, 3 laypeople, 1 ranger of the Provincial Department of Environment (PDoE)- Khnong Phnom ranger station at PKNP, and 1 district officer.

The workshop sessions covered the following topics: Conservation Context and Issues in Cambodia: providing an overview of main threats, laws and regulations, and a key species guide focusing no those most likely encountered by monks; Theological Basis in Buddhism for Biodiversity Conservation: Exploring the link between modern conservation issues and Buddhist values and beliefs, highlighting the valuable role of monks in conservation in Cambodia; Wildlife Rescue, Animal Handling, and Release Procedures; Conservation Prayer Animal Release, promoting a sustainable approach; Threatened species use in ornaments, bushmeat, traditional medicines, and the pet trade; Animal Welfare and Conservation.

Evaluation and Follow-Up: pre- and post-training questionnaires were conducted at the end of the workshop to assess the training's reception. Additionally, a follow-up meeting with participants 6 months after the workshop provided further insights into long-term attitude and behaviour changes, as well as the sustainability of the training approach.

Field Trip for Practical Learning: A field trip related to the training topics was organized for participants with a visit to ACCB centre and the Thousand Lingas at Kbal Spean, Phnom Kulen National Park, enhancing their understanding of animal welfare and providing practical learning experiences.

Building a Support Network: Post-workshop, the contact details of Buddhist monks and laypeople will be incorporated into ACCB database. With their consent, they will be added to a contact group on an instant messaging platform (Telegram), allowing us to maintain contact and providing the monks with a support network.

The project has enriched the understanding of conservation and animal welfare issues among Buddhist monks and laypeople, empowering them to contribute effectively to conservation efforts. The program's success and stronger participant attendance were made possible through the close collaboration and support of the Deputy Director of the Svay Leu District (Siem Reap province) Social Affairs Office, the head monk of Svay Leu District, and his deputy, who also serves as the head monk of Wat Anlong Thom. An average of 20 participants attended training sessions, and a total of 33 individuals have participated in at least one training day, including 21 monks, including 4 head monks and 2 district head monks, 9 laypeople, of which 7 achar's and 2 community members, government authority, 2 rangers of the Siem Reap Provincial Department of Environment. Finally, a total of 24 participants were present to receive their training certificates and a copy of the Monk Guidebook, and each pagoda was presented with a copy of Cry of the Forest.

The strong and well-established relationships ADF has built with community members at Phnom Kulen since 2008, combined with the expertise of ADF's deputy director, Mr. Chim Sopheap, in project materials and delivery, have been key to the success of the workshop sessions. Given the influential role head monks play in their communities, the positive engagement with the district officials, district head monks, and pagoda head monks and their willingness to support the workshop sessions has been instrumental to the outcomes.

As a result of ACCB's activities during this project period, we have observed a notable increase in number of turtles donated from the illegal trade — particularly from monks at pagodas in PKNP and Bakong District. This rise in donations reflects a growing awareness among monks, which can be attributed to the training sessions. Their active engagement with ACCB not only demonstrates a commitment to wildlife rescue but also suggests a positive shift away from supporting the traditional practice of prayer animal release.

In the previous quarterly report, we noted that despite proactive efforts to engage with pagodas in the days leading up to the training, participant attendance — particularly among monks — was lower than expected at the first workshop session. To address this, we intensified collaboration and support from the Deputy Director of the Svay Leu District / Social Affairs Office, the head monk of Svay Leu District, and his deputy (also head monk of Wat Anlong Thom). Despite these efforts, attendance rates from some smaller pagodas remained lower than anticipated. Monks and laypeople from Wat Poeng Ta Eav only attended the first two days of the workshop (Session 1, Module 1), while monks from Wat Poeng Ta Kuy were only able to join starting from the fourth and fifth workshop sessions (Modules 4, 5, and 6).

Maintaining consistent attendance among monks — especially head monks — remained a greater challenge compared to lay participants. Monks often have pressing social and community responsibilities, such as delivering Dharma talks, overseeing road and accommodation construction at their pagodas, attending house blessing ceremonies, and organizing meditation sessions. These duties frequently take precedence over participating in capacity-building activities.

Reforestation activities

Reminder: Since 2015, ADF participated and facilitated several activities related to tree planting activities in PKNP: selection of the area to be planted, organisation and logistic on the field, design of signboards, growing of saplings, plantation, mobilisation of person to plant. From 2015 to 2019, the total of saplings planted in PKNP reaches 241,500 for 97.5 hectares. In 2020, this total figure was largely expended due to the UNDP-C.19 project. The total number of reforested hectares, including the ones from the UNDP-C.19 project, reached almost 90 hectares. 87,100 trees were planted in 32 different locations. In 2021, within the UNDP-BESD, 20,9 hectares were planted within cashew nut farms. 6,8 additional hectares were planted in 3 different locations with a total of 5,600 trees. Apart from the UNDP-C-19 project (2020-2021), 27,7 hectares were therefore planted in 2021 in PKNP. In 2022, the total amount of reforested areas in PKNP reached 14.1 hectares. In 2023, 9801 trees were planted over 18.3 hectares and in 2024, 25 hectares were planted inside the PKNP (see "Trees planted inside PKNP in 2024", in TREE 3 and HUMY 3 projects above).

These combined figures include projects in which ADF was the main actor, and projects were PDoE was the main implementing partner.

Patrols by PKNP Rangers and Community Protected Areas members

Please refer to the chapter "Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion (HUMY 4 project)", in the Income generation/Alternative livelihood program chapter.

Road construction project across PKNP

ADF has participated and advised PDoE and APSARA about the road construction project across the national Park. On the 13th of December 2022, ADF advised the APSARA Authority and the UNESCO-ICC sustainable development experts, during a field visit to assess the boulders located on the section of the road which has not been rehabilitated yet. The following recommendations (n. 21.3) was issued at the 36th technical session and 29th plenary session on the 15th and 16th of December 2022. As in 2023, the road construction was halted temporarily in 2024.

f. Administration

On the 24th of May 2023, ADF Director signed a Memorandum of Understanding (MoU) with the Ministry of Foreign Affairs and International Cooperation, government of Cambodia, for a 3-years period, from May 2023 to April 2026. This MoU allows ADF to renew its agreement with the Cambodian government as an International NGO and allows to work legally in Cambodia, with other governmental partners. Numerous supporting documents were required.

In November 2023, ADF submitted to the APSARA National Authority, with several supporting documents, the draft of the renewal for the ADF - APSARA MoU for the next 3 years, as the ongoing on was due on the 8th of January 2024. This MoU was signed by both parties on the 6th of May 2024.

In December 2024, ADF and Sala Baï NGO prepared a cooperation agreement to define their partnership, in the framework of the ecotourism project "Destination Éco-Talents" funded by the International Organization of Francophonie (OIF) to support local communities in Phnom Kulen. It was signed in January 2025.

During the year 2023, ADF also defined a cooperation agreement with Sourire Angkor NGO, which was signed in early 2024, to define the support for several children from Phnom Kulen.

On the 08th of October 2024, ADF signed agreement with the District of Svay Leu, to define a framework for all ADF's activities implemented in Schools and villages in Khnong Phnom Commune. This signature officializes an existing collaboration, now formalized and reinforced by this agreement.

In May 2024, ADF organize interviews to recruit a new Deputy Director, as Mr. Sakhoeun Sakada, previous national manager and acting as a consultant, had to leave for his full-time position at the Provincial Department of Environment. Mr. Chim Sopheap was recruited. In 2024, ADF also recruited Mr. Em Lihieng for the SEAF 4 project (English classes and libraries) in June 2024, Mr. Rit Samao for the TREE 3 and HUMY 3 projects in June 2024, in replacement of Mr. Yon Sochea and Ms. Morn Pith for the WISH 2 in June 2024, in replacement of Ms. Soeng Seath, both quitting ADF for personal reasons. At the end of December 2024, Ms. Chhoun Phirom, responsible for the CBTCs and the patrols support within the HUMY 4 project, resigned for personal reason. However, she remained involved for the handicraft's support component, as a volunteer.

ADF reviewed and updated its Rules and Regulations in June 2024 and in August, ADF set up a quarterly report format for all team leaders to use, in order to facilitate the follow up and reporting of each project.

In preparing this report, the trustees have taken advantage of the small company exemptions provided by section 415A of the Companies Act 2006.

The report was approved by the Trustees and signed on their behalf by:

Vincent Chevance
Trustee
Date 28 October 2025

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

INDEPENDENT EXAMINER'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2024

Independent Examiner's Report to the Trustee of Archaeology and Development Foundation ('the Charity')

I report to the charity Trustee on my examination of the accounts of the Charity for the year ended 31 December 2024.

Responsibilities and Basis of Report

As the Trustee of the Charity (and its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the Charity are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of the Charity's accounts carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Charity as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair' view which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities [applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102)].

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

This report is made solely to the Charity's Trustee in accordance with Part 4 of the Charities (Accounts and Reports) Regulations 2008. My work has been undertaken so that I might state to the Charity's Trustee those matters I am required to state to them in an Independent Examiner's Report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustee for my work or for this report.

Signed: Hazra Patel Dated: 28 October 2025

Hazra Patel ACA

Lubbock Fine LLP
Chartered Accountants & Statutory Auditors
Paternoster House
65 St Paul's Churchyard
London
EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2024

	Note	Unrestricted funds 2024 $	Restricted funds 2024 $	Total funds 2024 $	Total funds 2023 $
Income from:					
Donations	3	55,170	164,175	219,345	155,142
Investments	4	-	190	190	80
Total income		55,170	164,365	219,535	155,222
Expenditure on:					
Charitable activities	5	40,490	138,859	179,349	145,359
Total expenditure		40,490	138,859	179,349	145,359
Net movement in funds		14,680	25,506	40,186	9,863
Reconciliation of funds:					
Total funds brought forward		(20,384)	42,324	21,940	12,077
Net movement in funds		14,680	25,506	40,186	9,863
Total funds carried forward		(5,704)	67,830	62,126	21,940

The Statement of Financial Activities includes all gains and losses recognised in the year.

The notes on pages 79 to 89 form part of these financial statements.

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

REGISTERED NUMBER: 06429421

BALANCE SHEET

AS AT 31 DECEMBER 2024

	Note	2024 $	2024 $	2023 $	2023 $
Fixed assets					
Tangible assets	10		4,810		4,060
Current assets					
Cash at bank and in hand		74,303		47,456	
		74,303		47,456	
Current liabilities					
Creditors: amounts falling due within one year	11	(16,987)		(29,576)	
Net current assets			57,316		17,880
Total net assets			62,126		21,940
Charity funds					
Restricted funds	12		67,830		42,324
Unrestricted funds	12		(5,704)		(20,384)
Total funds			62,126		21,940

The Charity was entitled to exemption from audit under section 477 of the Companies Act 2006.

The members have not required the company to obtain an audit for the year in question in accordance with section 476 of Companies Act 2006.

The Trustee acknowledge their responsibilities for complying with the requirements of the Act with respect to accounting records and preparation of financial statements.

The financial statements have been prepared in accordance with the provisions applicable to entities subject to the small companies regime.

The financial statements were approved and authorised for issue by the Trustee and signed on their behalf by:

Vincent Chevance
Trustee
Date: 28 October 2025

The notes on pages 79 to 89 form part of these financial statements.

1. General information

Archaeology and Development Foundation is a charitable company limited by guarantee incorporated in England and Wales. Its registered office address and place of business is 25 Brooks Mews, London, W1K 4DZ.

2. Accounting policies

2.1 Basis of preparation of financial statements

The financial statements have been prepared in accordance with the Charities SORP (FRS 102) - Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

Archaeology and Development Foundation meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy.

2.2 Going concern

The Charity is in the main reliant on donations and the support of related parties to meet its running costs. Due to the nature of its activities, the majority of the Charity's expenditure is incurred directly on charitable projects and so the Charity is able to control its direct charitable expenditure based upon the level of donation income that it has received and the anticipated ongoing support of related parties.

The Trustee considers it appropriate to prepare the financial statements on a going concern basis on the assumption that sufficient incoming resources will be generated to meet the Charity's running costs. The financial statements do not include any adjustment which would result if there were insufficient funds available in respect of the Charity's operations.

2.3 Donations and gifts

All income is recognised once the Charity has entitlement to the income, it is probable that the income will be received and the amount of income receivable can be measured reliably.

Donations and gifts are included in full in the Statement of Financial Activities when receivable.

2.4 Expenditure

Expenditure is recognised once there is a legal or constructive obligation to transfer economic benefit to a third party, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is classified by activity. The costs of each activity are made up of the total of direct costs and shared costs, including support costs involved in undertaking each activity. Direct costs attributable to a single activity are allocated directly to that activity. Shared costs which contribute to more than one activity and support costs which are not attributable to a single activity are apportioned between those activities on a basis consistent with the use of resources. Central staff costs are allocated on the basis of time spent, and depreciation charges allocated on the portion of the asset’s use.

Expenditure on charitable activities is incurred on directly undertaking the activities which further the Charity's objectives, as well as any associated support costs.

2. Accounting policies (continued)

2.4 Expenditure (continued)

All expenditure is inclusive of irrecoverable VAT.

2.5 Interest receivable

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the Charity; this is normally upon notification of the interest paid or payable by the institution with whom the funds are deposited.

2.6 Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into US dollars at rates of exchange ruling at the reporting date.

Transactions in foreign currencies are translated into US dollars at the rate ruling on the date of the transaction.

Exchange gains and losses are recognised in the Statement of Financial Activities.

2.7 Tangible fixed assets and depreciation

Tangible fixed assets costing $200 or more are capitalised and recognised when future economic benefits are probable and the cost or value of the asset can be measured reliably.

Tangible fixed assets are initially recognised at cost. After recognition, under the cost model, tangible fixed assets are measured at cost less accumulated depreciation and any accumulated impairment losses. All costs incurred to bring a tangible fixed asset into its intended working condition should be included in the measurement of cost.

Depreciation is charged so as to allocate the cost of tangible fixed assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following bases:

Freehold property	- over 10 years straight line
Motor vehicles	- 25% straight line
Office equipment	- 33.33% straight line

2.8 Cash at bank and in hand

Cash at bank and in hand includes cash and short-term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

2.9 Liabilities and provisions

Liabilities are recognised when there is an obligation at the Balance Sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably.

Liabilities are recognised at the amount that the Charity anticipates it will pay to settle the debt or the amount it has received as advanced payments for the goods or services it must provide.

2. Accounting policies (continued)

2.10 Financial instruments

The Charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

2.11 Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the Trustee in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The costs of raising and administering such funds are charged against the specific fund. The aim and use of each restricted fund is set out in the notes to the financial statements.

Investment income, gains and losses are allocated to the appropriate fund.

3. Income from donations

	Unrestricted funds 2024 $	Restricted funds 2024 $	Total funds 2024 $
Donations	55,170	164,175	219,345

	Unrestricted funds 2023 $	Restricted funds 2023 $	Total funds 2023 $
Donations	51,203	103,939	155,142

4. Investment income

	Restricted funds 2024 $	Total funds 2024 $
Bank interest	190	190

4. Investment income (continued)

	Restricted funds 2023 $	Total funds 2023 $
Bank interest	80	80

5. Analysis of expenditure on charitable activities

Summary by fund type

	Unrestricted funds 2024 $	Restricted funds 2024 $	Total 2024 $
Charitable costs	40,490	138,859	179,349

	Unrestricted funds 2023 $	Restricted funds 2023 $	Total 2023 $
Charitable costs	41,696	103,663	145,359

6. Analysis of expenditure by activities

	Activities undertaken directly 2024 $	Support costs 2024 $	Total funds 2024 $
Charitable costs	173,821	5,528	179,349

	Activities undertaken directly 2023 $	Support costs 2023 $	Total funds 2023 $
Charitable costs	139,519	5,840	145,359

6. Analysis of expenditure by activities (continued)

Analysis of support costs

	Charitable costs 2024 $	Total funds 2024 $
Accountancy fees	2,008	2,008
Independent examination fees (governance)	2,500	2,500
Foreign currency loss	(92)	(92)
Bank charges and interest	1,112	1,112
	5,528	5,528

	Charitable costs 2023 $	Total funds 2023 $
Accountancy fees	2,086	2,086
Independent examination fees (governance)	2,500	2,500
Foreign currency gain	165	165
Bank charges and interest	1,089	1,089
	5,840	5,840

7. Staff costs

	2024 $	2023 $
Wages and salaries	56,214	48,874
	56,214	48,874

The average number of persons employed by the Charity during the year was as follows:

	2024 No.	2023 No.
Average number of employees	12	11

No employee received remuneration amounting to more than $60,000 in either year.

8. Trustee's remuneration and expenses

During the year, no Trustees received any remuneration or other benefits (2023 - $NIL).

During the year ended 31 December 2024, no Trustee expenses have been incurred (2023 - $NIL).

9. Taxation

The company is a registered charity with the Charity Comissioners for England and Wales. It is not liable to corporation tax on any surplus arising from its charitable activites.

10. Tangible fixed assets

	Freehold property $	Motor vehicles $	Office equipment $	Total $
Cost				
At 1 January 2024	28,288	19,650	24,813	72,751
Additions	-	300	2,660	2,960
Disposals	-	-	(150)	(150)
At 31 December 2024	28,288	19,950	27,323	75,561
Depreciation				
At 1 January 2024	28,288	17,284	23,118	68,690
Charge for the year	-	571	1,640	2,211
On disposals	-	-	(150)	(150)
At 31 December 2024	28,288	17,855	24,608	70,751
Net book value				
At 31 December 2024	-	2,095	2,715	4,810
At 31 December 2023	-	2,366	1,695	4,061

11. Creditors: Amounts falling due within one year

	2024 $	2023 $
Accruals and deferred income	16,987	29,576

Included within accruals and deferred income is deferred income of $12,479 (2023 - $24,990) that was received in the year ended 31 December 2024 and relates to a project taking place in the year ended 31 December 2025 and beyond and has therefore been deferred.

12. Statement of funds

Statement of funds - current year

	Balance at 1 January 2024 $	Income $	Expenditure $	Balance at 31 December 2024 $
Unrestricted funds				
General Funds	(20,384)	55,170	(40,490)	(5,704)
Restricted funds				
Education project	7,343	61,809	(60,203)	8,949
Income Generation project	13,928	29,878	(22,668)	21,138
Veolia Foundation	-	21,204	-	21,204
Environment project	21,053	51,474	(55,988)	16,539
	42,324	164,365	(138,859)	67,830
Total of funds	21,940	219,535	(179,349)	62,126

12. Statement of funds (continued)

Statement of funds - prior year

	Balance at 1 January 2023 $	Income $	Expenditure $	Balance at 31 December 2023 $
Unrestricted funds				
General Funds	(29,891)	51,203	(41,696)	(20,384)
Restricted funds				
Education project	6,490	33,931	(33,078)	7,343
Income Generation project	25,030	20,007	(31,109)	13,928
Environment project	10,448	50,081	(39,476)	21,053
	41,968	104,019	(103,663)	42,324
Total of funds	12,077	155,222	(145,359)	21,940

. **Statement of funds (continued)**

Education project - this fund contains the following projects:

- WISH 2 - Hygiene and sanitation programme in 4 primary schools. The project was set to run from January 2021 to December 2022 however has been extended into 2023 and 2024.

- Emergency relief - Funds used for emergency relief/complementary support.

- SEAF 2 - Infrastructure project in primary schools, implemented from March 2021 to Dec 2022 and was extended to March 2023.

- SEAF 3L - This is for the construction and equipment of a library at Popel village primary school.

Income generation project - this fund contains the following projects:

- Income generation - This relates to the provision of technical and other assistance to farmers to replace destructive farming practices in PKNP, the IG project, which includes the rice bank project.

- ALIVE - This is for implementing alternatives in agriculture and animal raising. The project is running from May 2022 to April 2025 with donations from SEAF.

Environment project - this fund contains the following projects:

- Tree 2 - This relates to a participatory tree growing project to be implemented in three village schools on the plateau of Phnom Kulen National Park. This project has been renewed for 2 more years from September 2020 to October 2022, and a third tree project is set to start from February 2023.

- HUMY 2 and HUMY 2 bis - This project started from Oct 2021 to March 2022 (HUMY 2) providing training for CPA members of Popel and Anlong Community-based Tourism Centers (CBTCs) and Community Protected Area (CPAs) and promoting local handicrafts. The project continued from April 2022 to December 2022 (HUMY 2bis).

- HUMY 3 - This project is the Popel tree nursery project and began in April 2022 set to run for 2 years.

- UNDP - This relates to a project to implement a project in 2 villages with forest protection (demarcation and expansion of a CPA and alternative livelihoods), from May 2019 to June 2021.

13. Analysis of net assets between funds

Analysis of net assets between funds - current period

	Unrestricted funds 2024 $	Restricted funds 2024 $	Total funds 2024 $
Tangible fixed assets	4,810	-	4,810
Current assets	6,473	67,830	74,303
Creditors due within one year	(16,987)	-	(16,987)
Total	(5,704)	67,830	62,126

13. Analysis of net assets between funds (continued)

Analysis of net assets between funds - prior period

	Unrestricted funds 2023 $	Restricted funds 2023 $	Total funds 2023 $
Tangible fixed assets	4,060	-	4,060
Current assets	5,132	42,324	47,456
Creditors due within one year	(29,576)	-	(29,576)
Total	(20,384)	42,324	21,940

14. Members' liability

Each member of the charitable company undertakes to contribute to the assets of the company in the event of it being wound up while he/she is a member, or within one year after he/she ceases to be a member, such amount as may be required, not exceeding £10 for the debts and liabilities contracted before he/she ceases to be a member.

15. Related party transactions

Included within incoming resources is an amount of $40,484 (2023 - $48,888) which was donated by the trustee / close family member of the trustee.

ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales - Charity number 1122750

Accounts

Registered number: 06429421
Charity number: 1122750

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2023

LUBBOCK FINE LLP
Chartered Accountants
Paternoster House
65 St Paul's Churchyard
London EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

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ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

(A Company Limited by Guarantee)

REFERENCE AND ADMINISTRATIVE DETAILS OF THE CHARITY, ITS TRUSTEES AND ADVISERS

FOR THE YEAR ENDED 31 DECEMBER 2023

Trustees	Vincent Chevance
Company registered number	06429421
Charity registered number	1122750
Registered office	25 Brooks Mews London W1K 4DZ
Company secretary	Jean-Baptise Chevance
Accountants	Lubbock Fine LLP Chartered Accountants & Statutory Auditors Paternoster House 65 St Paul's Churchyard London EC4M 8AB

The Trustee presents the annual report, which includes the directors report, together with the financial statements of the Archaeology and Development Foundation for the period from 1 January 2023 to 31 December 2023. The Trustee confirms that the Annual Report and financial statements of the Charity comply with the current statutory requirements, the requirements of the Charity's governing document and the provisions of the Statement of Recommended Practice (SORP), applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

Since the company qualifies as small under section 383, the strategic report required of medium and large companies under The Companies Act 2006 (Strategic Report and Director's Report) Regulations 2013 is not required.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Archaeology and Development Foundation is a company, incorporated on 16 November 2007, governed by its Memorandum and Articles of Association. It registered as a charity with the Charity Commission for England & Wales on 12 February 2008.

New Trustees are appointed by the members. The Trustees may appoint a person who is willing to act to be a Trustee, either to fill a vacancy or as an additional trustee.

New Trustees are briefed on their legal obligation under charity and company law, the content of the Memorandum and Articles of Association, the committee and decision making processes, the business plan and recent financial performance of the charity.

In setting the objectives and planning the activity of the charity, the Trustees have given careful consideration to the Charity Commission's general guidance on public benefit.

OBJECTIVES AND ACTIVITIES

The objectives of the charitable company as set out in the governing document are:

The Archaeology and Development Foundation has been undertaking archaeological research in Phnom Kulen since 2008. One of the objectives is to understand the extent of this first capital as well as to define the various settlements during the period of time, from pre angkorian period to the post angkorian period. Working in close collaboration with the APSARA National Authority (National Authority in charge of Angkor region), the Ministry of Environment and other institutional partners, ADF is the main institution working on both development and archaeology in Phnom Kulen.

ADF is also disseminating the archaeological knowledge of the findings. Reports and conferences are regularly given and specific publications on archaeological research are also published in specialised reviews.

Historically, geographically and from a hydrologic point of view, Phnom Kulen is very closely linked with Angkor World heritage site. The Royal Government of Cambodia has registered Phnom Kulen on the indicative list of the world heritage site, and ADF is working closely with UNESCO and APSARA to move toward the recognition of this site and to meet the standards of a world heritage site.

Additionally, ADF is strongly collaborating with the Ministry of Environment, in charge of the Phnom Kulen National Park, for the management of the protected areas. Other activities in the environmental protection field are implemented such as reforestation, environmental awareness campaigns, demarcation of protected areas, training and supporting to ranger patrols in the National Park, mapping etc.

Conservation and protection of the sites

In the post war years (1990's) Cambodia suffered from endless looting. It is well known that archaeological site protection goes hand in hand with an increased local awareness that arises as a result of research and conservation programmes.

The Phnom Kulen programme is providing APSARA Authority a better knowledge of the archaeological value of the plateau, in order to extend its activities on the Phnom Kulen. ADF is also helping the Ministry of Environment by providing information relative to protected area, forest cover, and illegal activities (encroaching, illegal logging etc).

The programme is also helping to define demining areas and specific archaeological protected areas. The regular cleaning of vegetation and the maintenance of the monuments can then occur. Curators and guards/workers have been appointed by APSARA in order to follow up this initiative. The Archaeology and Development Foundation is providing APSARA advice and expertise to improve the management of the sites in terms of conservation and tourism management. ADF has regularly asked APSARA to increase the human and technical resources, to fulfil these missions.For the last years, the Archaeology and Development Foundation is also sponsoring the activities from the APSARA Stone Conservation Unit (transports, salaries, materials) to restore the sandstone artefacts and bas reliefs discovered during the excavations.

Training of Khmer specialists

One of the long term outcomes of this project is the training of Cambodian specialists, in providing them with knowledge, expertise and know how to preserve these sites.

This project provides an opportunity to train the young Khmer specialists on specific search processes. All stages of the archaeological research process, beginning at the preparation phases then field work phases (prospecting to diagnostic trenches or open area excavations, conservation of monuments, inventories) all the way through to annual and final report and publication, is done working closely with ADF and APSARA archaeologists. The project also provides young students graduated from the Royal University of Fine Arts, faculty of archaeology, with their first fieldwork experience.

ADF also provide regular training to the Provincial Department of Environment of Siem Reap staff and the rangers in charge of the Phnom Kulen National Park.

Economic and social impact on local populations

Cambodia has been devastated by civil wars which were fought from 1970 through to the 1990's; this period saw one of the largest genocides in the world which killed between 1.7 to 2 million people. Fighting, aerial bombardments and minefields had a significant impact on the lives of three generations.

Phnom Kulen region was the scene of violent fighting between Khmer Rouge and government troops; the consequences are still evident today. It was one of the last Khmer Rouge strongholds to surrender in 1996.

This project is providing jobs to seasonal workers and, consecutively, full time activity to guards and specialised workers. In providing the villagers with heritage and conservation knowledge it is helping to prevent further looting and is creating a safe archaeological zone by initiating a land mine removal programme and archaeological protected areas.

An important effort is also done towards the villagers from the Phnom Kulen region for food security/nutritional health, medical and health support, hygiene and sanitation (particularly in primary schools), alternative livelihood generating incomes, as well as environmental education and protection.

These initiatives have an important impact on the social and economic development of Phnom Kulen and especially improve the level of education and health care of the inhabitants.

FINANCIAL REVIEW

Income for the year ended 31 December 2023 was $155,222 with expenditure totalling $145,359. At the year end, the charity was holding restricted reserves of $42,324 and the unrestricted reserves were in a deficit position of $20,384.

As the Charitable company has minimal fixed costs its policy is to hold approximately $5,000 in reserves in order to use as much of the funds received each year for charitable purposes. The Trustee will continue to work to bring reserves to this the target level. In the meantime, ongoing financial support will be provided by the Trustee.

PLANS FOR FUTURE PERIODS

For the archaeological activities (maintenance and conservation program), there is no plan to coordinate demining operations in 2024 by CMAC teams. However, and if the budget and work plan allow it, ADF will decide if excavations are possible in 2024. If possible, it would most probably take place on a site already secured over the previous years.

ADF will continue to maintain a regular coordination with APSARA National Authority and provide assistance and advice for a better heritage management of the archaeological sites in Phnom Kulen. This involves advice for the general maintenance of the sites and the control of the Archaeological Protected Areas. ADF will continue to encourage APSARA to increase the material resources for these tasks. ADF will provide any recent and old documentation on archaeological sites to be restored by APSARA in 2024.

For the Kbal Spean and 1000 linga sites, the ADF team will intend to finalize the signboards and with their text and submit them to APSARA, so information panels can be edited and set up by ADF and APSARA, providing APSARA a better tool to manage this area and a better knowledge of the site for the public. The maps and their study will also be published in a specialised review in 2024 or 2025.

In the restoration field, only small sandstone fragments from previous archaeological campaigns will require complementary restoration in 2019. As our requests from 2018 to 2019 were left unanswered, ADF will have to ask again if this small operation can be done.

ADF will continue to encourage the Cambodian authorities (APSARA National Authority, Ministry of Environment, Provincial Authorities) to officially recognise the Archaeological Protected Areas and to allocate more resources for their effective protection, within the PKNP zoning process. ADF will encourage APSARA to maintain the posts and their signs all around each CPA.

The archaeological research, diffusion, communication and training will continue. ADF will also intend to finalise the publication about the 1000 linga and Kbal Spean sites with the most recent maps of these two sites, on Prasat Rong Chen mountain-temple and on the earth mounds fields, discovered thanks to the Lidar and excavated by ADF and APSARA in 2013.

Further studies and analysis from previous excavations archaeological samples and artefacts could also be undertaken such as ceramic or roof tiles studies, charcoal analysis for radiocarbon dating and tree identification, or phytolyth analysis.

The continuation of our collaboration with EFEO/Dharma project and APSARA will allow additional surveys for the recording, rubbing and studies of unregistered ancient inscriptions in Phnom Kulen. Additional surveys to check specific archaeological features will also be undertaken in partnership with EFEO.

ADF will also continue working with the Ministry of Fine Arts and Culture of Cambodia to gather previous documentation and submit reports on artefacts that appeared to be left on site before the Cambodian civil war and reappeared in private or public collections later on. It will allow the Cambodian government to claim the repatriation of these artefacts, strengthening the dynamic started a few years ago. ADF aims to write one report per artefact coming from Phnom Kulen and reappearing in these collections.

In term of communication and collaboration with APSARA, UNESCO and MoE, ADF will continue to participate to the ICC meetings, APSARA meetings, MoE and other meetings or events related to the Action Plan and the Phnom Kulen Management Program, and any other project related to PKNP.

The ADF Facebook page as well as ADF website will continue to be regularly updated with pictures from our various operations, to share our actions and inform our donors and partners. An ADF Instagram account will be set up.

Regarding the development activities, the main components will continue to be reinforced and adapted, according to their results.

In ADF's operational year 2024, ADF Income Generation (IG) team will continue to monitor and support (financially and technically) each chicken and pig breeders. ADF will strongly encouraging them to re-invest their profit into their micro-enterprise, in order to create sustainable models, and applying a 50% reimbursement rate to ADF. Additional beneficiaries interested in pig and chicken raising will be included.
ADF IG team will continue to develop the IG-agriculture activities in Khnong Phnom commune villages, with the AGRISUD project, proposing alternative livelihoods to more than 200 families. All IG beneficiaries will be registered and will continue to be monitored. ADF will also encourage its IG staff to attend technical training and will encourage exposure visit for the beneficiaries.
The Rice bank sub-component in Thma Chruogn village will continue to be monitored, encouraging the local population and authorities to take their ownership.

Regarding the alternative livelihoods related to tourism, ADF will continue to support and the Anlong Thom and Popel CBTC by advising and training his team, with funding from HUMY NGO to support this initiative. The objectives remain to offer tours with stronger sustainable and local impacts. The collaboration with our partner from the private sector Terre Cambodge will continue.

In 2024, the hygiene project (WISH 2) started in January 2021 for a 4-year period and targeting 5 primary schools (Popel, Khlah Khmum, Sangke Lak, Ta Penh and Phum Thmey) will continue to address environmental, hygiene and health issues.

ADF will submit a project proposal to the South-East Asian Foundation (SEAF) to implement a project (SEAF 4) supporting libraries in the primary schools of Phnom Kulen villages.

ADF team will continue to work closely with the local Health Centre (Anlong Thom) to assist poor people, facing emergency situations. As per the previous years, an Emergency Relief Fund will be reserved in case of major emergency for the poorest of the people (domestic fire or accident, illness, natural disaster…).

To allow school students from Phnom Kulen a different future, ADF will establish partnerships with other NGO such as Sourire Angkor or Sala Bai school.

Finally, ADF Environmental Support will continue, as ADF is strongly committed to the environmental protection of the Phnom Kulen National Park, and as the MoE is seeking support from our organisation.

ADF will continue to contribute to the Phnom Kulen Management Plan and the Action Plan, in the framework of the Phnom Kulen working group. ADF will assist the MoE for the completion of documents and studies. ADF will continue to recommend the official recognition of the archaeological protected areas (APA). ADF will seek for donors to implement activities corresponding to the Action Plan. ADF will continue to participate to the PES studies for the PKNP, if required.

ADF will continue the dynamic initiated with the HUMY 1, 2 and 2 bis projects regarding the Popel and Anlong Thom CBTCs and CPAs and the training of its members, with the funding from HUMY (HUMY 4). ADF will continue to improve the management of the CBTCs, their related CPAs and the regular patrols in these 2 Community Protected Areas, as well as a support to the Phnom Kulen handicrafts producers.

ADF will make sure that a maximum of households is connected to the water system in Popel and that the water committee is properly functioning.

The TREE 3 project focusing on growing saplings in tree nurseries located in three primary schools will continue in 2024 as well as the project funded by HUMY in Popel primary school (HUMY 3).

ADF will continue to advise and assist the APSARA Authority and the MoE on large project such as the Preah Ang Thom / waterfall area and the road project crossing the PKNP.

ADF will assist tree-planting project with APSARA and MoE. The continuation of the Income Generation activities and the systematic report to the relevant authority of illegal activities (ex. logging, construction, land speculation) will also contributing to assist the MoE for the protection of the National Park. The Soneva project, if implemented, will provide an opportunity to better protect the forested areas and reduce the illegal activities, to reforest encroached areas as well as to implement an environmental awareness component.

ADF will continue to stress Phnom Kulen National Park threat's on at every level (local, national, international) and, if funded, to implement the demarcation of additional protected areas, and additional patrolling activities within the park.

ADF will be associated to the project entitled "Integrated Natural Resource Management (INRM) in the productive, natural and forested landscape of the Northern Region of Cambodia". ADF will be associated to the project entitled "Cambodia Sustainable Landscape and Ecotourism Project (CSLEP)" a partnership project between the Ministry of Environment (MoE) and World Bank Group (WBG), working to improve protected areas management and promote ecotourism in the Cardamom Mountains-Tonle Sap landscape.

Every ADF activities will be implemented in accordance with the Khnong Phnom Commune development Plan. To do so, ADF will continue to attend the regular meeting with the local authorities.

ACHIEVEMENTS & PERFORMANCE

1. INTRODUCTION

This report presents the ADF activities in Phnom Kulen during the year 2023. They are implemented by ADF within the framework of the MoUs signed between the APSARA National Authority and the Ministry of Environment, ADF's two principal governmental partners. Other governmental bodies are also involved on a local scale such as the Health Department (Sotr Nikum), the Educational

Department, the commune Council of Khnong Phnom Commune (Svay Leu District, Siem Reap Province).

This report is divided in two main parts, presenting the two axes of ADF's activities: the archaeological component and the development component. The last chapter presents the perspectives and the plans for the future.

ADF/ Phnom Kulen Program team for 2023
Administration, finance and communication officer:
- Ms. Hoeung Hourapich (ADF)

Archaeological and environmental team
- M. Sakhoeun Sakada (Part time consultant, MoE)
- M. Seng Samry (Environmental assistant)
- M. Yon Sokchea (Tree nursery Supervisor)

Development team
- Ms. Mien Mout (Income Generation Supervisor)
- Ms. Bis Chhoeurng (Income Generation field assistant)
- M. Seng Samry (Hygiene and sanitation Supervisor and house manager)
- Ms. Loem Nimul (Hygiene field assistant)
- Ms. Soeng Seath (Hygiene field assistant)
- Ms. Chhun Phirom (CBTC, patrol and handicrafts supervisor, part-time)

Logistic team
- Ms. Lay Thol, guard
- Ms. Loch Leach, cook

The ADF international team in 2023:
- M. Jean-Baptiste Chevance (Archaeologist, Phnom Kulen Program Director)

All fields' activities are implemented with local partners such as the Phnom Kulen National Park Rangers, the APSARA archaeologists and guards, the Community Protected Area members of Popel and Anlong Thom villages, the Community-based Tourism centre teams of Popel and Anlong Thom, the teachers and principals at Sangke Lak, Khlah Khmum, Anlong Thom and Ta Penh primary schools and the Anlong Thom Health Centre staff.

2. ACHIEVEMENTS AND PERFORMANCE

ARCHAEOLOGY: FIELD OPERATIONS

The 2023 archaeological activities are in continuity of the programme launched in 2008 in collaboration with the APSARA National Authority. The 2023 activities can be summarized as below.

a. MAINTENANCE AND CONSERVATION PROGRAM:

Land Mine and UXO removal program

As stated in the Memorandum of Understanding between ADF and the APSARA National Authority, and as implemented from 2008, the ADF team is selecting the sites, after approval by APSARA, and is coordinating the demining operations with the CMAC (Cambodian Mine Action Centre) teams. In the previous years, the annual demining program set up by ADF, in collaboration with CMAC and APSARA, allowed the regular clearing and the maintenance of the archaeological sites in Phnom Kulen. In addition to these demining orations related to archaeological research, ADF team reports and follows up the unexploded ordnances (UXO) founded by villagers to the local authorities.

ADF did not request nor organised any land mine removal campaign in 2023, prior to archaeological excavations, as they were none undertaken in 2023.

Assistance to the APSARA National Authority for heritage management in Phnom Kulen

ADF is continuing its assistance to APSARA for the conservation and the maintenance of the Phnom Kulen archaeological sites. This concerns the ongoing maintenance and conservation of the monuments and sites and their respective Archaeological Protected Areas (APA, 1,600 hectares).

ADF maintains a regular coordination with the APSARA deputy director, heads of departments, archaeologists, workers and guards in charge of Phnom Kulen sites, and provides assistance and advice for a better heritage management of the archaeological sites.

In 2023, ADF has provided pictures of the Srah Damrei site since 2009 to show the presence of modern and illegal installation.

Restoration of sandstone, ceramic and metallic artefacts

No ceramic or metallic artefacts required restoration/conservation in 2023.

Archaeological protected areas (APA)

The main objective of the APA is to protect the immediate environment of the archaeological sites in Phnom Kulen from damaging agriculture practices, including deforestation and uncontrolled fires and erosion. The LiDAR previous campaigns (2012 and 2015) allowed identification of archaeological sites, and allowed to build awareness towards the population and the local authorities on their cultural heritage and the natural environment.

After the 2017 assessment of each zone, ADF reminded APSARA National Authority to replace the broken posts demarcating the areas and submitted a report in Khmer to APSARA on the 1st of October 2017. It summarises the number of broken (or missing) posts for each zone. A total of 45 should be replaced, as stated in APSARA-ADF MoU, signed at the end of 2017. So far, and considering the time passed since the first assessment, it should be updated and the post replaced. ADF is looking for funds to support this.

After their official recognition by the APSARA, the Ministry of Environment and the provincial authorities of Siem Reap (May and June 2015), these zones still need a jurisdictional framework

and a clear definition of the responsible authority. Presently, the APSARA National Authority, in charge of the archaeological sites in Siem Reap Province, manages them. Their exact status should be defined within the framework of the zoning of PKNP, implemented within the Phnom Kulen Management Plan and its Action plan. To date, this zoning is still pending and awaits its final version by the MoE.

The additional APA (799 hectares demarcated in the Phnom Kulen National Park) was implemented in 2019 within the UNDP-BESD project around the Prasat Krohom 1 and 2 temples, the dike Thnal O' Srae, and a group or earth mounds, north of Khlah Khmum village. Patrols by MoE rangers are organised since by the Ministry of Environment to control this area.

b. ARCHAEOLOGICAL RESEARCH, DIFFUSION/COMMUNICATION AND TRAINING:

Archaeological Excavation campaign and topographical survey, archaeological research:

Photogrammetric surveys

Following the 2021 photogrammetric surveys of Srah Damrei, Poeng Eisei, Poeng Tbal and Prasat Damrei Krap (see ADF 2021 report) and within the excavation operation at Poeng Ta Roet (see ADF 2022 report), ADF undertook photogrammetric acquisition on this site, in collaboration with APSARA National Authority.

The pictures were taken in April 2022, at the end of the excavations, to provide a maximum information of the features discovered. The treatment of these images was done during the following months by Mr. N. Josso. The data obtained (pictures and topographical files) were processed in the Agisoft Metashape 1.7 photogrammetry software. The final documents produced are with the following formats: .psz, .dae.

In 2023, when all models were finalised, ADF shared these models through a selection of SketchFab links on ADF Facebook page.

Excavations

ADF archaeological research is focusing on the ancient settlements in Phnom Kulen and one of its main's objectives is to better define them, from the early capital of Mahendraparvata (late 8th-early 9th century) to later ones during the angkorian and post- angkorian periods. Among the most important sites of these periods are the rock shelters where hermits settled and sometimes left bas-reliefs, inscriptions and traces of wooden architecture (10th to 12th century).

As briefly presented in the ADF 2022 report, ADF has excavated two of these sites in the past and surveyed a maximum of them over the years, to complete their inventory, documentation and the general archaeological map of Phnom Kulen. Some of these results were published in 2015, in the journal Aséanie, dated from 2013 (« Pœng Tbal et Pœng Eisei, ermitages angkoriens méconnus du Phnom Kulen », Aséanie 32, Décembre 2013, p. 11-76). These excavations, the first undertook in Cambodia for these types of sites, indicated their dates and revealed their importance with their associated wooden architecture and hydraulic associated features, with ponds collection water directly from the sources. Numerous artefacts were also unearthed, including an important volume of ceramic sherds. Their function was also enlarged to pilgrim sites, and, eventually, meditation centres and a funerary use.

In this perspective, ADF team signed an agreement with the École Française d'Extrême-Orient (EFEO) to undertake a common excavation at the Poeng Ta Roet rock shelter site, located on the eastern slope of Phnom Kulen, funded by EFEO. In the framework of the angkorian hermit studies, Pœng Ta Roet site is particularly interesting as it presents a rare iconography and an inscription (K.172).

Prior to the demining operation, the team completed the clearing of the grass, bushes and small trees. The excavation took place during 4 weeks, from mid-March to mid-April 2022. At the end of the campaign and in May 2022, the trenches were filled.

The excavation was conceived as an archaeological diagnostic, opening manually 6 trenches close to the rock shelter, bas relief and the source, as well as a few meters away on the slope. They covered a total surface of 1694 square meter. The trenches stratigraphy allowed to understand the settlement of the site, its spatial use and its abandonment. Ceramic sherds, charcoals and soils samples were collected for studies and analysis. A complementary rubbing of the K.172 inscription allowed to record it entirely as a line was omitted and several other inscriptions were discovered (K.1574) or rediscovered (previously photographed inscriptions K.1323 and K.1569) and registered. Several sandstone fragments of sculptures and bas-relief were also discovered (bas-relief fragments, grinding table, pedestals, sandstone basins and deposit stones).

During the year 2023, the complete excavation report was written by Ms Chloé Chollet, under the supervision of Dr. Dominique Soutif and Dr. JB Chevance. It will be finalised in 2024.

Specialised studies

ADF previous excavations (from 2008 to 2018) provided numerous data. They constitute an ongoing database for ongoing studies and future publications about these sites. More specialised studies with artefacts excavated from these campaigns will be undertaken in the coming years with ceramics and radiocarbon studies.

Mr. Eng Tola, 3rd year PHD student focusing on ancient Khmer iron archaeometallurgy, was associated with ADF to study the metallic slags from ADF excavations at the Phnom Kulen royal palace (Banteay/Pteah Kruh Chas) in 2010 and 2018. Mr Heng Tola, is currently a PhD student under the supervision of Ms. S. Leroy and Ms. C Robion-Brunner at the Université Toulouse Jean Jaurès (France), and started his thesis in 2022. He will be classifying the categories of the slags from the Royal Foundry at Angkor Thom and will compare with other sites, such as Banteay.

Chance discovery
Following archaeological surveys at the eastern foot of Phnom Kulen by ADF team in April 2023, we were alerted about the discovery of the sculpture of head of a Buhdda (identified to the Bayon style, from the end of the XIIth century to early XIIth century) by a villager from O'Mean Chey village, Svay Leu Commune (Svay Leu District, Siem Reap province), from the nearby site of Kok Wat. The ADF team gathered information and was able to trace the circumstances of the discovery. The team inspected the site in May 2023 and told the villager to keep it until ADF's report was provided in June 2023 to APSARA National Authority. The sculpture was later collected by APSARA team and brought to the Preah Norodom Sihanouk museum in Siem Reap city.

Mission to the World Heritage site of Vat Phu/ Champasak, Laos.
Form the 10 to the 17th of December 2023, the ADF Director was invited by the Ecole Française d'Extême-Orient (EFEO) for an expertise mission about the Vat Phu rock shelters sites, for the Cultural Heritage Management, Protection and Attractiveness project (CHAMPA), funded by the Agence Française de Développement (AFD), in collaboration with the Wat Phu Heritage Site Office (WHSO) and the EFEO.
The objective of the mission was to evaluate the archaeological potential of the angkorian rock shelters next to the main temple of Vat Phu and to propose minimum archaeological operations for their presentation to a larger public, with the definition of trails benefitting to the local communities, as a new tourism offer. ADF was requested for this consultancy thanks to its experience of excavating similar sites and defining trails with a tourism product for the benefit of the local population. The mission was followed by a report with recommendations, handed over to the stakeholders in January 2024.

Diffusion of the archaeological research and communication:

Publications

As in 2022, ADF director has participated during the year 2023 to two other general articles. They were finally published in 2023 in a large volume on Angkor, by Routledge editor (https://www.routledge.com/The-Angkorian-World/Hendrickson-Stark-Evans/p/book/9780815355953).
For the next publications, ADF team is focusing on the Kbal Spean and the 1000 linga site (with additional survey in rock shelter and hermits' sites from Phnom Kulen), Rong Chen mountain temple and the ancient mound fields.

Communications

During the weekend of the 29th and 30th of April, ADF team hosted H.E. Jacques Pellet, French ambassador in Cambodia for a trek and a visit of the main historical monuments.

ADF director presented all ADF activities in a short presentation at the NGOs Tea Day on 24th May 2023 at the United Kingdom ambassador's Residence in Phnom Penh. It was the occasion to discuss and exchange experiences, constraints and challenges with the ambassador, H.E. Dominic Williams and his team as well as with other NGOs.

On the 12th and 13th of June 2023, ADF director assisted to the 37th technical session of the International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor.

ADF participated to the guidebook written by Mr. Wayne Mc Callum to promote Community-based Tourism centres set up by ADF in PKNP and to review the part on this national park. During this "Wild Angkor" guidebook release event at the FCC Angkor on 11th of November 2023, ADF director presented all ADF activities in a 20 minute presentation. This event provided a unique opportunity to meet with representatives from various hotels and travel agencies and to share about the ADF projects in PKNP.

ADF team regularly update our website (www.adfkulen.org) and our Facebook page where the last pictures and summarised texts of our main activities are shared (www.facebook.com/adfkulen).

Documentaries

In November 2022, ADF Director participated to the shooting of a promotional documentary about the IADA project, implemented in partnership with AGRISUD International since 2019. It was published on ADF Facebook page in May 2023.

Training of Cambodian archaeologists

There is a close collaboration between the APSARA Authority and ADF archaeologists. It provides a platform for field training to the APSARA local staff (archaeologist and local workers) during all activities (excavations, surveys, APA surveys and management, site management…).
However, since there was no field activity in 2023, this training competent was limited to regular exchanges on the conservation issues that the PKNP could face.

DEVELOPMENT: FIELD OPERATIONS

Overview:

Since its conception, ADF has closely linked the two main components of its action, archaeology and development. The population of Phnom Kulen, beneficiaries of the development activities, particularly suffered from the darkest chapter in Cambodia history and civil war, since this area was a Khmer Rouge stronghold in the early 1970's and until 1997.

The side effects are still tangible today with little public infrastructures, difficult access to education, healthcare, nutrition and sanitation facilities, difficulties to bring products to market, low resources from the governmental bodies (Health dpt, Education dpt, Police, Ministry of Environment…). Some of the schools are facing an important turn over as qualified teachers are reluctant to work in Khnong Phnom commune, and facilities are poor as compared to other communes in Siem Reap province. This results in inadequate education for the children rendering yet another generation that is very likely to fall into the poverty. There is only one secondary school and one health centre for nine villages of the commune (4,926 inhabitants in December 2022, Khnong Phnom data).

For a significant percentage of this population, peace and stability is enough and they don't see the need for further change and development. Breaking the poverty cycle in any context is challenging. For this population located on a plateau with a difficult access to some of the villages, it is even more problematic. A proportion of the population in Khnong Phnom commune live in extreme poverty or poverty, surviving on 'day to day' bases. Others are now wealthier thanks to the illegal cultivation of cashew nuts.

Seasonal food shortages continually affect some of the population of Phnom Kulen. The ramifications of food shortages are numerous, the most notable being family health and wellbeing. Sickness exacerbates the multitude of issues that poor families have to endure, further interning them into the poverty cycle. A proportion of the poorest population is suffering from the lack of liquid assets. They are subsistent farmers and have little to no money to buy the necessities: soap for hygiene, fundamental household materials, or material to build or fix their dwellings...

However, the road built between 2017 to 2022 from Svay Leu to Preah Ang Thom village, on the east side of Kulen, has changed this general dynamic. The southern villages of Anlong Thom, Thma Chruogn and Ta Penh are now accessible by car. Tourist (national or foreigners) can now visit these villages and the archaeological sites nearby. The C-19 pandemic halted all international tourism in Cambodia but international tourism slowly started again in 2022 and many Cambodians are now able to travel to national parks and sites in their country. In December 2023, the section of this new road from Svay Leu to Preah Ang Thom was achieved but not the western section, controlled by a private company who benefits from a tourism concession. This second section, from Preah Ang Thom to the western checkpoint of the park will start in a second phase. The northern villages (Popel, Khlah Khmum and Sangke Lak) remain isolated with very difficult access road. They now benefit, apart from Popel, of an access from Anlong Thom village.

Other government bodies, for example the Ministry of Environment (MoE) and the police, have limited resource. The result is a lack of law enforcement, illegal logging, poaching, illegal building, a general depletion of the environmental natural resources; which are having serious consequences for the water of Angkor Park and Siem Reap town, as Phnom Kulen is the natural water tank of the region.

For the last 30 years, Phnom Kulen National Park faced a very important deforestation mostly due to the slash and burnt practice, combined with the illegal cultivation of cashew nut. Illegal logging of large trees and hunting are still observed. However, and for the last few years, ranger patrols have been more active and these practices have reduced, at least in the southern part of the plateau, where the population is concentrated. However, in the northern part of the park, these illegal practices are still very much observed.

Under the development program, ADF has set up four main components to address these issues: 1) Income Generation/alternative livelihoods, 2) Hygiene and sanitation/ Emergency Relief, 3) Educational support, and 4) Environmental component.

They are all tailor-made to the Kulen problematic and are implemented in coordination with the Khnong Phnom Commune Development plan, the Ministry of Environment and the APSARA Authority.

The 2023 activities are presented below.

c. INCOME GENERATION (IG)/ALTERNATIVE LIVELIHOOD PROGRAM

This component falls under the IADA 2 project, implemented since 2019 in partnership with Agrisud-International NGO, in the Khnong Phnom commune. The donor for ADF's contribution was Terre Cambodge travel agency until April 2022. While the IADA 2 project was extended for 3 more years from May 2022 (with the IADA 3 project) by Agrisud, ADF secured funds from the South East Asia Foundation for the extension of our contribution, with a project entitled ALIVE ("Alternative Livelihood for villagers in PKNP"). The following reports presents the results from May 2023 to April 2024.

Animal raising alternative livelihood project

The objective remains the same as the previous years: to enhance and develop alternative income generation activities, with the purpose of encouraging the Phnom Kulen population to move away from their current unsustainable, illegal and destructive practices (mono-culture of cashew nuts and slash-and-burn) to sustainable and environmentally friendly income generation activities. Even though this practice in forbidden by the MoE since 2019, this activity represents the main alternative option on Kulen plateau. As behaviour change is a process taking time, this component has to aim towards positive examples and repetition. It is therefore one the most challenging component of ADF within the development component.

- ADF animal raising alternative livelihood

Reminder: As for the previous years (since 2010), ADF continued in 2023 the support to local communities and villagers from Khnong Phnom commune. ADF propose technical assistance and materials for the families to undertake animal raising (chicken and pig). This was completed by families reached by the other related project started in 2019 (ADF/ AGRISUD project; see 2022 report and below).
In 2023, ADF IG team continued to monitor these animal raisers and their incomes, and provided material if needed (piglets and chicks, nets, nails, cement, bricks, water tanks and feeding tanks). ADF also invited veterinarian (From the Agriculture Dpt, Svay Leu District) to monitor pig farmers and to vaccinate the animals 3 times for each farmer.
With the objective to transform these producers into independent local entrepreneurs, ADF encouraged them to contribute with their incomes to the costs. This allows taking ownership for their business, ensuring sustainable alternative incomes. Beneficiaries were previously asked to repay back to ADF's IG accounts 50% of the amount spent for the materials and equipment they received from ADF. From January 2019 to December 2020, ADF applied the 75% rate for the reimbursements, to encourage the beneficiaries to be responsible. As in 2022, ADF collected in 2023 these reimbursements on a 50% rate again as most of farmers had difficulties to pay back a higher rate. They were collected from pig farmers.

Pig Raising Activity:
This activity has been ongoing for a few years now, as part as ADF's core alternative livelihood component. Due to its popularity, and additional funds from UNDP in 2019, we have now 2 groups. The ADF team is following up their raising activity, making sure the conditions are favourable (hygiene, health, food…). When budget is available, additional households is being proposed this activity.

As in May 2023, the first group of pig raisers had 17 families over 4 villages: 3 in Sangle Lak, 5 in Popel, 1 in Ta Penh and 8 in Khlah Khmum village. In May 2023, the second group (initially funded by UNDP and of 27 pig raisers (21 in Khlah Khmum village and 6 in Anlong Thom village)), has dropped progressively from 29 in 2021, 23 in February 2022, 18 in May 2022, 19 in August 2022, 17 in October 2022, to 15 in February 2023, and to 13 families in May 2023 (11 in Khlah Khmum village and 2 in Anlong Thom village). This was mostly due to an epidemy in the villages, the lack vision on the long term, and the lack of financial resources from these villagers (cf. below).
The total of pig raisers from both groups in May 2023 was therefore 30 families.

Among these groups, there were the following issues in 2023: one farmer has let without notice, another one wanted to stop, or had issue with a pig dying.
Another general issue is to ensure that the owner of the female pig can have piglets by mating, before it is sold by its owners. Often, pig raisers in need of quick incomes tends to sell it before having piglets.
To mitigate the risk of disease and death, ADF is cooperating regularly with the Dpt of Agriculture, from the Svay Leu District with one veterinary visiting and spraying disinfectants on the pig shelters. When family moved and/or did not built cage yet, this activity is on hold.
To ensure that the existing pig raisers are not giving up, the ADF team will continue in 2023 to encourage families to build cages, to organise the vet's visit and will record pig raisers expenses. It will also encourage the pig owners to have them fecundated by organising a rotation of pig male.

In March 2024, 4 new families requested to join the pig raisers group. The project supported them with pigs, materials to build the pig pen, pig raising technique, vaccination, and disinfectant inside pig pens. As for the others, each family received 1 piglet and material to build the shelter and take care of the pig (4 bags of cement, 500 bricks, 1 water tank, water equipment for pig, 2 meters hose). There are 5 other families who did not successfully raise pigs or the animal died during the reporting period. The animals got sick and died even if ADF supported the family with vaccination and disinfection. The total of pig raisers from both groups in April 2024 was therefore 29 families.

Chicken Raising Activity:
In 2023, there were a total of 7 families who raised chicken in 3 Villages (1 in Sangke Lak, 3 in Thma Chruogn, and 3 in Anlong Thom). ADF monitored them and bought some materials for them. Over the year 2023, 1 of the chicken raisers lost their chickens (chicken died). However, ADF continued to support them by buying more chicken for them in April 2024. In April 2024, 3 new families requested to join the chicken raisers group (2 in Khlah Khmum, and 1 in Thma Chruogn). The project supported them with male and female chickens, chicks, materials to build the chicken pen, chicken raising technique, vaccines, and help them with vaccinations. ADF will keep the possibility to fund the chicken raiser in 2024.
In April 2024, the total number of chicken raisers is 10 families in 4 villages: 1 in Sangke Lak, 4 in Thma Chruogn, 3 in Anlong Thom, and 2 in Khlah Khmum village.

AGRISUD and ADF joint-project in Khnong Phnom Commune (IADA-2), agriculture alternative livelihood project

Reminder: The partnership between ADF and AGRISUD International started in May 2019 with a signature of a Memorandum of Understanding and the beginning of the field activities. AGRISUD International is active in Cambodia since 1995 on supporting family farms to improve their activities for a better and sustainable livelihood. The project "Agroecological and diversification family farming in peri-urban of Siem Reap Province" (IADA-2) is ongoing since May 2016 supporting 820 small agricultural family enterprises to help them increase their income and living conditions.
The concept developed with ADF and AGRISUD is to expend this project to more beneficiaries offering various alternatives to the population, adapting it to the commune of Khnong Phnom specificities, and including ADF existing direct beneficiaries.
The partnership of both organizations commenced in June 2019 with a joint rapid assessment, closely followed by an introduction and dissemination meeting in the 5 legal villages of Anlong Thom, Thma Chrougn, Ta Penh, Sangke Lak and Khlah Khmum. The main purpose of the village meetings was to explain to the existing beneficiaries and the potential new beneficiaries the

partnership of ADF and AGRISUD, the benefit of the new synergy of the combined experience of both organizations, and finally the strategy for new agriculture / IG activities. The agreement between ADF and AGRISUD consists in a partnership where both organisations join their funds in the same project. ADF continues to pay for the costs of ADF IG component (salaries of both Ms. Mien Mout and Ms. Bis Cheung, their operational cost: transportation costs, monitoring / reporting costs, stationery, material for ADF beneficiaries, etc…). AGRISUD covers their staff operational costs, all material for the new 120 families, and AGRISUD staff salaries. AGRISUD benefits from ADF's extensive knowledge of Phnom Kulen National Park (PKNP), its population and their local agricultural habits, the local network of influential people and local authorities (village chief, Commune chief), the provincial authorities and the national authorities (Ministry of Environment, Provincial Department of Environment and APSARA National Authority). ADF staff gains in professionalism, learning from AGRISUD long experience in this field of agro-ecology, from the producers, to the group then to the market linkage. The beneficiaries will benefit with AGRISUD approach of organizing the farm families into groups / cooperatives, with prospective new products: black ginger, premium fruit trees and pepper. These new products have a higher value per kilogram, and markets in Siem Reap and Phnom Penh are willing to purchase them. The project aims to set up a marketing chain, from the family to the market.

From 2022, the agricultural production of family farms was strengthened and diversified. 130 new beneficiary farmers from Khnong Phnom and Banteay Srey communes were trained and supported to intensify and diversify their agroecological production system in pig raising, market gardening, spices and fruit crops. 202 farmers from Khnong Phnom commune supported in the previous phase (IADA 2) were supported, diversified and strengthened through master farmers and socio-professional organization. 332 farms in total are effectively in agroecological transition.

Black Ginger and ginger growing Activity
In 2022, there was a total of 102 families (64 women) who grew black ginger, from 5 villages (13 in Sangke Lak, 12 in Ta Penh, 49 in Anlong Thom, 12 in Thma Chruogn, and 16 in Khlah Khmum village).
On the 23rd March 2023, ADF facilitated the purchase of fresh black ginger (300 Kg) from farmers from Phnom Kulen to sell to other dealers in Siem Reap through the Green Framers association.
In May 2023, there were 91 families who continue growing black ginger, while 11 other families give up or did not grow, due to some challenges they faced such as the plants rotting after growing or they could not find a suitable land to grow the black ginger.
In May/ June 2023, the ADF/Agrisud team recruited 6 families among the 91 families, who volunteered to grow black ginger (2 in Sangke Lak, 1 in Ta Penh, 2 in Thmar Chruogn, and 1 in Anlong Thom) to experiment with some planting techniques from Thailand. The team facilitated the preparation of land for planting black ginger with these 6 families.
For the experiment planting techniques, we distributed 70 kg of black gingers to the 6 families.
Moreover, we also distributed 73.5kg of black ginger to 11 other families and other 42 families planted the black ginger, with their ginger seeds to grow.
As of Dec. 2023, there were only 67 families who continued to grow black ginger while 24 other families give up or did not grow due to some challenges they faced such as the plants rotting after growing or they could not find a suitable land to grow the black ginger.
Among the 67 families, the families who successfully harvested the black ginger in January 2024 are 56 families with a total harvest of 1,992 kg while 11 other families were not successful in growing or had no harvest.
From 15th to 17th February 2024, the ADF/ Agrisud team organized a field exposure for 10 master farmers (3 women) to the Vegetable Shipping and Quality Control Centre; and Royal University of Agriculture in Phnom Penh to learn about how to grow the black ginger.

Pepper/Long pepper/Vanilla growing Activity
On April 5th 2023, ADF team facilitated the training course on pepper growing techniques and natural pesticides, with a total of 10 participants/4 females. The issues encountered in 2022 were the termites, the lack of water during dry season and the lack of care from some of the beneficiaries.
In June 2023, the team plan to visit with the 13 pepper producers the Farmers' Home Association,

to improve techniques of pepper growing. In 2023, the team will encourage farmers to grow more pepper and will distribute fertilizer. After planting vanilla vines in 2022 as an experiment at 1 MF house (Mr Ann Ravuth, Anlong Thom), vanilla flowers appeared in February 2023. The Agrisud and ADF teams shared vanilla breeding and caring techniques. Unfortunately, the flowers did not survive the 2023 dry and very hot season. It will be tried again in 2024 with the same MF.
In May 2023, the team is supervising 13 families growing pepper, and long pepper and 2 other families planting vanilla vines (1 family in Anlong Thom and 1 in Sangke Lak).
Over the entire project length, the ADF/ Agrisud team is monitoring and providing techniques to farmers who are growing pepper, long pepper, and vanilla vines as well as distributing fertilizer.

Fruit Tree Growing Activity
From May 2019 until April 2024, the team has encouraged and trained 126 families to plant and grow orchards with fruit trees from 5 villages: 27 families in Sangke Lak, 24 families in Ta Penh, 22 families in Thmar Chruogn, 48 families in Anlong Thom, 5 families in Khlah Khmum. From April 2022 to May 2023, the numbers of tree growers raised from 56 to 126.
The ADF/ Agrisud team provides training on the technique of making compost and natural pest control for master farmers and families growing fruit trees, 126 families (79 women), and ensure a regular ongoing support for them. Over the entire project length, the ADF team is monitoring and providing techniques to farmers who are growing fruit trees. The Master farmers help to train on how to prune the tree branches, for the 126 families in the 5 villages.
A field study was organised for 16 master farmers and families growing pepper (5 women) to the Sela Pepper company in Thbong Khmum. A second field study was organised for 31 farmers (19 students) to see the Cambodia products, fruits and vegetables exhibition in Siem Reap.
For the rest of the year 2024, the team will monitor and promote additional techniques for fruit farmers and will distribute fertilizer for fruit trees. ADF and Agrisud will continue to follow and support these 126 farmers.
Generally, fruit trees distributed to farmers were coconut, orange, Pursat orange, grapefruit, lime, sapodilla, longan, dwarf coconut, Burmese grape and durian. In 2022, the new farmers were trained on planting (digging pits), weeding, fertilizing and pruning techniques. The farmers were trained about the production costs (income, outcome, revenue and unit price calculation) and marketing (market trend, supply, demand, structuring and information). However, this will need to be reinforced as the farmers are not confident and independent yet.

Overall and for the beneficiary in the Khnong Phnom Commune: 30 pig raisers, 10 chicken raisers, 102 black ginger farmers (11 farmers' families gave up or did not grow in May/June 2023 and other 24 farmers gave up or did not grow at the end of 2023), 126 fruit tree farmers, 13 pepper and long pepper farmers, 2 families growing vanilla vines. 42 farmers have combined activities and varieties (black ginger, ginger, and fruit trees). Numerous training sessions and weekly follow up of the farmers and animal raisers.

Master Farmers (MFs) and Socio-professional organisation (SPO)

The support for Mater Farmers (MFs) and Socio-professional organisation (SPO) is provided through meetings, training technical and educational, networking workshops and visit exchanges. The master farmers implemented their training and agricultural advisory activities with the previously supported farmers and deploy them to the new farms.
The number of farms monitored by MFs and SPO, among those already supported in previous projects is below target. Restrictions have indeed limited the ability to intervene. Furthermore, requests for support and follow-up have been reduced due in part to the gradual acquisition of autonomy by farms.
Based on the economic results of data collection, this year was calculated only the average annual income of the black ginger activity, i.e. the data from the technical and economic monitoring of the 102 black ginger farms (67 farmers continue to grow, 35 farmers give up, among 67 farmers, 56 framers successful harvested and 11 farmers not successful harvested). Therefore, it is possible to estimate the annual average income.

The annual average income of farms supported by the commune of Khnong Phnom (only for the black ginger farmers) reached $125/ target value $325. If compared to last year's report (year 1-2022-2023 = $100/ target value=$325), it shows a slight increase in the average income of farmers. The annual average income target for farms in Khnong commune Phnom was not achieved ($125/$325) due to poor crop results for black ginger.
The objectives of generating income from market gardening production in the area of Khnong Phnom have not been reached due to the technical difficulties encountered in the production of black ginger. The margins were negative for black ginger producers in or almost zero campaign in the first phase of the project. This new phase is working on adapting techniques.
The income from fruit production in Khnong Phnom commune is not yet known, as the support consisted of supporting the establishment of orchards that haven't come into production, given the fruiting time of many of the species planted.

The Socio-professional organisations (SPO) consolidate their governance and adapt their operating methods to develop their capacity to provide services to family farms. The Socio-professional organizations (SPO's), networks of master farmers and technical advisers are service providers to farmers.
The interprofessional workshops are biannual and bring together all the players in the sector concerned: farms, collectors, input sellers. They aim to share information about market demands based on figures and trends of the last season. Meeting restrictions made it impossible to organize only 3 interprofessional workshops out of the 6 planned.

The support for the development of the activity of the Green Farmers Siem Reap Association involves advising its managers, networking actions and the organization of exchange visits. The Green Farmers Association adapted to changes in demand for agricultural products to secure marketing on the markets. The marketing of agricultural products is improved by a better integration of producers into local sectors. Stable relationships are established between producers and buyers and new outlets were identified for local products. Local products were promoted to local consumers and tourists.
The multi-actor dynamics initiated at the provincial and commune level lead to the implementation of concrete actions allowing the development of territorialized food systems. The actors are equipped to promote and support the agro-ecological transition of the territories.
These last activities were mostly implemented by Agrisud International team.

332 families (32% of the population practicing unsustainable agriculture in Khnong Phnom commune) are now following agroecological principles to generate incomes, reducing their pressure on the natural resources of Phnom Kulen National Park (PKNP). This is combined with other ADF projects (support to law enforcement, zoning and demarcation of forested areas, environmental education and reforestation), and allows a better protected PKNP. There is an increase knowledge of the importance of a protected bio-diversity for the local population of PKNP.

The IADA/ALIVE project provides a concrete response to environmental issues by having developed agricultural systems to preserve and sustain resources productive farms while intensifying cropping systems. Agroecological practices disseminated contribute to improving the resilience of systems and to their adaptation to climate change. Soil and resource protection activities of water supplying crops and villages makes it possible to respond to the problems of hazards rainfall, particularly related to climate change. The project has also promoted systems that enable carbon sequestration in the aerial and underground biomass (perennial plantations: orchards, hedgerows and windbreaks) and by increasing soil organic matter (fertility management with organic inputs). The project provides alternative options to generate income to population from PKNP, options that does not require deforestation.

Administration, trainings, coordination, visits
The contract between the Ministry of Environment, ADF, and Agrisud International Cambodia for the rental of "Keskol product center " store on the foot of Phnom Kulen is in the process of being finalized.

On 16th and 17th of March 2023, ADF team joined the workshop with the Green Farmer Association to exchange on marketing.
On the 20th of march 2023, ADF team participated to the visit of AGRISUD donor, the Agence Française de Developpement (AFD).
On May 10 2023, the ADF/ Agrisud team hosted a visit of Mr. Yasushi Yoshida, a Japanese national, and the founder and CEO of Cambodia Earth Farm, to see the farmers' owned pepper plantations in Phnom Kulen.
From May 31 to June 02 2023, the ADF/ Agrisud team led a total of 16 master farmers and farmers (05 females) from 5 villages of the Khnong Phnom commune on a field exposure, visit to study the black pepper cultivation at Thbong Khmum province.
On June 23 2023, the ADF/ Agrisud team led the students from Sala Baï Hotel & Restaurant School to visit the dry spice producer group at Phnom Kulen, located in Khnong Phnom commune, Svay Leu district.
On June 27 2023, a total of 22 people, staff from ADF, AGRISUD, and the Green Farmers, as well as the officials from relevant departments (Provincial Dpt of Commerce, Provincial Dpt of Rural Development and Provincial Dpt of Agriculture) visited and shared experiences at the NGO GRET international project activities, located in the Sotrnikum district.
On July 19 2023, at the office of AGRISUD, there was a training and sharing on the basics of video shooting by smartphone with the facilitation of experts from GRET-CIRD and 18 participants (12 AGRISUD, 4 GRET, 1 ADF, and 1 PDA). The objectives of this training were to compile short videos on the application of agricultural techniques in accordance with Agro-ecology principles, and to disseminate and share with modern farmers, modern technology through social media such as YouTube, Facebook...
On August 02 2023, the ADF/ Agrisud team participated in the inauguration ceremony of Orchid Ranger Station and Homestay, located in the Preah Jayavarman-Norodom Phnom Kulen National Park, under the participation of HE Say Sam Al, Minister of Environment.
On August 21 2023, Agrisud and ADF were honoured to receive the visit of Mr. ING Kimleang, Deputy governor of Siem Reap, and his colleagues and Mr. PHOEUN Kimly, Director of the provincial department of commerce and colleagues on the activities and achievements of the project, such as black ginger, black pepper, fruit tree, wild pig raising, dried spiced producers group, Khnong Phnom Kulen shop and other activities implemented by ADF.
On August 25 2023, the team of ADF joined a workshop organized by AGRISUD on the dissemination of the Principles and Requirements Book of Safety Vegetables through multilateral partners such as the Provincial Department of Agriculture, Provincial Department of Commerce, APSARA Authority, AGRISUD Cambodia, GRET Cambodia, and CIRD. They have provided methods for monitoring and evaluating farming systems to 35 master farmers (20 females) from Khnong Phnom, Krabei Real, KanDek, Chreav, Khun Ream, and Tbeng communes. This workshop aims to review techniques based on agro-ecology principles and encourage their production to adhere to certain standards, for the confidence of local consumers. For the continuation plan, all stakeholders will aim to disseminate these principles to all producer members.
On September 14 2023, the ADF/ Agrisud team trained 12 farmers (11 females) on how to make bio-pesticides from rice alcohol in Ta Penh Village, Khnong Phnom Commune, Svay Leu District
From March 02 to March 15, 2024, with Agrisud team, ADF welcomed Marie POURRECH from Planete Urgence NGO. Here mission was related to the setting up of the GREEEN FARMER into a social company. During this mission, workshops were organized as well as field visits to Phnom Kulen, where the representative of Planete Urgence in Cambodia Apollinaire LEHEUTRE participated.
From March 26 to March 29 2024, the ADF/ Agrisud team conducted a refresher training on grafting fruit trees to master farmers and farmers in 4 villages on Kulen Mountain: 1- Anlong Thom village, 3 master farmers, 8 farmers. 2- Thma Chruougn village, 2 master farmers, 6 farmers. 3- Ta Penh 1 master farmers, 4 farmers. 4- Sangke Lak 2 master farmers, 6 farmers.
On April 02 2024, visit of Mr. CHHENG Piseth, a representative of CONFIREL company, to Phnom Kulen regarding the cultivation and processing of black ginger and roselle. This visit was organized by the ADF/ Agrisud team.

Reminder:
Regularly over the year, ADF team is doing the following activities: technical advising and follow-up on fruit trees and spices production, technical advising and follow-up on Dry Spice Producer group, Khnong Phnom Kulen (13 members, see below), take photos of every new farmers and take GPS point for archiving data, check the record of incomes and expenditures data in the book for farmers, arrange the seedlings and materials from the Agrisud office to farmers in Phnom Kulen, collect reimbursements from farmers (pig and chicken raisers). All these reimbursements (corresponding to 50% to ADF support) are in cash and reinvested in the project. In May 2023, the ADF team had the 70 new families growing fruit trees signed contract with rules to follow. Among these 126 families growing fruit trees, 20 will be selected as model farmers (MFs).

For each beneficiary of the project, contracts were signed between ADF-AGRISUD and each farmer. They present the roles and responsibilities of each parties (ADF/AGRISUD and the beneficiary), in order to engage the beneficiary to take responsibilities. The organisations commit to provide trainings on strengthening agricultural techniques (production of vegetable crops and fruit trees) and marketing to farmers; to facilitate planning, implementation, revenue recording, production costs, and marketing; to provide assistance, technical advice and regular monitoring; to provide materials to farmers according to the project possibilities and upon request. The beneficiaries must comply with the status of the organization and group of farmers, must collaborate with agri-businesses and agricultural extension officers, have to participate in training programs and follow the instructions from the NGO technicians on agriculture, must follow the best instructions from the technicians and share good techniques with other farmers, must commit to grow crops and fruit trees on their farms regularly and until the end of the project, must record their amount of products borrowed and produced and must allow the visit of international and national guests and provide brief explanations. It is agreed that if a beneficiary does not comply with this agreement, he should pay back the cash equivalents of the investment with equipment.

Follow up of the Dry Spice Group
From May 2023 to April 2024, the ADF and the Agrisud teams continued the follow up, on a weekly basis, of the Dry Spice group from Phnom Kulen (13 members, 12 women).
On July 05 2023, the dry spice producer group of Khnong Phnom and the vegetable and black pepper producers met with professors, researchers, assistants and project leaders from the Royal University of Phnom Penh. The university is currently implementing a project on "Promoting the agricultural and non-timber forest products market chain in Preah Jayavarman Norodom Phnom Kulen National Park" supported by the INRM project of the Ministry of Environment.
On October 27 2023, the team of ADF (Ms. Mien Mout and Ms. Bis Cheung), and its partner Agrisud (Ms. Tann Dinary and Ms. Chey Narun) joined forces to close the accounts of the Kulen spice drying group so the members were able to receive their dividends. It was also the planning of next year's production to support economic activities in the area. At the same time, a visit to the land took place accompanied by Mr Chinh Pheareak, Mr. Veth Vireak and Mr. Keo Sopheak from Agrisud team.

MF and vegetables producers follow up:
On August 10, 2023 Agrisud and ADF technicians trained the 11 master farmers (06 female) in Khnong Phnom commune on how to produce the bio-fertilizer from sea fish and produce the bio-pesticide from rice alcohol.
From February 15 to February 17 2024, the ADF/ Agrisud team organized a study visit for 8 Master Farmer and 3 producers of Kulen, to the Vegetable and Quality Control Center, headquartered in Takhmao City, Kandal Province, under the supervision of the Provincial Department of Agriculture. The objective was to see principles and quality control using laboratory equipment and services. In the afternoon, the team continued a visit to the Royal University of Agriculture, Chamkar Doung, and were shown the results of the multiplication through the tissue culture on black ginger and shared some techniques in cultivation from a professor. A total of 21 participants (project staff, PDoC, Green Farmer staff, MFs, and producers).

Follow up by MF with KoBo tool for vegetables and fruit trees farmers
The Agrisud project paid indemnities to the MFs according to the number of visits to the farmers.

Infrastructures
In early 2023, ADF and the Agrisud International Cambodia, with fund supported from SEAF, started to build the retailing shop next to Orchid garden, at the western entrance of Phnom Kulen National Park. The construction was completed in April 2023.

Retailing shop next to Orchid garden, at the western entrance of Phnom Kulen National Park
In April 2023, before the Khmer New Year, the Retailing shop next to Orchid garden, at the western entrance of Phnom Kulen National Park was successful opening under the official name "KESKOL PRODUCT CENTER ".
In August 2023, KESKOL PRODUCT CENTER welcome the visit of officials from the Ministry of Environment (MoE).
On February 04 2024, the Cambodia Tourist Association, in collaboration with the Young Entrepreneur's Siem Reap Association and the Ny Monineath blood donation launched promoting tourism and local products more broadly. A group of artists and influencers worked to promote and support agricultural products in Siem Reap, GREEN FARMER, as well as the handicrafts from Phnom Kulen- Kulen Crafts at the Kesorkol center shop were promoted.

Workshop, communication and participation to fairs
In September and October 2022, ADF team participated in the documentary with interviews for the project's video, in coordination with Agrisud team. It was released on social media on the 12th of May 2023.
On June 20 2023, Agrisud organized a multilateral and multi-sectoral consultation workshop to develop communes / Sangkat on a sustainable basis with the following topics: • IADA III Project Presentation• Presentation on the Territorial Project for Sustainable Agriculture• Review of multilateral discussion and consultation workshop• Follow up on the action plan mentioned in the previous workshop. A total of 12 local authorities (2 females) from 8 communes / Sangkats (Khnong Phnom, Tbeng, Khnar Sanday, Khun Ream, Puok Kandek, Chreav and Krabey Riel) joined.
On September 21 2023, ADF collaborated with Agrisud to organize a meeting to strengthen school vegetable garden activities with teachers who have been trained in life skills in 2 schools at Khang Phnom Commune, including Ta Penh Primary School and Sangke Lak Primary School.

Schools and agro-ecology activities
In 2023, the Agrisud team follow up cultivation techniques in Sangke Lak and Ta Penh primary schools. This programme was extended in 2024 to Popel primary school, at the request of the school director. After a visit in January 04 2024, the team and the director and teachers discussed issues and requirements, and started the collaboration.

Various
In 2023, ADF continued to be part of the "ALiSEA", the Agroecology Learning alliance in South East Asia, a network of Agroecology practitioners and supporters (sharing and supporting common goals on agroecology) that actively engages its members into information/knowledge sharing and vibrant collective actions promoting an agroecological transition, and providing meaningful benefit for all participants.

Related websites and online publications
https://greenfarmerssiemreap.com

Rice bank for the households in need in Thma Chruogn village

Reminder: The ADF input and support for the Rice Bank, set up in 2013 in Thma Chruogn village, is now mainly of a technical nature, guidance, monitoring and recording. The objective of this project is to alleviate food insecurity during the dry season amongst the target population. The concept is similar to a bank: beneficiaries can borrow rice when they have a shortage of supplies and have to give it back with a low interest, after the harvesting season (usually in November each year).
The beneficiaries are divided into 8 groups of household members, an equivalent to 34 families, and the policy of borrowing is for 11 to 12 months. The rice bank committee consists of 4 permanent

members who are organizing in-house activities, ranging from administration to the maintenance of the rice bank. They are also responsible for lending to and collecting rice from the household members. 19 families borrowed rice in 2022, 10 families borrowed rice in 2021, 13 families borrowed rice in 2020, 18 families in 2019, 24 families in 2018, 27 families in 2017, 39 families in 2016, 23 families in 2015 and 34 families in 2014. Less families tend to borrow over the years. This shows food security in this village is less of a problem than before.

The rice bank committee and ADF team collected and distributed rice to the households in need in Thma Chruogn village, with the following data:
In January 2023, villagers asked to borrow rice paddy. This represents 22 families, 160 people (including 78 women, of which 88 persons can work), for a total of 7,700 Kg of rice paddy distributed to the loan group. Additionally, rice contribution to the 4 committee members, 48kg/ person, makes a total of 192kg. The total rice paddy that was distributed in 2023 is 7,892 Kg.
In January 2024, the loan groups of 22 families returned rice paddy to ADF = 7,700Kg+ Interest 1,332 kg of rice paddy= 9,032kg.
2 new families in Thma Chruogn village joined the rice bank group in 2024, for a total of 37 families (including 4 committee members), and 204 people (including 90 women, of which 118 persons were able to work).
In February 2024, villagers asked to borrow rice paddy. This represents 33 families, 184 people (including 81 women, of which 107 persons can work), for a total of 8,900 Kg of rice paddy distributed to the loan group. Additionally, rice contribution to the 4 committee members, 48kg/ person, makes a total of 192kg. The total rice paddy that was distributed in February 2024 is 9,092 Kg.
In 2023, 22 households (160 people, 78 females) in need benefited from the rice bank in Thma Chruogn village. Additionally, 4 committee members also benefited from the rice bank.
In 2024, 33 families, (184 people, including 81 women) benefited from the rice bank in Thma Chruogn village. Additionally, 4 committee members also benefited from the rice bank.

The HUMY 4 project: Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion

Community-based tourism centre (CBTC) in Anlong Thom and Popel villages

HUMY 4 backgrounds and rationales

The HUMY 2 project was implemented by ADF from October 2021 to March 2022 and the HUMY 2 bis was implemented as a continuation, from April 2022 to December 2022. In continuation and at the end of the year 2022, the HUMY 4 project was designed for 2 years (2023-2024) to continue the support to the Eco-tourism alternative livelihood, patrolling activities and handicrafts promotion and training.

The HUMY 4 project is entitled "BUILDING CAPACITIES and PROMOTION OF THE PHNOM KULEN COMMUNITY-BASED TOURISM CENTERS, COMMUNITY PROTECTED AREAS (POPEL and ANLONG THOM), and HANDICRAFTS PRODUCERS" by providing training for CPA members of Popel and Anlong Community-based Tourism Centers (CBTCs) and Community Protected Areas (CPAs), and promoting local handicrafts, Phnom Kulen National Park.

HUMY 4 objectives

The main objectives of this project are in line with the two previous one (HUMY 2 and 2') and are therefore:

- to provide the necessary training for the two Community-based Tourism Centers (CBTCs) members and their related Community Protected Area (CPA) staff, in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. The project aimed to develop the capacities of these villagers by providing training sessions regarding tourism management, environmental education, protection, law enforcement and patrolling. The project also aimed to support the capacities of these villagers by providing a minimum incentive per month for the 2 CBTC leaders.
- to organize, train and financially support mixed patrols in both Popel and Anlong Thom CPAs (rangers and CPA members), to prevent illegal activities and raise environmental awareness (from January 2022).
- to support and promote the PKNP handicrafts producers. The project aimed to transmit the knowledge of making these products by providing training from the elders to the younger generations. The project should promote the products with the setting up of a brand, selling points in Siem Reap or Phnom Penh and at the CBTCs, promotional material (video, catalogue, leaflet…). Additionally, it should provide incomes for these vulnerable villagers as well as for the CBTC.
- Finally, the project should also facilitate the administrative procedures prior and during the bio-diversity's assessment of PKNP by Vincent Romera from HUMY, assisted by Claire Zagala, from September 2022 to March 2023 (see HUMY 5 project).

HUMY 4 activities and outcomes

Training and management of the Popel and Anlong Thom CBTC members.

The training sessions for Popel and Anlong Thom CBTC/ CPA members were organized thematically and delivered by a range of partners. These partners included TC tour operator with expertise in PKNP and community-based tourism, PKNP rangers and director, as well as highly experienced and successful community-based tourism stakeholders from other provinces.

Hospitality and Khmer History and archaeology training

On the 3rd of October 2023, the ADF team started the first training presented the Khmer History; hospitality and tourism management. Ms. Chhun Phirom, the CBTC's supervisor, meticulously designed a training document in Khmer, tailored for the local community, to provide a comprehensive understanding of Phnom Kulen National Park. Recognizing that not all trainees were literate, the training incorporated visuals and interactive exercises, ensuring accessibility for all.

The lesson covered essential aspects of the park's geography, history, local life, health care, education, population, and tourism impact. It then emphasized the goals and benefits of the CBTCs, fostering a sense of community ownership and pride. The training also instilled key guiding principles, emphasizing knowledge, hospitality, responsibility, honesty, and research.

Practical skills were emphasized through lessons covering a welcoming approach, clear explanations, guest observation, showcasing unique attractions, and flexibility. The training concluded with engaging videos promoting the CBTCs, visually reinforcing the project's vision.
This comprehensive training equips the local guides with the knowledge, skills, and principles to be successful ambassadors for their community, contributing to sustainable tourism and enhancing the visitor experience in Phnom Kulen National Park.
On the following days, the two introductory sessions to Khmer History and archaeology, with a particular focus on Phnom Kulen archaeological sites, by the director of ADF, JB Chevance, to members of the CPA and the CBTC local guides in PKNP. This vital program, led by Mr. Heng Puthea (Srel), the CBTC's leader, aims to empower these dedicated guides with the knowledge and skills to provide enriching experiences for tourists visiting the archaeological sites.
A simplified archaeological guide translated in Khmer was developed and shared to each AT CBTC member. It was reviewed all together. This initial part focused on a general introduction to Phnom Kulen and its archaeological sites, laying the foundation for comprehensive tour experiences.
The training then continued with on-site sessions at each of the main archaeological sites, ensuring that the guides have a deep understanding of the park's cultural and historical significance. This initiative not only strengthens the skills of the local guides but also contributes to sustainable tourism for sustainable development practices, enriching visitor experiences and showcasing the cultural and ecological treasures of PKNP. We are confident that this training program will empower the CBTC members to become ambassadors for their community and contribute to the long-term prosperity of this destination.
On the 09th and 10th of November 2023, the AT CBTC local guides and the guards from the Apsara National Authority participated in a on sites training session led by ADF director, JB Chevance. The training focused on archaeological sites within the Phnom Kulen national park, aimed at sharing valuable knowledge with those responsible for maintaining and protecting these sites, including the Cambodian guides from the CBTC.

<u>CBTC Management and training</u>
The continuous training of the CBTC responsible and members was ensured by Chhun Phirom with numerous meetings (monthly on the first week of each month) and working sessions over the period project.
The financial incentive for both CBTC responsible allowed to keep a permanent link between ADF and the CBTC and guaranteed a way to keep control over the centre's objectives. These incentives are completed by the incomes generated thanks to the tours sold by the CBTCs.
On the model of the AT CBTC, the PP CBTC rules were defined and explained to the CBTC members (safety, hygiene, environment…) for the visitor's tours in PP CPA.
ADF designed in Khmer and English the description of each tour offered by the 2 CBTCs and posted them on each CBTC Facebook page.
A printed book was designed to register all incomes and expenditures per tour.
The PP-CBTC booklet was also design and printed. It is designed to be presented at visitors on their arrival at the center and present pictures, maps of the tours and various information.
ADF designed 2 PP-CBTC signboards and display them at each kiosk (Veal Ta Lo and CPA entrance), in April 2022 and replaced them in 2023.
ADF organized the fixing of the base of pillars for 2 kiosks at Anlong Run, which appeared unstable, with additional cement.
In the 2022 report, it was noted that some Cambodian visitors to the Anlong Run waterfall refused to pay camping fees, which support guarding and cleaning services provided by the Popel CBTC members. To mitigate this issue, 3 clear signage was designed and installed in June 2023 at each camping locations managed by both CBTCs: Along Run for Popel CBTC and O' Ta Chork and O' Chup Thal for Anlong Thom CBTC, outlining the services, prices and rules for each site, and ensuring visitors are informed before their arrival. They also present QR codes with a link to each CBTC Facebook page.
The newly established price list for handicrafts, available in both Khmer and English, was thoroughly explained to the two CBTC leaders. In 2023, it was printed and prominently displayed at both CBTCs to ensure clear communication and transparency for visitors.

An ABA bank account was opened for both CBTC, to facilitate the cash flow management. However, since it has no legal status, it was opened on the name of Ms Chhun Phirom and Mr. Heng Puthea until the CBTC get legal status.
In early 2024, Ms. Chhun Phirom organized and led a training for the CBTC members on 1) hygiene cooking and packaging, at the CBTC kitchen 2) Being a local guide on the CBTC tracks, 3) Being a guard for camping visitors at KULEN basecamp, TC camping site in PKNP.

Promotion of the CBTCs:
The promotion of the 2 CBTCs was primarily conducted through their respective Facebook pages. Additionally, the promotion was shared on TC and ADF Facebook pages. The promotional activities included regular posts about the CBTCs' activities, pricing information, contact details, and promotional videos.
In early 2023, Ms Chhun Phirom, CBTC supervisor joined the ICEM workshop (WB project) about the Eco tourism project in Kulen at Somadevi Angkor Hotel in Siem Reap.
Ms. Chhun Phirom, the supervisor of the CBTCs, organized an extensive inspection trip to the CBTC-AT tours for Angkor Grace, ensuring thorough attention to detail and comprehensive oversight of the tour's arrangements and facilities.
AT and PP CBTCs had the honor of hosting His Excellency Ambassador Mr. Jacques Pellet for a two-day visit to Phnom Kulen National Park in early May 2023. This visit provided an excellent opportunity to explore the rich archaeological sites and forested areas while also highlighting the importance of supporting local villagers and promoting environmental sustainability. It's truly commendable to see efforts being made to preserve the cultural and natural heritage of the region while also contributing to the well-being of the local communities.
On the 3rd of August 2023, the AT CBTC had the honor of hosting Mr. Sul Rarvy from Thmey Thmey, a highly regarded newspaper in Siem Reap, Cambodia. Mr. Heng Puthea (Srel), the leader of CBTC, extended a warm welcome and engaged in fruitful discussions with Mr. Rarvy. This notable visit culminated in the creating a compelling video, which was later released online on the 11th of August 2024. The video effectively highlighted the CBTC project's unwavering commitment to empowering local communities and advancing sustainable livelihoods within the Phnom Kulen National Park: https://www.facebook.com/watch/?v=110719782104740&extid=NS-UNK-UNK-UNK-AN_GK0T-GK1C&mibextid=RUbZ1f&ref=sharing
On the 19th and 20th of September 2023, the ADF and AT CBTC members had the privilege of hosting a group of 19 students and tutors from The School for Field Studies visited PKNP. This special occasion provided an opportunity to exchange valuable experiences, showcase ADF's diverse activities such as tree nurseries, CBTC, and Kulen Crafts support, and take advantage of the exceptional services offered by CBTC, including a trek to Poeng Tbal, the guidance of a knowledgeable local guide, and the enjoyment of delicious local cuisine.
The ADF team met with Mr. Wayne Mc Callum, the director of Song Saa Foundation at Banteay Srey District, Siem Reap to promote CBTCs in PKNP, previously to his book release event "Wild Angkor" at the FCC Angkor on 11th of November 2023.
ADF team designed and printed English leaflets and banners fort this event and JB Chevance presented all ADF activities in a 20 minute presentation.
On the 11th of November 2023, the AT and PP CBTCs attended the event of the book release "Wild Angkor" by Wayne Mc Callum at the FCC Angkor. This event provided a unique opportunity to meet with representatives from various hotels and travel agencies. It was a chance to share more about the local development projects in PKNP and discover another side of this beautiful region.
The team developed new CBTC programs in partnership with Angkor Grace, the French school of Siem Reap, Phnom Penh and Battambang, and an NGO from Battambang province
The team prepared new CBTC program for 90 students from Spoon Cambodia Organization and for Sala Bai (120 students) visiting Phnom Kulen National Park (PKNP) with the AT CBTC.
The team created a new CBTC program for 14 students from China visiting PKNP with the AT CBTC, including a tree planting session.
In December 2023, the 2 CBTC registered to the application launched by ASARA to promote the tourism in the region.

Exposure visits and training for CBTC to other community areas:
For these 2 activities, ADF identified 1 program involving local communities, patrolling and protecting their natural environment, as well as benefitting from visitors and tourism, to be visited and serve as examples for PP and AT CBTC/CPA teams.

On the 9th of June 2023, with funding support from HUMY, the ADF team organized an exposure visit for CPA/ CBTC members to the Changkran Roy Community Forest/ Community Protected Area (9100 hectares) also known as a famous Community-Based Tourism site for nature and birdwatching tours, located to the west of Phnom Kulen National Park in Varin District, Siem Reap province.
The agenda and planning for the visit were coordinated with the head of the Changkran Roy community, Mrs. Chhoeun Sokdy, and the patrolling leader Mr. Lom Som.
The visit involved a day-long exposure visit for Phnom Kulen CBTC and CPA members (15 people), as well as 5 ADF staff, a short presentation about the community, its conservation efforts, key fauna/flora, patrolling and law enforcement, communication systems, and relevant laws/regulations, a field visit inside the Changkran Roy forest.
The presentation and discussions covered topics such as: Conservation issues in the respective areas, Community involvement and environmental awareness/education, Community-based tourism and tourism revenue sharing, CPA member training, NGO and government support.
This field exposure visit provided an opportunity for cross-learning and knowledge sharing between the different CPA and CBTC groups, as well as with the Changkran Roy community. It helped to build an understanding of community-based conservation and tourism efforts in the region.

Training for local patrol by PDoE, ADF and other partners:
From September 2022 to July 2023, HUMY supported an updated study for the PKNP biodiversity with the presence of Mr Vincent Romera, associated with Mr Tony Yon and the rangers from PDoE. ADF was involved in ensuring the authorization from the MoE, in allocating the necessary resources and network, as well as the required logistic.
On the 4th of May 2023, an overview of the biodiversity findings was shared with rangers and CPA members, along with ways to present this information effectively:
Phnom Kulen National Park is renowned for its rich biodiversity, featuring a diverse array of plants, animals, and ecosystems. This natural habitat supports various species and contributes to the ecological balance within the region, making it a vital area for conservation efforts.
The recent biodiversity survey, conducted by HUMY, Vincent Romera and Yon Tony, aimed to shed light on the threats facing this valuable ecosystem and to present potential solutions for its protection. This presentation, which built on the knowledge shared during previous training sessions for CPA members and rangers, was attended by 14 rangers from the PDoE, 11 CPA members from Anlong Thom, and 14 CPA members from Popel.
The survey revealed the presence of several endangered species, highlighting the critical importance of the park in protecting threatened biodiversity. The presentation discussed threats such as habitat loss, illegal logging, and poaching, and presented potential solutions including strengthening anti-poaching patrols, promoting sustainable tourism, and engaging with local communities on conservation efforts.
This collaborative effort underscores the shared responsibility of rangers, CPA members, HUMY, ADF and other NGO (ACCB…) and the researchers in protecting the park's unique biodiversity. The presentation served as a valuable platform for transferring knowledge about biodiversity conservation to the rangers and CPA members, empowering them to take an active role in safeguarding the park.
We are grateful to HUMY for their generous support and to Vincent Romera and Yon Tony for their expertise and dedication to the project. Moving forward, ADF team will leverage the findings of the survey and the knowledge shared during the presentation to continue building capacity within the ranger and CPA communities, ensuring long-term protection for the biodiversity of Phnom Kulen National Park. See below for more information about this report (patrol chapter).

The first training session for the year 2023 for the patrolling project in Phnom Kulen National Park was a crucial step in empowering local communities to protect this valuable ecosystem. Organized by ADF on the 15th and 16th of June 2023 for AT and PP- CPA members and conducted by Mr. Nop Thet from BeTreed (Phnom Thnout in Preah Vihear Province), the training focused on equipping CPA members and rangers with the skills and knowledge needed to effectively patrol the park and prevent illegal activities like poaching and natural habitat destruction. It was following the training organized by ADF and sponsored by HUMY in December 2021 at Be treed entitled "Patrolling in Protected areas by local communities" where Be treed team provided a similar experience on this site.

The agenda start with the theoretical training, attended by 30 CPA members from PP and AT, covered essential topics such as identifying illegal activities, patrol techniques, data collection, community engagement, and communication skills.

It continued with the practical portion involved a one-night patrol with 10 CPA members, 2 rangers, and ADF and Humy team members. This hands-on experience allowed participants to practice tracking, surveillance, and data recording methods. Thanks to Mr. Nop Thet's inspiring professionalism and the collaboration with the Provincial Department of Environment, the training achieved significant results.

As a direct outcome, 7 hunters were apprehended and issued warnings. More importantly, the training fostered a new vision and shared commitment among the participants to protect Phnom Kulen National Park. We are grateful to Mr. Nop Thet and BeTreed for their invaluable expertise and to the Department of Environment for their continued support. Despite the request of both Be treed and ADF team, the PDoE did not want to fine the perpetrators nor to bring this case to court. They signed contracts mentioning that they will not repeat their illegal activities.

The project will continue to build on this experience with future training sessions, ongoing monitoring, and strengthened collaborations to ensure the long-term sustainability of the park's conservation.

Building on the previous training session, the second training in 2023, conducted by ADF, the Provincial Department of Environment, and experienced park rangers, aimed to further empower 30 CPA members from PP and AT and the park rangers to actively protect Phnom Kulen National Park. This collaborative effort brought together the expertise of different stakeholders to equip CPA members with the skills and knowledge they need to effectively prevent illegal activities.

Participants learned about patrolling techniques, law enforcement procedures, and the legal framework for protected areas. Field exercises provided hands-on experience in tracking, surveillance, data collection, and reporting. The training also trained again to participants to Avenza mobile application that enhanced their patrol efficiency and accuracy in recording violations.

As a direct result, CPA members are now better equipped to effectively patrol their forests, understand the legal framework for protection, and accurately report violations to the MoE. This training has significantly enhanced their ability to protect their community's natural resources and has instilled a sense of ownership and responsibility for the preservation of Phnom Kulen.

ADF and Humy are deeply grateful for the expertise and dedication of the Provincial Department of Environment, the park rangers, and the training facilitator. ADF team is committed to continuing our support to the CPA members through ongoing training, mentorship, and resources. We are confident that this collaborative effort will contribute significantly to the long-term protection of Phnom Kulen National Park.

During this training, issues met during the ongoing patrols were raised such as: Establishing and keeping a consistent numbers of patrol members: 4 pax for day patrol (1 ranger and 3 CPA members), 5 pax for night patrol (2 rangers and 3 CPA members), Requesting the systematic presence of rangers, Follow up of illegal activities after they were observe should be done in the Telegram group by PDoE rangers, Bonus for catching illegal activities was still under discussion at that time with PDoE, Schedules of patrols have to change, taking into consideration the observations of HUMY team: important and systematic poaching observed early morning (5h30-7h00), Information about all illegal activities should be shared in the report of each patrol, PP and AT patrol reports should be improved with a better use of Avenza application.

Support to local patrols in CPA by CBTC and CPA members:

The detailed context and key points of the patrolling activities in 2023:

Patrols conducted in 2023:

- In 2023, ADF has set up and supervised 144 patrols, implemented by Phnom Kulen National Park rangers and CPA members.
- In January 2023, a system of night patrols was introduced, in coordination with the CPA members and the Provincial Department of Environment (PDoE). This was based on the assumption that most illegal activities occur at night.

For the Popel CPA:

- 84 patrols were conducted from January 26 to December 20, 2023, averaging 7 monthly patrols.
- Each patrol had 5 participants - 3 Popel CPA members and 2 rangers.
- There were 384 individual payments, with day patrols paid $7 each and night patrols paid $10 each, totalling $3,279.

For the Anlong Thom CPA:

- 60 patrols were conducted from January 26 to December 27, 2023, averaging 5 monthly patrols.
- Each patrol had 5 participants - 3 Anlong Thom CPA members and 2 rangers.
- There were 275 individual payments, with day patrols paid $7 each and night patrols paid $10 each, totalling $2,312.

General remarks:

The introduction of the night patrol system, with an additional ranger per patrol and a higher payment of $10 per patrol, was done to better address the illegal activities that were suspected to occur more frequently at night.

From January 2022 until October 2022, Anlong Thom CPA-rangers patrols were implemented only inside Anlong Thom CPA. After, they were also implemented outside this CPA. From January 2022 to May 2023, Popel CPA-rangers patrols were implemented only inside Popel CPA. After, they were also implemented outside this CPA.

Before March 2023, patrols were organized by CPA members (selection of dates and locations…). Due to difficulties or organizing patrols (rangers being busy to other tasks and CPA members less organized), ADF and PDoE agreed on the rangers taking over the patrol organization from that date.

Conclusions from the 1-year of patrolling activities in 2023:

Illegal logging was the most recurrent illegal activity, with a total of 10 cases (7 in Popel CPA, 3 in Anlong Thom CPA). Most cases involved the cutting of trees without catching preparators but also the collection of dead precious wood. In one case, perpetrators escaped before being apprehended.

Forest encroachment for farming was equally important, with 10 total cases (4 in Popel CPA, 6 in Anlong Thom CPA). This involved clearing of forest for new farms and expansion of existing farms.

Poaching evidence was more numerous than in 2022, with 9 total cases (6 in Popel CPA, 3 in Anlong Thom CPA). This included setting of traps, hunting huts, seizing of guns, and apprehending some hunters.

There was an increase in fruit collectors from outside the CPAs during the Kulen fruit season, with 4 total cases (3 in Popel CPA, and 1 in Anlong Thom CPA).

Some CPA members reported facing pressure from other villagers while conducting patrols and preventing hunting activities.

It was more difficult to conduct patrols during the cashew nut harvesting season and national festivals in April-May.

The patrol reporting and documentation process had some challenges, with rangers and CPA members not properly using the Avenza mapping app.

While the number of patrols was similar to 2022, the number of illegal activities detected almost doubled, partially due to patrols being conducted outside the CPAs (2022: 16 cases for 145 patrols; 2023: 33 cases for 144 patrols).

The effectiveness of the patrol methodology was questioned, as perpetrators were rarely apprehended and some illegal activities persisted over multiple visits.

The conclusions suggest the need to adapt patrol scheduling and methodology to better target the timing and locations of different illegal activities. Overall, the patrols were effective in preventing and reducing environmental threats, but significant challenges remain in fully addressing the variety of illegal activities in the protected areas.

Bio-diversity report HUMY-ADF 2022-2023: "Phnom Kulen National Park: an update on the biodiversity status with an assessment of threats".
This report was done after the PKNP bio-diversity survey by HUMY, ADF, and MoE from September 2022 to July 2023 and presented to MoE in November 2023. It presents an inventory or ecological assessment of PKNP, highlighting the threats to species and ecosystems, as well as mapping the illegal logging sites observed between December 2022 and June 2023.
Illegal activities observed in the forested areas of PKNP are divided into 3 groups of activities:

- Important land clearing for the creation of new agricultural plots: mostly for cashew nuts on the plateau and valley bottoms; and for bananas on the more rugged areas (slopes);
- Very important selective logging with the chainsaw (more than 1,100 recently cut trees), which consists of cutting large trees (from 40 to over 100 cm diameter) individually or in small groups according to their economic value;
- Systematic poaching, which is characterized in PKNP by hunting with air rifles (more exceptionally with shotguns), the setting of various types of traps, and stalking. Poaching is practiced everywhere in the national park, whether in degraded agricultural zones, CPAs, APAs, or the 2 forest cores (identified as future core zones). Poaching is also a consequence of logging activities, as loggers poach for food during their stays in the forest.

ADF has sent this report to the PDoE and the MoE and is hoping to address these issues with a new project in 2024 or 2025.

<u>Training by handicrafts producers from PKNP to villagers and young students:</u>
The HUMY 4 project plays a vital role in preserving the traditional crafts of the PKNP handicraft producers, particularly focusing on the unique skills of vulnerable elders in the Phnom Kulen villages. By targeting the transmission of knowledge to the younger generation, the project aims that these traditional crafting techniques, particularly in creating mats, baskets, cutlasses, and knives will not be lost to future generations.
Additionally, promoting these environmentally friendly products at Community Based Tourism Centers (CBTCs) and other selling points in Siem Reap helps to create a larger market for these artisans, providing them with valuable income opportunities. This dual approach not only sustains traditional arts and crafts but also enhances the livelihoods of the artisans, fostering both cultural preservation and economic empowerment within the community.

The identification and training of handicraft producers in the Phnom Kulen villages is crucial steps in preserving traditional crafts and empowering local artisans. The survey shows that mat weaving is done exclusively by women, and basket weaving and blacksmithing are male-dominated activities. Here's a summary of the activities and challenges faced in this initiative:

Artisan Identification:
The ADF team, consisting of Ms. Chhun Phirom, the program supervisor (part time), and Ms. Chhouk Sreymom, the assistant conducted surveys in seven (7) villages: Phum Thmey, Anlong Thom, Thma Chruogn, Ta Penh, Sangke Lak, Khlah Khmum, and Popel during 2021, 2022, and 2023.
Artisans were categorized based on their crafts, including mat weaving, blacksmithing, basket weaving, making brooms, cotton ball making, bamboo straw crafting. The census includes their age and phone number if they have one.
Training sessions in villages:
In June 2023: A training session was organized specifically for four women artisans in Along Thom village, focusing on mat weaving techniques.
Throughout July 2023, additional training sessions were conducted:
Phum Thmey Village: Training occurred over four days (July 5, 7, 11, and 18) with five women artisans participating.
Khlah Khmum Village: A similar four-day training took place for thirteen women artisans on July 7, 14, 19, and 28.
Trainers from Along Thom village, Aunty Hai and Hon, led the sessions. Trainees were encouraged to bring their own dried romchek (Pandanus pierrei) to use in their practice.

Financial support: The HUMY 4 project supported the costs for the training: Per Diem at 7 US$ per day for the trainer, transportation costs for the trainer, complementary tools and equipment, and raw material (ex: pigments for mat dyeing).
Challenges Faced:
Communication Barriers: Many trainees were not familiar with using telephones, necessitating in-person visits to communicate effectively and ensure attendance.
Commitment Issues: Some artisans displayed a lack of commitment during training, believing they already possessed sufficient skills in mat weaving. This assumption affected their engagement and learning.
Post-training: the artisans were encouraged to practice mat producing, but the quality of the mats did not meet standards, leading to difficulties in selling their products, so the Kulen Crafts could not buy their mats due to quality concerns, which highlights the need for ongoing support and quality improvement.
Training sessions in primary schools:
The training programs for students at schools in Khnong Phnom commune serve to raise awareness and foster an appreciation for traditional handicrafts, particularly mat and basket weaving. Here's a comprehensive overview of these initiatives.
Purpose of the Training:

- Conservation of traditional handicrafts: The primary aim is to conserve and promote traditional handicrafts in the Phnom Kulen area.
- Awareness Raising: The objective is not necessarily to train children to become future weavers, which is seen as unrealistic; rather, it's to instil an awareness of traditional weaving techniques. The most effective transmission of this knowledge occurs through hands-on training in village settings, complemented by future workshops through Kulen Crafts project supported by HUMY and TDS.
- Ethical Considerations: Kulen Crafts does not purchase products made by children, as engaging in this practice could be seen as exploiting child labor. Furthermore, financial incentives could detract from their educational commitments. Items from the fist training were collected by ADF team from the students and were given as gifts to ADF donors. They are now kept by each student.

Training Overview (June to October 2023):

- The training was conducted at two schools (Along Thom and Sangke Lak), engaging a total of 69 students (21 male):
  - Anlong Thom School: 43 students (10 male) participated. Students were divided into 7 groups focusing on mat weaving for grades 5 and 6.
  - Sangke Lak School: 26 students (11 male) participated. Students were divided into 6 groups, with training on both baskets and mats for grades 5 and 6.

The training program reveals both the potential and challenges in revitalizing traditional handicrafts in the region. Continued emphasis on skill development, improved communication, and quality assurance will be crucial for the artisans' success in the market and preserving their craft for future generations.
The training efforts in Khnong Phnom commune for the school children are designed to impart knowledge and cultivate appreciation for traditional crafts among young students while ensuring that the programs respect ethical standards concerning child labor and education. By preparing students for hands-on experiences in their communities, the program fosters a sense of cultural identity and continuity, which is crucial for the preservation of these traditional crafts.

<u>Promotion and distribution of the handicraft's products from PKNP to the market</u>

In 2022, the banners, leaflets, and catalogues (both in Khmer and English) were produced, distributed to selling points and promoted on ADF Facebook page, Kulen Crafts page and CBTCs' pages.
In 2023, all the Kulen Crafts promotion materials including the logo, the catalogue and leaflet were updated, adding the new product items and printed to distributed to selling points and to customers during the workshop and product exhibitions in Siem Reap and Phnom Penh.
The tags mentioning the price, the producers' name and its village were also updated.

T-shirts were designed and printed (60 units) with the incomes from Kulen Crafts.
A short video around 5 minutes long which was produced in 2022 to promoted Kulen Crafts products on ADF Facebook page and on Kulen Crafts Facebook page: https://www.facebook.com/Kulencrafts). In 2023, the ADF team continue to post and share this video on social medias as part of Kulen Crafts promotion.
The item list was defined, with their corresponding prices, season availability and care instructions were also updated in 2023.
The contacts with potential buyers or retailers were also updated in 2023.
During the year 2023, Kulen Crafts participated to several fairs and exhibitions. They provided a platform for showcasing and selling Kulen Crafts products, contributing to the promotion of traditional handicraft from Phnom Kulen. Mats, knives, baskets, and brooms were available for sale. With these events, ADF team showcased its commitment to sustainable development by helping the local artisans, highlighting the Kulen Crafts project supported by HUMY, to preserve traditional skills and promoting sustainable livelihoods in Phnom Kulen National Park, to raise awareness about the work of the ADF team in supporting local communities and contributing to the long-term conservation of Phnom Kulen National Park, to connect with a wider audience interested in Cambodian culture and traditional handicrafts from Phnom Kulen.
From the 24th to the 27th of February 2023, the Kulen Crafts team, along with two mat weavers from Phnom Kulen, participated in the 16th Cambodian Products Fruit and Vegetable Exhibition. The event was held at the exercise area near the Royal Residence garden in Siem Reap town.
On the 02nd of August 2023, the ADF team participated in the inauguration ceremony of the Conservation Park, Kesor Kol House, and the Green Farmer Shop in Phnom Kulen National Park.
On the 3rd of August 2023, the Kulen Crafts team received a visit from Mr. Sul Rarvy of Thmey Thmey newspaper, a prominent publication in Siem Reap, Cambodia. The visit resulted in two impactful videos published online on 11th and 24th of August 2024, shining a spotlight on the Kulen Crafts project and its dedication to supporting local artisans and promoting sustainable livelihoods in Phnom Kulen National Park. They are available to the two-following links:
https://web.facebook.com/watch/?v=843260637414587&extid=NS-UNK-UNK-UNK-AN_GK0T-GK1C&mibextid=4zoUgC&ref=sharing&_rdc=1&_rdr
https://web.facebook.com/watch/?v=672801524734297&extid=NS-UNK-UNK-UNK-AN_GK0T-GK1C&mibextid=RUbZf&ref=sharing&_rdc=1&_rdr
On the 16th of September 2023, the ADF team participated in an event hosted by the École française d'Extrême-Orient (EFEO) in Siem Reap.
On the 10th, 11th, and 12th of November 2023, the Kulen Crafts team, and 2 mat weavers from Phnom Kulen participated in a three-day exhibition of locally grown fruit and vegetables, as well as handicrafts, held at exercise area near the Royal Residence garden in Siem Reap town.
On the 11th November 2023, the Kulen Crafts team and 3 CPA members from Phnom Kulen participated in a new publication release event for the guidebook 'Wild Angkor' at 'FCC Angkor by Avani'.
Production and incomes follow up:
In 2023, a comprehensive record of all sold items was meticulously updated and stored in an Excel file. This record includes details such as the date of sale, item description, size, quantity sold, selling price (with any applicable discounts), profit margins, expenses, information about the buyers, and the relevant villager. A total of 278 items were sold in 2023, including mats, placemats, brooms, and various types of baskets and knives.
The capital fund brought forward from 2022 (1,862 US$) was reserved for January 2023 to purchase handicraft items before selling them in CBTCs (AT and PP) but mostly other retailing places in Siem Reap.
The transportation costs for products from Phnom Kulen to Siem Reap or Phnom Penh were covered by the ADF pickup truck, typically used for small quantities. For larger quantities, the Kulen Crafts team hired a truck for transportation to Siem Reap, after which the products were shipped to Phnom Penh via a shipping company in town.
In 2023, a stock list was updated, including the following information for each item: item number, size, unit, unit price, total, village, producer name, and remarks.
In January 2023, Angkor Grace Residence and Wellness Resort placed a significant order with Kulen Crafts for a total of 116 items, which included 38 mats with natural and mixed color stripes,

40 natural color placemats, and 38 round baskets. The transportation costs for these items were factored into the overall price. To initiate the order, 50% of the total costs were paid upfront. The ADF/ Kulen Crafts team actively monitors the production process to ensure both quality and timely delivery.
Incomes and profits from January to December 2023:
The total cost of purchasing 278 items was 3,557.50 US$. The total selling price of 278 items was 4,880.00 US$. The overall net profit from 278 items amounted to 1,322.50 US$. The substantial Angkor Grace order, comprising 116 items, significantly contributed to the profit increase. Other costs and expenses amounted to 1,380.75 US$, including 1008.25 US$ for students in Sangke Lak, a shelf for the store room, and the printing of booklets, banners, and t-shirts (see below).
Redistribution of profit:
The profits from Kulen Crafts are designated for buying new products and covering expenses such as pigments and transportation costs. However, in January 2023, it was decided that a portion of the profits would be used to support the education of 23 of the poorest students from Sangke Lak village. This support included purchasing school materials such as notebooks, pens, rulers, and backpacks, which amounted to a total of $233. Additionally, other necessary expenses such as a shelf for the store room, and the printing of booklets, banners, and t-shirts were also covered which amounted to a total of $775.25.

Monitoring the HUMY 4 project activities:
The success of the project was built upon a collaborative spirit, with the ADF team actively working with key stakeholders on a weekly basis to ensure timely progress and address challenges. The ADF team meetings facilitated open dialogue, allowed for prompt problem-solving, and ensured that all stakeholders were aligned with project objectives.
Throughout the HUMY 4 project, rangers, villagers, and CPA members were actively involved, ensuring that the project was tailored to their needs and empowered their participation in conservation efforts. This approach fostered a sense of ownership and responsibility for the project's success, building the capacity of the local communities to continue conservation efforts long after the project's completion.
A robust system of documentation was implemented using Telegram groups, allowing for clear tracking of each project step and facilitating the creation of comprehensive reports. This documentation system ensured transparency and accountability throughout the project, providing a clear record of progress and allowing for continuous monitoring and evaluation.
Regular payments for CBTC leaders, patrolling members, and the project supervisor fostered a sense of ownership and responsibility, contributing to the overall success of the project.

Collaboration with stakeholders:
ADF worked during the HUMY 4 project in close collaboration with: Local authorities (village chiefs, commune chief), Ministry of Environment (in charge of PKNP) and particularly with the PKNP rangers and the Provincial Department of Environment (PDoE), Be Treed, and Changkran Roy Community Forest/ Community Protected Area, CSLEP team (MoE and World Bank). However, the MoE and World Bank representatives were not always involving ADF in the meetings.
ADF finalized and signed a Memorandum of Understanding (MoU) with HUMY NGO. It formalizes all responsibilities of the two parties. It was signed for a 3-years period, from March 2021 to March 2024.

Activity and financial reporting:
The 2023 report was submitted to HUMY in September 2024. All expenses per budget lines were closely monitored and receipts are checked and recorded into the HUMY 4 project Xcel spreadsheets, on a weekly basis, to ensure the correct spending of the budget per activity; by ADF Finance, admin. and communication officer.

Next steps, challenges and risks analysis for HUMY 4 project

Training and management of the Popel and Anlong Thom CBTC members

AT CBTC

Conduct a refresher training session focused on hospitality and about the archaeological history of the sites for the local guides.

Provide a refresher training session on hospitality and hygiene practices to improve service quality.

The archaeological simplified guide translated in Khmer should be corrected and disseminated by Mr. Heng Puthea to the others AT-CBTC members.

This dissemination should be completed with a guided visit on every archaeological site visited by the AT-CBTC tours, given by Mr. Heng Puthea (Srel) and JB Chevance to every AT-CBTC members, as it was the case on the 9th and 10th of November 2023.

An illustrated booklet should be design and distributed to all guides to present all significant discoveries from each site visited by the trails, in order for the guide to show the unearth structures, the artefacts brought to museum or looted.

PP CBTC:

Popel village faces significant challenges due to its remote location and high levels of poverty, including issues like illiteracy, alcoholism, and food security.

There is insufficient food available in Popel to prepare lunch packages for visitors. The PP-CBTC cooks lack financial reserves to purchase ingredients and do not have motorbikes to travel to Preah Ang Thom village (4 km away) for supplies.

ADF plans to convene all stakeholders (ADF, CPA, & CBTC) to collaboratively find solutions to the food supply issues at PP-CBTC for the next years.

ADF will organize meetings to explain the CBTC rules and provide the emergency contact list to PP-CBTC members.

Regular maintenance of the tracks along the O'Thom River (between the four waterfalls) and from Veal Ta Lo to Poeng Gnogneat will be organized.

The roofs of the kiosks at Anlong Run will be replaced to ensure better service and shelter for visitors.

Both CBTC:

The financial incentives provided by the project for the leaders of the two CBTCs have established a lasting connection between ADF and the CBTC teams. These incentives ensure ongoing oversight of the centers' objectives. Additionally, the income generated from tours sold by the CBTCs is expected to fully replace these financial incentives over time.

The next project should focus on "having the centre self-sustaining through cost control and better planning of its objectives", as the December 2022 ICC-Angkor recommendations (n.21.1.2.ii).

Both CBTCs were designed as alternatives rather than permanent sources of income. However, their economic model should evolve towards more stable and long-term revenue streams. This involves considering expenditures related to sustainable jobs and maintenance of facilities. It is essential to leverage voluntary work and subsidies to assess the "profitability" of operations and prepare for their eventual empowerment.

It will also be important to train more the CBTCs managers to record the incomes and expenses of the centres. ADF is facing lack of human resources and IT equipment for this.

Coordination with the CSLEP project:

The World Bank/UNDP funded project has selected Phnom Kulen National Park (PKNP) and the two Community-Based Tourism Centers (CBTCs) established by ADF and TC as the foundation for developing the Cambodian Sustainable Landscape and Ecotourism Project (CSLEP).

In early 2023, a meeting was held to discuss potential infrastructure projects to be integrated into CSLEP, including: Kiosk Construction: Requested by the AT-CBTC for the O'Ta Chork camping area, Meeting Room and Kitchen Construction: Requested by the AT-CBTC. In 2024, another meeting took place, during which representatives from CSLEP visited both CBTCs and revisited the discussed projects. However, as of the time this report was written, no progress has been made on these initiatives.

Promotion of CBTC (AT & PP) tours to Travel Agencies

Previously, Terre Cambodge was the only travel agency offering CBTC tours to foreigners. Starting in 2023, the CBTCs, in collaboration with ADF and Terre Cambodge, began promoting their existing

services—half-day and full-day tours, as well as camping—to other receptive travel agencies. It is important to note that homestays for foreigners are not proposed to avoid competition with Terre Cambodge's package offerings.
Several agencies expressed interest in the proposed itineraries, and a few, including So Kool Travel, Discova, Hanuman Travel, and ViVu Journey, plan to visit the CBTCs in 2024. It is recommended that CBTCs prioritize selling full tours, as some agencies are particularly interested in day tours and camping options.
Additionally, ViVu Journey is in contact for potential cooperation on a 4-day, 3-night trek and camping experience in Phnom Kulen.
Moreover, other travel agencies should be contacted to promote CBTC tours include All Dream Travel, About Asia Travel, Asian Trail Travel, and Asev Travel. For a better promotion of both CBTCs, ADF would also like to design banners, leaflets, and posters to display and distribute during fairs (ex. National Forum on Eco-tourism) and to reach new partnering agencies and clients.
Other tailored trails should also be designed for schools and university. They could focus on other activities such as trees planting and agro-ecology visit, to showcase the one implemented by ADF and Agrisud International.
In addition to travel agencies, several private partners and NGOs are working with the CBTCs, including: School for Field Study (SFS): This organization sends students from the USA for field studies with the CBTCs, Mr. Scott from Canada: He facilitates study tours by sending groups of students from China to engage with the CBTCs.
Writers of widely distributed guided books (Lonely Planet, Petit Futé, Guide du Routard….) should also be contacted to reference the CBTCs.
The tours offered by the centers should also be more promoted on social media to attract local tourism.
The next steps for improving the quality of the CBTC include: Training for Local Guides: Provide comprehensive training to all local guides at both AT and PP, and improve archaeological knowledge for the AT ones, Training for Cooks: Offer specialized training for cooks at AT and PP to enhance food preparation and hygiene, Training for Camping Team: Educate the camping team on hospitality and quality service to improve the camping experience for visitors.

Training sessions in PKNP by other local Community members to CPA/CBTC members:
Building on the success of the first training session in 2023 by BeTreed adventure team, ADF plans to hold a second training session in 2024. ADF believes it would be beneficial to invite Mr. Ben Davies or his representative from Cambodia for additional training on patrolling activities in both Popel and Anlong Thom CPAs.

Exposure visit and training for CBTC to other community areas:
The Monk Community Forest (MCF) in Oddar Meanchey, also known as Sorng Rukhavoan Wildlife Sanctuary, was designated by the Ministry of Environment as a Wildlife Sanctuary in 2018. The MCF is the only community forest managed by monks. It was previously managed by the founder and former community leader, Mr. Bun Saluth, who is now an ex-monk. Nowadays, it is managed by Venerable Thou Thouross, the deputy head monk of Oddar Meanchey and the community leader. Additionally, the work of Wildlife Alliance NGO in the Cardamom Mountains was considered as a good example to visit for law enforcement in protected areas but due to costs travel, it was decided that the MCF visit was more cost efficient.

Training for local patrol by PDoE:
A refresher of the use of Avenza application should be done for all CPA members, particularly for the Popel ones, as well as for some of the PKNP Rangers.
The ADF team, the PDoE, and experienced park rangers will conduct training for 30 CPA members from PP and AT, as well as the park rangers. The training will cover patrolling techniques, law enforcement procedures, and the legal framework for protected areas. There will also be field exercises to actively protect Phnom Kulen National Park.

Patrols in CPA by CBTC and CPA members in 2024:
After two years (2022-2023) of patrols in both PP and AT CPAs, there are a few conclusions for better law enforcement. These should be mandatory requirements for the future patrolling project:
Each patrol should be of 4 hours minimum.
An Avenza map with the trek, length, and duration of the patrol, has to be provided, with each report through the Telegram group.
The 2 forms (report and presence list), the activity pictures, and the Avenza screenshot map have to be sent to the Patrolling Telegram group, on the same day of the patrol.
Patrols are possible in APA and anywhere else in PKNP, (except in other CPAs, to be confirmed).
The schedules of patrols have to change, taking into consideration the observations of the HUMY team, for example, important and systematic poaching observed early morning (5h30-7h00) in AT-CPA by V. Romera (HUMY).
Night patrols, when most illegal activities are suspected to happen, are considered by both CPA members but they have requested additional funds for gasoline and food costs. One additional ranger is also requested by the PKNP rangers.
Form 2024, combining patrols information will be asked to Mr, Heng Puthea, AT-CBTC manager.
Bonus System for Patrols:
In 2024, a bonus system will be negotiated and agreed upon with the Siem Reap Provincial Department of Environment (PDoE).
The objective is to encourage patrol members and increase law enforcement efforts.
The bonuses would be provided when facing illegal activities, under certain conditions, and shared equally among all patrol participants.
A draft of these bonuses and the conditions to obtain them is under reviewing between all partners (ADF, HUMY, PDoE). Once approved, it should be included in the project's next budget.
Higher payment of patrols in April and May could ensure more patrols during this festive period.
Patrol Leadership Structure:
The objective was to encourage patrol members and increase law enforcement efforts.
Each Community Protected Area (CPA) now has 4 designated patrol leaders.
The other patrol members change according to availability.
The patrol leaders for each CPA are:
Popel CPA: Mr. Las Chat, Mr. Prin Chatt, Mr. Las Vanna, Mr. Nan Thei
Anlong Thom (AT) CPA: Mr. Thy Then, Mr. Noch Nev, Mr. Mean Chhoeun, Ms. Sun Chreb (female: patrols inside CPA only)
With this improved system, ADF believes the CPA members will prevent more environmental illegal activities and crimes, will take more ownership of their protected areas and will enhance their environmental awareness.

Training by handicrafts producers from PKNP to villagers and young students:
Training Initiatives planned for 2024 in the villages:
Mat Weaving Training: there are plans to conduct mat weaving training for women in Popel and in Anlong Thom village during the 2024 rainy season.
Knife Making and Basket Weaving Training:
In 2024, there are also plans to provide training for knife making and basket weaving.
The trainees for these programs will be identified within the fund support from the TDS project. This project will be designed in 2024 by ADF team. If this donor won't support, ADF will seek for other source of funding.
Training Initiatives planned for 2024 in the schools:
Training at Ta Penh Primary School involved a maximum of students, divided into several groups. The training should focus on more complex basket weaving, specifically "chongei" and "kangcheur," aimed at grades 5 and 6. Training is set to be conducted at Popel Primary School, further extending the reach of the program.

Promotion of handicrafts from PKNP:
Kulen Crafts will be set up as a social enterprise, featuring a bank account controlled by two individuals: Ms. Chhun Phirom and one additional person to be selected. This model will be inspired by the Siem Reap Green Farmers Association, created by Agrisud International, which sells

products grown by the farmers they support. Further information is needed to ensure the successful implementation of this model. Establishing Kulen Crafts in this manner will promote transparency, respectability, and sustainability for the enterprise in the future.
A management tool will be developed to better follow the production, the stock and the sales of Kulen Crafts.
A contract will be signed between each artisan and Kulen Crafts to engage them to respect prices and quality.
More artisans could be enrolled in the project such as the one producing khunmea roof or cotton thread.
The Kesor Kol shop (at the foot of Phnom Kulen) and Green Framers stock manager (in collaboration with Agrisud) should be trained about the Kulen Crafts items by bringing them to artisans, in order to better sell these products.
ADF and the PDoE will define protected areas for raw material (pandan, bamboo, rattan) and submit them for a protection by the MoE.
In 2024, ADF will continue to participate to fairs and exhibitions to promote this project, and handicrafts form Phnom Kulen.

Upcoming Shop Openings for Kulen Crafts
Eric Stocker shop enlargement: ADF team will ensure that Kulen Crafts products are represented in the enlargement of the Eric Stocker shop in 2024.
Sala Bai School Shop Opening: ADF team will ensure that Kulen Crafts products are represented in the opening of the Sala Bai School Shop in 2024.
Product Stock: The Kulen Crafts team will ensure there is sufficient stock and a variety of products available for these new shop openings.

Funding, management, monitoring and reporting of the HUMY 4 project:
The donor for this project, HUMY French NGO, has agreed to continue its support for the years 2023 and 2024.
ADF will continue to monitor the administration, the activities and the financial aspects of a further project, in close coordination with HUMY, PDoE and all other partners.
However, the objective is to get away from the villager's dependence from ADF so they reach autonomy, in particular for the 2 CBTCs and the handicrafts.
The funding of patrols is still essential to ensure motivation and results.

d. HYGIENE AND SANITATION PROGRAM/EMERGENCY RELIEF

The WISH 2 project: Hygiene and sanitation program in five primary schools

WISH 2, 2023 (=year 3) summary report.
The main purpose of this report is to outline the activities of the WISH-2 Project funded by the Almayuda Foundation, carried out by the ADF team, together with our stakeholders (community members, school principals, teachers, and school children) at five (5) primary schools in Phnom Kulen National Park (PKNP).
The report covers the period of 18 months from January 2023 to June 2024 for the five (5) primary schools: Khlah Khmum, Popel, Sangke Lak and Ta Penh. For Phum Thmey Primary School, the WISH-2 Project was started from May 2023. The report details the facts and activities completed during this reporting period, including specific objectives from 1 to 9 and the results of each one.
Furthermore, a summary report of the WISH 2 project, which was previously presented in a separate report in October 2023, provides an extensive overview of the project's progression from January to October 2023. This comprehensive report encompasses in-depth discussions and recommendations resulting from meetings involving the Almayuda Foundation team, the ADF team, and all relevant stakeholders after their visit in October 2023. Furthermore, it delves into the project activities undertaken in the five (5) primary schools at PKNP throughout the specified period, incorporating valuable feedback from school principals and teachers. Additionally, the report offers insightful suggestions for enhancing the project in 2024 and further on. For more information, please refer to the "Summary report WISH program Oct 2023".

Reminder: the WISH 2 purpose

Ensuring access to clean water, proper sanitation, and effective hygiene practices is crucial for the well-being of children. Water and sanitation-related diseases are leading causes of illness and death among children globally and in Cambodia. Additionally, these factors contribute significantly to child stunting and wasting. By promoting good hygiene and sanitation, we can protect children and prevent these serious health challenges.

This practice requires a long process and schools are ideal settings for promoting WASH practices because they provide a concentrated environment to reach large numbers of children and foster long-term positive behaviour change. School-based WASH programs are vital for developing sustainable hygiene practices and have proven effective in reducing disease transmission and improving overall child health. All these schools provide a crucial platform for reaching children with critical WASH messages and establishing long-term healthy habits.

Projects Goals:

None to low cases of water-borne diseases leading to a reduction in student absenteeism in school.

The promotion of preventative hygiene.

Inclusive environmental education methodologies, in five (5) village primary schools.

In combination with increased upgraded water systems, the project plan to increase sanitation and hygiene facilities to foster health hygiene behavioural changes.

Project inception, introducing the project to all stakeholders

RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in details in the first progress report, covering the period from January to October 2021. The WISH 2 project is conceived as a 4-year project, from 2021 to 2024.

Conduct a baseline survey

RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in details in the first progress report, covering the period from January to October 2021.

WISH 2 Project management, oversight and accountability

RESULTS:

The WISH 2 project has been highly successful in achieving its objectives, as evidenced by the detailed progress reports from 2021 to 2023. The progress reports from January to October 2021, from November to December 2021, from January to October 2022, and from November to December 2022 provide a comprehensive narrative of the activities and results achieved during those periods.

Additionally, the summary report in October 2023 offers a consolidated overview of the project's progress.

Looking back to early 2023, Almayuda suggested to extend ADFs' reach to another school, and thanks to the support of the Almayuda Foundation, the WISH 2 project was successfully initiated at Phum Thmey primary in May 2023. Upon the launch of the WISH 2 project in this additional school, it was equipped with essential water and sanitation facilities. As a result, students have reaped the benefits of improved hygiene and sanitation.

From January 2023 to June 2024, the project underwent refinements and minor adjustments to further optimize its interventions and maximize outcomes. These adjustments were made based on the unfolding results and lessons learned, showcasing the project's commitment to continuous improvement. The management and oversight of the project prioritized accountability, ensuring that monthly reports thoroughly explicated the project's activities and outcomes. This meticulous approach facilitated effective project governance and streamlined interventions to achieve the desired results.

The project's commitment to accountability and transparency is evident in the detailed documentation provided in the progress reports. This comprehensive reporting not only highlights the achievements but also serves as a valuable resource for stakeholders, building trust and confidence in the project's operations.

Overall, the WISH 2 project has demonstrated remarkable progress, continuous improvement, and a strong focus on accountability. These factors have contributed to the project's success in improving access to clean water, sanitation facilities, and promoting effective hygiene practices among children in the target schools.

During the reporting period, there were changes in the staff working on the WISH project, with the integration of Ms. Morn Phet, who was recruited in late February 2024 with a 3-month probation period (February to April) and a contract until the end of the WISH 2 project in late 2024. Ms. Morn Phet's arrival followed the departure of Ms. Soeng Seath from the WISH/ADF team in early March 2024, for personal reasons. We express our sincere gratitude to Ms. Soeng Seath for her contributions to the project and wish her well in her future endeavours. Ms. Morn Phet has seamlessly integrated into her role, quickly demonstrating her commitment to the WISH 2 project. Her collaborative spirit has strengthened the team's ability to effectively implement the WISH 2 project at target schools. This smooth transition has ensured that the WISH 2 project continues to operate efficiently and effectively, maintaining its momentum in providing vital WASH services to children in PKNP.

TRAININGS of ADF WISH Team and key stakeholders of the WISH project:
On the 8th of February 2023, ADF WISH team and the key stakeholders (school principals and teachers) attended to the workshop at Sangke Lak primary school in Khnong Phnom commune entitled "the Biosand Filter training" organized by Water for Cambodia (WFC). The training was attended by 15 people, including 04 women.
In February 2023, the ADF WISH team successfully organized a crucial workshop on "Hygiene and Health Education Training" for our stakeholders from four (4) primary schools: Khlah Khmum, Popel, Sangke Lak, and Ta Penh. The workshop comprehensively covered essential topics such as proper handwashing techniques, dental hygiene, and the significance of waste management and combating plastic pollution. This empowering training equipped the key stakeholders involved in the implementation of the WISH 2 project with valuable knowledge and skills to impart to the students in their own schools. Notably, the training was well-attended, with 20 participants, including 6 women, actively engaging in the enriching sessions. Furthermore, the new teachers who recently joined the schools received ongoing training and support in "Hygiene and Health Education" during the reporting period. Adding to the impact, a dedicated training session covering the same topics was conducted for the teachers at Phum Thmey Primary School following the launch of the WISH 2 project in this school in May 2023.
On the 15th and 16th of August 2023, the ADF WISH team (Mr. Seng Samry, Ms. Loem Nimul, Ms. Soeng Seath) participated in the "Inclusive WASH training" workshop in Siem Reap city, organized by WASH Skills Development Organization (WASH SDO). This valuable training, supported by the Center for Affordable Water and Sanitation Technology (CAWST) and the Provincial Department of Rural Development of Siem Reap province, directly supports the WISH 2 project's mission to promote sanitation and hygiene behavior change further and scale up the hygienic and sanitation practices in five (5) rural village primary schools to improve the pupil's health and wellbeing and intern their school attendance. The "Inclusive WASH Training" focused on ensuring that WASH initiatives are accessible and beneficial to all individuals, regardless of their background or circumstances. The training will equip the WISH team with new knowledge and skills to improve the WISH 2 project implementation. We sincerely thank WASH SDO, CAWST, and the Provincial Department of Rural Development for organizing this valuable workshop.
In June 2024, the ADF team organized a field exposure for principals and teachers from the target schools (Sangke Lak, Ta Penh, Khlah Khmum, Popel, Phum Thmey), with the ones from Anlong Thom school. A total of 26 participants visited Kravan Primary School, located in the Angkor site, to observe its successful school management practices and learn about creating a clean and healthy learning environment. The goal was to enhance program promotion activities and improve hygiene and environmental standards at the participating schools.

16 Years of Success: Adapting and Refining for positive impact
With 16 years of dedicated work in Phnom Kulen, ADF has achieved an impressive track record of success in archaeological, environmental, and community development projects. ADF's main goal and objectives are to ensure the integration of its archaeological preservation program with the conservation of the Phnom Kulen natural environment and the enhancement of livelihoods for the local population. Our commitment to continuous improvement has led to the refinement of our project management and accountability in three (3) key areas:

Close and clear communication with all stakeholders: Fostering open and clear communication with all stakeholders is central to our approach, ensuring everyone is informed and involved.
Initiation, planning, execution, monitoring of projects: We employ a systematic approach to project management, adhering to a robust cycle of initiation, planning, execution, monitoring, and evaluation. This ensures projects stay on track, meet objectives, and deliver measurable results.
Navigating Challenges (embrace change, stay adaptable, focus on solutions, and seek support): We've successfully navigated a wide range of constraints, including global pandemics, limited infrastructure, budget limitations, and evolving schedules. This adaptability has enabled us to consistently achieve our objectives.
This professional management, project oversight, and transparent accountability have enabled ADF to successfully conclude numerous projects. These accomplishments are meticulously documented in reports and evaluations, providing a clear record of our impact.

Procurement of WISH 2 supplies, provisions, materials
RESULTS: This objective is being successfully achieved. The achievement of results and the progression of activities were narrated in details in the progress reports from January to October 2021, November to December 2021, January to October 2022, and November to December 2022.

Refining WASH practices through ongoing adjustments: From January 2023 to June 2024, the WISH 2 project implemented ongoing refinements and adjustments to its WASH practices, based on the evolving needs of the schools and communities. This adaptive approach ensured that the project effectively addressed emerging challenges and maximized its impact.

Strategic Procurement of Essential Hygiene Products
The ADF team implemented a strategic procurement system for essential hygiene products, ensuring that materials were purchased on a needed-basis to maintain optimal effectiveness and minimize waste. This included:
Individual hygiene kits for each school: These hygiene kits (10 nail clippers and alcohol were provided to each school) for virus prevention, promoting personal hygiene among students and teachers.
Waste Management Tools: 10 Pliers and 4 waste baskets were provided to each school for efficient garbage collection, promoting cleanliness within the school environment and surrounding villages.
Regular Supplies: Toilet materials were replenished every two months, while toothbrushes were provided twice per year, ensuring consistent access to essential hygiene tools.
On-Demand Procurement: Toothpaste was purchased as needed, ensuring a continuous supply for students and teachers.
Additional Infrastructure: 4 waste bins were purchased for Phum Thmey Primary School, enhancing its waste management capabilities.

Rehabilitation, construction and maintenance of the WASH facilities in the targeted schools
RESULTS:
The main requirement post installation of the school's water, sanitation and hygiene facilities is ongoing maintenance to ensure they remain fully functional:
Ensuring Long-Term Success: The Importance of WASH Maintenance
The success of our WASH initiatives in five (5) rural primary schools hinges on a commitment to ongoing maintenance. These vital facilities require regular inspections, minor repairs, and cleaning to prevent deterioration and ensure the safety and health of the students. By empowering school teachers and training the ADF local team in basic maintenance techniques, we've fostered a sense of ownership and responsibility, contributing to the long-term sustainability of these essential resources.

WISH 2 Project Accomplishments: A Roadmap for Improvement
Detailed progress reports from 2021 to 2022, and the summary report in October 2023, provide a valuable roadmap for continued success. These reports document the implementation of maintenance strategies, the results achieved, and the lessons learned, enabling us to adapt and refine our approach for optimal impact.

Recent Achievements (January 2023 - June 2024)
School Infrastructure:
Shelter Protection for the source: In April 2023, construction workers undertook the construction of a brand-new roof for the shelter, ensuring the protection of source 1. Following this, in May 2023, the carpenters also repaired the shelter's roof of source 2. This work took place in Khlah Khmum village and primary school, benefiting 84 households and providing a secure environment for 53 students and 3 teachers to have access to clean water for their hygiene and sanitation needs.
Toilet Repairs: The construction workers repaired the toilets at two primary schools. In July 2023, the toilets were changed and floor slab and floor tiles were fixed at Phum Thmey, benefiting 40 students, 2 teachers and in June 2024, the floor slab in front of the toilet was repaired at Sangke Lak, benefiting 92 students, 4 teachers.

Water System Repairs:
Khlah Khmum Primary School: In May 2023, the water system that supplied water from the village chief's house to the school underwent successful repairs, ensuring a reliable and safe water supply. On the 5th of June 2024, a meeting with all stakeholders (Inhabitants/parents, village chief, commune chief, teachers, police) was organized by ADF to address the issue of regular water shortages at school in March and April. After this fruitful meeting, the community came together to assist in the repair of the water system, contributing to the achievement of access to clean and potable water for all.
Phum Thmey Primary School: The school saw major improvements to its infrastructure in May/June 2023 when the brand-new WASH facilities (PVC pipes connected to the village reservoir, new wash bay covered with roof) and a dining area were constructed by the construction workers. Additionally, in April 2024, a significant achievement was made with the replacement of the new water system PVC pipes by HDPE rigid pipes, spanning over 350 meters, and connected from the main village water reservoir to the school's reservoirs. This new system resolved the issues experienced with the previous water supply, providing a reliable and efficient water supply from the reservoir to the school.
Sangke Lak Primary School: In May 2024, significant investments were made in the water infrastructure of this school, including the construction of a new water reservoir with a filtration system by the source and the replacement of the entire PVC pipes by HDPE pipes, spanning over 1800 meters, in June 2024. These improvements are now ensuring a reliable and efficient water supply for the school and some households around the school location.
In all cases, the local population was invited to participate to dig the trench for the pipes. From the reservoir to the schools. It allows a better ownership of the population for these water systems.

Water Filtration:
Bio sand Filters: At the request of ADF and in February 2023, the dedicated team from Water for Cambodia (WFC) skilfully undertook the repair of 12 bio sand filters, specifically catering to the needs of four schools: Ta Penh, Sangke Lak, Khlah Khmum, and Popel. They also trained the teachers and ADF team for the maintenance of these filters. This initiative was instrumental in ensuring the provision of safe and clean drinking water for the students, and teachers at these schools.
Water Filter Distribution: In June 2023, the ADF WISH team provided 22 water filters to five (5) schools (Sangke Lak, Khlah Khmum, Popel, Ta Penh, and Phum Thmey). The objective was to install a filter in each classroom of every school, thereby significantly broadening access to safe and clean water. This initiative aimed to enhance the well-being of the students and teachers, fostering a healthier and more conducive learning environment.
Water Bottle Distribution: In June 2023, the ADF WISH team provided 279 water bottles to support the hydration needs of 279 students at three schools: Popel, Ta Penh, and Phum Thmey. This thoughtful initiative aimed to promote and encourage proper hydration among the students. The other schools' principals of the WISH project did not request this.
Hygiene Bucket Distribution: In September 2023, the ADF WISH team empowered 62 families in Phum Thmey with 70 hygiene buckets, promoting community-wide handwashing for a cleaner, healthier life for 264 people, providing them the tools to practice proper hand hygiene. This initiative empowered the community by highlighting the urgent need for improved sanitation facilities in Phum

Thmey, with only 33 families (about 54%) having toilets. This demonstrates that many villagers face limitations in accessing proper hygiene practices due to limited awareness and financial resources, hindering their ability to build toilets. We are committed to working with the community to improve access to sanitation facilities and promote hygiene awareness through educational programs and potential fundraising efforts.

Positive Impact
Improved WASH conditions transform school lives: This comprehensive effort has significantly improved WASH conditions in five (5) rural primary schools, transforming the learning experience for 429 students including 202 girls, and 19 teachers including 8 women (Source: Schools of Khnong Phnom Commune – 06 May 2024).

Preventative sanitation hygiene (WASH) health care educational training
RESULTS: From January to December 2023 and June 2024, the implementation of these sessions was done by the teachers of each school and ADF staff (each teacher responsible of his class), using the functioning wash bays. These training sessions are repeated on a daily basis, 6 days per week. Monitoring was undertaken on a regular basis by ADF WISH team, not only to ensure the activities were undertaken, but also to improve the training, making the activities more exciting, user-friendly and relevant.
Health prevention is far more advantageous than cure, as it strives towards student absenteeism, one WISH's 2 objectives. This central objective is being achieved with the support of Phnom Kulen's health center staff, who visit all 4 primary schools 1 time per month and check on the health and well-being of the students, with their medical expertise and resources.
In order to ensure sustainable behavioural change, ADF is strongly encouraging schools and their communities to adopt regular Hand Washing With Soap (HWWS) as when applied regularly will serve as a barrier for further transmission of communicable diseases including COVID 19 (see below environmental education).
This critical objective is to prevent the spread of infectious diseases and helping children to have long and healthy lives. It also prevents them from missing school, resulting in better learning outcomes. A better hygiene means avoiding illness and spending less financial resources on healthcare.

Conduct a mid-term evaluation
RESULTS:
The midterm Evaluation was implemented from 28th of November 2022 for a period of 4 weeks. The midterm evaluation report was sent to ALMAYUDA FUNDACION, together with the "WISH 2 NOV-DEC 2022 Report" in December 2022 (see ADF 2022 report).

Environment education in the targeted schools
RESULTS:
WISH 2 Project: Prioritizing Health Prevention in Phnom Kulen National Park
The WISH 2 project recognizes the significant health and education challenges faced by rural and low-income communities like those living on Phnom Kulen. The project prioritizes a proactive approach to health prevention, recognizing that this strategy not only helps address student absenteeism but also ensures overall student well-being.

The ADF team, in close collaboration with the dedicated staff of the Khnong Phnom Health Center (PKNP), conducted monthly health and hygiene education training sessions for all five (5) schools in the area. These comprehensive training sessions covered a range of crucial topics and diseases, including:
Infectious Diseases: Diarrheal diseases, colds, influenza, worm disease, dengue fever, pneumonia, wound infection, tooth decay, malaria, typhoid fever, and anaemia.
Preventing Mosquito Infection: Practical strategies to combat mosquito-borne illnesses.

The health center staffs, leveraging their expertise and available resources, also diligently monitor and assess the health of the students, contributing significantly to their overall well-being. The implementation of this activity took place over a period of 6 months, specifically during the first half of 2023, with funding provided by the South East Asia Foundation (SEAF), another ADF donor. However, the ADF team has had to postpone this activity due to funding constraints and several challenges encountered during the training sessions. Some villagers have expressed their hesitation and lack of confidence in the ADF team's ability to effectively teach about the above-mentioned topics and diseases, in the absence of health centre staff.

Additionally, daily sessions on hygiene practices such as tooth brushing and hand washing is also part of environment education in the targeted schools. The ADF team recognized the crucial role of regular Hand Washing With Soap (HWWS) in preventing the spread of communicable diseases, including COVID-19. This simple yet powerful practice serves as a vital barrier against infection, ensuring healthier lives for children and communities. These training sessions are repeated on a daily basis, 6 days per week.

Handwashing for Healthier Lives and Brighter Futures:
Protecting our children: By fostering a culture of regular handwashing, we protect children from preventable illnesses, allowing them to attend school regularly and achieve their full potential.
Building a healthier future: Handwashing significantly reduces the incidence of infectious diseases, easing the burden on healthcare systems and leading to a healthier society overall.
Sustainable change: ADF actively encourages schools and communities to adopt handwashing as a routine practice, ensuring its long-term impact on health and well-being. Investing in handwashing is investing in a brighter future. ADF works with teachers to make this simple act a cornerstone of healthier lives.

Lastly, in order to promote the sustainable waste management in Phnom Kulen, the WISH 2 project, in collaboration with the Provincial Department of Environment (PDoE), is actively promoting sustainable waste management practices in Phnom Kulen. Weekly waste collection events are organized at five (5) schools, along village roads, and the main road in the park. During these events, rangers from the PDoE and the ADF team provide training on proper waste collection techniques and educate the school children and communities about the problems associated with plastic pollution. Collected waste is then transported to the main incinerator in Khnong Phnom commune. In cases where the garbage collection truck is unable to reach the village due to road conditions such as in Popel and Khlah Khmum, the waste is disposed of in a controlled manner using the school incinerator. The access road to SL school may also be inaccessible for the truck, but due to its proximity to the main road at TP, the waste is transported with the ADF pick-up truck to Ta Penh school for collection by the garbage truck. Additionally, at Phum Thmey School, although the school location is generally accessible by truck if the garbage collection truck fails to pick up the waste, it is also disposed of using the school incinerator.

Preventing environmental pollutants can reduce health problems like respiratory diseases and water-borne diseases. A cleaner school environment can also be repeated at home by the students. The integration of the Environmental Educational objective in the WISH 2 project helps the children to understand the importance of the environment and provides them with the building blocks they need to live eco-friendly and sustainable lives.

<u>WISH 2 project challenges and constraints</u>
Road conditions
One of the main challenges encountered during the implementation of the WISH 2 water sanitation projects in the 5 primary schools was the poor road conditions leading to the Popel, Sangke Lak,

and Khlah Khmum villages. However, there has been an improvement in the accessibility of the road to Phum Thmey.

Health education sessions attendance and funding
The health education sessions in the villages experienced low participation, with mainly women attending. Consequently, crucial health information did not reach the men, who hold decision-making roles within their families, and we are currently facing a financial shortage that is impacting our ability to sustain health education sessions for both school children and villagers. Recognizing the critical importance of continuing these initiatives, we are seeking support from the ALMAYUDA Foundation to explore the possibility of receiving funding for this activity in the next phase of the WISH project, which is set to launch in 2025.

In the context of health education sessions in both schools and villages, the absence of doctors or health center staff led to reduced participant confidence, as the ADF team did not have medical professionals. This concern was raised by the WISH team during a meeting in February 2024. The ADF management team suggested the suspension of the activity due to budget constraints from South East Asia Foundation and the WISH team's lack of expertise in health education sessions. However, discussions with ALMAYUDA Foundation representatives in October 2023 resulted in an idea to prioritize health education for students, parents, and villagers, with allocated budget alongside the WISH3 project in 2025 following the completion of the WISH2 project at the end of 2024.

Upon the WISH project supervisor's recommendation, the initiative to appoint village facilitators who would volunteer to actively engage more villagers in the health education sessions has been considered. The number of facilitators required will be based on the size of the village, taking into account the population size. These facilitators will receive compensation in the form of allowance to motivate their involvement. Typically, a village with approximately 100 families would need one facilitator, while those with over 200 families would benefit from the engagement of two facilitators.

The majority of parents and relatives of the students have limited education and demonstrate low commitment when called upon to participate in the health education sessions. Consequently, we are required to host these sessions more frequently to make sure they understand the topics. In addition to their economic struggles, their impoverished condition also results in a lack of attention to health-related issues. This includes challenges in accessing clean and nutritious food, safe drinking water, and maintaining a hygienic living environment. Furthermore, they face difficulties in affording essential items such as water filters and proper sanitation facilities.

Farming activities versus school attendance
Given that all of the students' parents are engaged in farming activities, primarily focusing on cultivating cashew nut, rice and various other crops, they often face busy schedules depend on the season. As a result, they sometimes need to bring their children with them to the farms, which are situated at a distance from their homes.

Frequent teachers' turnover and repeated trainings
Due to the frequent turnover of teachers in each school, there is a continual need to retrain new teachers on the WISH project, as well as health and hygiene topics. This repetitive training becomes necessary whenever former teachers move out and new teachers join the team, requiring them to be educated on the same topics again.

Waste management

The teachers have not yet assumed the responsibility of leading students in waste collection events, especially when the ADF team is preoccupied with other commitments and unable to lead these events. It is crucial to convene a meeting with the principal and teachers to address this issue and encourage the teachers to take on greater responsibility for waste collection events, even when the ADF team is unable to lead them.

The issue of waste management persists in the roads/tracks and villages, despite our efforts to engage students in waste collection. Our training on waste management during waste collection events aims to raise awareness within the community, but it appears that the broader population does not fully understand the significance of the waste problem. Additionally, the majority of families do not have waste bins at home to effectively manage their waste. As a solution, the WISH team recommended using rice bags in the absence of waste bins and proposed organizing a workshop or training session focusing on proper waste disposal and addressing the issue of plastic pollution.

Water supply for schools

The water supply for WASH purposes becomes insufficient during the dry season, particularly in April and May, as certain schools such as Phum Thmey and Khlah Khmum continue to share the water system with the villagers. While a separate water system has been successfully established for Phum Thmey primary school in April 2024, effectively resolving the water supply issue, Khlah Khmum primary school still struggle with water shortages during the dry season due to the unavailability of budget within the WISH2 project 2023-2024. As a potential solution, it would be prudent to propose to the ALMAYUDA Foundation the consideration of providing support for the installation of a separate water system to school for Khlah Khmum in the subsequent phase of the WISH project, commencing in 2025.

Hygiene at home

A significant number of school children are unable to practice teeth brushing and hand washing at home upon returning from school, it is observed that most students do not engage in WASH activities due to their parents' inability to afford toothpaste or a lack of understanding of the importance of WASH for their children's and family's health, resulting in a lack of commitment. It is crucial to implement comprehensive health education sessions on WASH to effectively address this issue and empower parents and villagers with the necessary knowledge.

Dish washing area for the kitchen at schools

Students at schools where a dedicated dish washing area is not available, such as Sangke Lak, Khlah Khmum, and Popel, utilize the school wash bay to clean their dishes after breakfast. The breakfasts are provided by the Cambodian Government and World Food Program. To improve this situation, it is recommended that if there is a budget allocated for the WISH3 project in 2025, dedicated dish washing areas be set up for students to use in each school, alongside the existing school wash bay.

Water quality consistency

Finally, ensuring the quality of water that comes out of the taps is a constant challenge for the WISH 2 project. ADF recognizes this fact as a risk to a successful outcome of the project, and is constantly seeking solutions to address the challenge. During the WISH implementation period, ADF had put into place bio sand water filters at school and make sure they are systematically used as the teachers tends to neglect their use, applying minimal and correct dose of chlorine into the water storage tanks. Thus far, these have resulted in a fair to good results. However, there is a general belief that this product his very harmful and a strong education campaign has to be done toward teachers, students and villagers.

Despite these challenges and constraints, the WISH 2 project is achieving positive results, changes and outcomes, that should be reinforced.

Emergency Relief support and collaboration with Khnong Phnom Health Centre in Anlong Thom

The Khnong Phnom Health Centre in Anlong Thom is the only public health facility for the population of this commune (4,926 inhabitants in Dec. 2022). ADF hold monthly meetings to coordinate activities. The Wish 2 project is implemented in close collaboration with the centre. As every year, a coordination meeting with the Health centre staff and ADF team was hold (in January 2023) to determine the needs of the centre (both material and financial) and to agree on following the Emergency Relief support.
In 2023, ADF continued its support to the Health Centre by allocating the left over from SEAF 1 (from the Educational support) to fund ADF's for the Emergency Relief support (D5), when poor families are facing severe health issues and need transportation and hospitalization in Damdaek/Sotr Nikum or Siem Reap city. In most cases, these poor families have no transportation mode to travel this distance, the roads are in bad conditions, and don't have enough financial resources to buy food while in town.
In 2023, there were 10 cases supported concerning pregnancy issue (x 3), cirrhosis, miscarriage, dengue fever (x 2), fanconi anaemia, high fever, enterocolitis.
Since 2024, Almayuda Foundation supports this component. From January to June 2024, this helped 8 persons with cases of appendicitis, head trauma, broken clavicula, stomach issues (x2), miscarriage, follow up for a prosthesis after a foot amputation. A total of 410 US$ were spent during that period.

Finally, ADF was also given on regular occasions some clothes by friends to distribute to the poorest families identified by the team.

The Water for Phum (village) Thma Chruogn project (WPTC)

In 2023, ADF has conceived a project (Water for Phum (village) Thma Chruogn (WPTC) responding to the demand of the villagers from Thma Chruogn, a water system to provide clean water for the households. It was submitted to the Veolia Foundation who visited the site on the 28th of November 2023 and should be implemented in 2024.
The WPTC is a participatory project to set up a water system for the entire Thma Chruogn village, on the plateau of Phnom Kulen National Park (PKNP). The WPTC project comes to reinforce a dynamic initiated by ADF since 2012, setting up numerous gravity water systems for villages and primary schools in PKNP, in the framework of nutrition and hygiene and sanitation projects.
PROJECT FOCUS AREA: The WPTC project will focus exclusively in Thma Chruogn village in Khnong Phnom commune (9 villages), from the Svay Leu district, in Siem Reap Province, Cambodia; providing clean water to more than 350 inhabitants (73 families).
PROPOSED PROJECT STRATING DATE: 2024, according to the availability of funds.
PROPOSED PROJECT DURATION: The WPTC project duration is 3 to 4 months. This will allow time to involve all authorities (national and local) and a maximum of villagers, to set up a village water committee, to purchase and transport all material and to build the entire water system.

e. EDUCATIONAL SUPPORT

The objective is to enhance local school facilities and resources, to provide a favourable educational environment in Khnong Phnom commune. If appropriate, facilities are built to create a conducive learning environment that entices the children to come to school and learn, as opposed to staying at home and/or working on the subsistence farms. ADF provide infrastructures according to the teacher's needs.

The SEAF 2 project: Phnom Kulen Primary Schools Development Project

Reminder: This project objective was to build upon the activities started by ADF by providing basic hygiene and learning infrastructures, for three primary schools (Sangke Lak, Anlong Thom and Ta Penh), located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. It is targeting 5 primary schools (Popel, Khlah Kmum, Sangke Lak, Anlong Thom, and Ta Penh), with additional minor infrastructures in 2 others (Phum Thmey and Preah Ang Thom). English classes and hygiene sessions were also provided.
The original starting date was March 2021, for a 12-month duration. However, due to the Covid-19 pandemic, many activities were delayed (English classes, health sessions at schools) due to the school closure, and were implemented when school reopened. It was achieved in March 2023.
The project focus is the renovation of existing classrooms (roof), construction of basic sanitation and hygiene facilities (UV light purification systems, incinerator…) and construction or renovation of basic learning infrastructures (black boards, tables, playground), in combination with providing English classes (for 1 year). It is also funding the costs for the nurses of Anlong Thom Health centre to provide monthly awareness lessons about basic disease prevention and menstrual hygiene, to students of 4 schools.

This project was designed to provide basic facilities to children in primary schools, located in five (5) primary schools (Popel, Khlah Khmum, Sangke Lak, Anlong Thom and Ta Penh villages), all located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. These primary schools do not have the financial resources to upgrade their facilities and little support for the Cambodian Government. Basic hygiene and learning facilities are missing or broken. The project aims to correct this. These facilities correspond to a request from each principal, ADF is only relaying them here with this project.

Phnom Kulen five primary schools are often isolated and there is only one secondary school for the whole population (4728 pers., Jan 2021, Khnong Phnom commune data), providing teaching from 7th to 9th grade only (i.e. not the last three years of secondary school, from 10th to 12th grade). This secondary school is located in Anlong Thom village and kids from other villager located miles away often do not continue to study, due to the lack of transportation needs. This has been partially addressed by a personal donation of 25 bicycles to the students in January 2021, by Mrs. NGUON Rothsophal (Country Director of the S.E Asia Foundation) and her friends.

The objectives of this project were to provide basic infrastructures for these five schools, both for hygiene and learning (including English classes). This project offers a support to the teachers to disseminate better learning and hygiene practices. This proposed project is built on ADF significant experience from implementing similar projects in this same area.
Targeted schools:
This proposed project focused on young pupils and their teachers of five (5) of the poorest schools on the plateau of Phnom Kulen (Popel, Khlah Khmum, Sangke Lak, Ta Penh and Anlong Thom villages), located in Phnom Kulen National Park (PKNP), Khnong Phnom Commune, Siem Reap Province, Cambodia. Phnom Kulen villages are often isolated and difficult to access due to the road conditions. Some villages, such as Khlah Khmum and Sangke Lak are only accessible by motorbike. At the inception of the project, the population of Phnom Kulen plateau (corresponding to Khnong Phnom administrative commune) was populated by more than 4700 pers. (Jan 2021, Khnong Phnom commune data).

The pupils and teachers were the direct beneficiaries of the project. This represents at the inception of the project: 98 children (including 50 girls) and 3 teachers at Sangke Lak primary school, 107 children (including 56 girls) and 5 teachers at Ta Penh primary school, 69 children (including 31 girls) and 4 teachers at Khlah Khmum primary school, 98 children (including 42 girls) and 4 teachers at Popel primary school, 311 children (including 172 girls) and 10 teachers at Anlong Thom primary school. Additional infrastructures, such incinerators were built in 2 other primary schools: 47 children (including 23 girls) and 2 teachers at Phum Thmey primary school, 300 children (including 156 girls) and 10 teachers at Preah Ang Thom primary school.

The total number of beneficiaries, at the inception of the project was 719 children (including 358 girls) and 38 teachers (including 16 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 2020-2021). Indirectly, the project had repercussion on basic hygiene habits and learning environment for the children and families of the 9 villages, totalling 4728 persons (data: Jan 2021, Khnong Phnom commune data).

At the end of the project, in march 2023, the pupils and teachers were the direct beneficiaries of the project were: 102 children (including 37 girls) and 4 teachers at Sangke Lak primary school, 135 children (including 71 girls) and 6 teachers at Ta Penh primary school, 55 children (including 28 girls) and 3 teachers at Khlah Khmum primary school, 99 children (including 41 girls) and 4 teachers at Popel primary school, 332 children (including 157 girls) and 11 teachers at Anlong Thom primary school. Additional infrastructures, such incinerators were built in 2 other primary schools: 49 children (including 25 girls) and 2 teachers at Phum Thmey primary school, 340 children (including 170 girls) and 11 teachers at Preah Ang Thom primary school.

The total number of beneficiaries, at the end of the project was 1112 children (including 529 girls) and 41 teachers (including 21 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 1st of March 2023). The five targeted villages (Sangke Lak, Ta Penh, Khlah Khmum, Popel, Anlong Thom) represent in December 2022 a total population of 700 families or 3002 persons. Including Phum Thmey and Preah Ang Thom villages (where only incinerator at schools were built), it represents a total population of 1031 families or 4310 inhabitants.

Potential benefits of the target area and the beneficiaries

Schools are the most important places for children to play, learn, and grow, acquiring essential skills, and positive behaviours / habits for their lives. Promoting healthy habits in schools with a good learning environment allows children to make the most out of their education through better health. Teachers benefiting from a good learning environment with associated facilities are happier to teach and have less chance to ask for a new assignment, insuring a low turn-over. Children and young girls benefit from school health facilities regardless of their background, so that existing disadvantages and inequalities are reduced and all have better chances for attaining healthy and productive lives. Children and young people are generally more concerned and receptive to learning and promoting behaviour changes and hygiene practises that influence the whole family. Accessibility, hygiene and education for the young people at schools, and particularly young girls, are the basics needs for them to survive and thrive even in difficult situations of living.

Project Goal, Purposes, Objectives and Results

The project aims to provide and improve basic learning facilities (classrooms and corresponding furniture, fix broken items…) and hygiene infrastructures (incinerator…) in five of the Phnom Kulen primary schools. An incentive salary was given so the teachers who speak English can teach it at selected school. The project combined upgraded hygiene and learning infrastructures to ensure schools are becoming a pleasant place to learn. It also encourages teachers to stay in these remote villages.

The project purposes are to build and expand on the previous project done by ADF with the support of the South-East Asia Foundation in Khlah Khmum and Sangke Lak primary schools, from September 2028 to November 2019, to provide a healthy, hygienic and friendly environment for primary school children to excel, to reply to the needs of the children and their teachers in these

primary schools. All activities and items are the result of an explicit demand from each principal, after several meeting between them and ADF team.
The project global objective is to reach higher education standards by offering basic hygiene and learning facilities in primary schools, located in Phnom Kulen National Park (PKNP). The project is tailored-made to each school and implemented by ADF team in coordination with the principals, teachers, school committee and parents. Parents are involved in proving food and material, or labour help. No remuneration was allocated to parents.
The project results should attain minimum education standards with the basic facilities for the overcrowded targeted schools and classrooms, provide basic hygiene, water, and sanitation facilities in the targeted primary schools, participatory cleaning of the school area by systematically deposing of the rubbish in the incinerator, students from Ta Penh, Khlah Khmum, Anlong Thom and Sangke Lak are taught the basis of English in their primary schools.

Project Inception:
A meeting was organized by ADF in March 2021 to inform all stakeholders (Health center staff, teachers, principals) of the project implantation plan and of their roles and responsibilities.

Constructions and Rehabilitations in schools:
Ta Penh primary school:
ADF organized the rehabilitation of the school's roof (5 classrooms) by replacing the old leaking tin sheet one by new ones. The wooden framework was in good condition and kept. On the 2nd of March 2021, a meeting with the parents, teachers and school committee was organized to mobilize a financial participation (except for poor families with ID card and widows) so they can get ownership. There were 71 families (337 family members) who gave for a total of 1,269,000 riels (317.25 US$), from 5,000 to 20,000 riels per family. The replacement of the tin sheet was done started in April and concluded in May 2021.
ADF organized the construction of an incinerator with a storage area (2 small, separated cement slabs), to the northeast corner of the school compound, far from the school and households. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of this school and bring them to the incinerator at Preah Ang Thom village. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are tearing the waste bags.
The replacement of the broken playgrounds item was not done as a swing was installed by another donor in this school. The budget allocated for this was added to the equivalent ones for Khlah Khmum school to upgrade the existing playground. However, ADF purchased 10 new swings in February 2023. Two were installed on the existing swing structure on the 8th of March 2023.
1 UV light purification system was purchased from WFC. However, this has been underestimated in the budget for the 4 schools as our estimation did not include the solar panel equipment, but only the UV purification system. ADF waits the setting up of the governmental electricity system to connect the school and this item, rather than using a solar system. It is planned to be done in 2024 with governmental school money or in 2023, with the sale of the trees from the tree nursery.
In June 2021, ADF organized the setting up of a library in the western room of the building (7x8 m=56m2), using the remaining funds from the furniture in Sangke Lak (see below). The old cement slab was broken, resealed on the top of a good foundation and large tiles were installed. This classroom was painted. All wood shutters from each class were fixed and repainted. Metallic frames on each window were paid by the tree sales from 2020.
In March 2023, ADF team organized the building of a cement slab next to the water reservoir and kitchen in Ta Penh school, to facilitate its use and improve hygiene.

Khlah Khmum primary school:
Football cages: this item was built from the 15th of March 2023 by a local builder, with material brought by ADF.
The replacement of the broken playground items was done in March 2023, benefitting from the budget allocated for this expenditure, as well as the equivalent for other schools, to ensure a good quality construction by a local builder, based on the model of the Popel playground (see below).
ADF purchased 10 new swings in February 2023 to install on the existing swing structure. Two were

installed on the new swing structure on the 23rd of March 2023.
The metallic school gate was built by a local builder, with material brought by ADF, on the 15th and 16th of March 2023. This will allow a better control of the school access and prevent roaming animals to get in.
1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).
A small cement slab (with 2 smaller separated parts) was built next to the existing incinerator, to the northwest corner of the school compound. Due to the road condition, the Ministry of Environment garbage truck does not collect the wastes in Khlah Khmum village during the rainy season.

Popel primary school:
The existing school reservoir (6 ring wells, funded by the school itself and later raised by ADF within the WISH 2 project) was connected to reservoir opposite the school (built by ADF with UNDP funds in 2019-2020) with a pipe below the road. From April to May 2022 and within the new tree nursery project in Popel primary school (funded by HUMY), 6 x 0,5 additional ring wells were set up on a strong cement slab, forming a second row, insuring a sufficient volume of water for both hygiene and tree nursery activities.
1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).
ADF organized the construction of an incinerator with a storage area (2 small, separated cement slabs), to the southeast corner of the school compound, far from the school and households. Due to the road condition, the Ministry of Environment garbage truck cannot collect the wastes in Popel village.
Learning materials for library were purchased such as notebooks for teachers and cleaning materials for libraries. This component was upgraded from January 2022 with the SEAF 3 project, focusing on setting up a library in Popel primary school and providing books to other schools' libraries.
ADF organized the construction of playgrounds items with a local builder (1 swing with 6 sitting places and 2 bouncing items) in August 2021.

Sangke Lak village primary school:
ADF organized the construction of the extension of the tin sheet roof for 2 classrooms building (to the south only), to avoid rain during the rainy season in the building. The corresponding slab below was also built. It was done in March 2021. From the 29th to 31st of March 2023, an equivalent roof extension and slab were built to the north side of the classrooms.
A small cement slab (with 2 smaller separated parts) was built next to the existing incinerator, to the northwest corner of the school compound. Due to the road condition, the Ministry of Environment garbage truck does not collect the wastes in Popel village during the rainy season. In March 2023, ADF had the incinerator fixed by replacing the metallic iron grid.
The budget originally allocated for the furniture (tables for students, blackboard…) was not spent as originally planned, as the teachers changed their mind since the project's inception. It was used to complete the costs of the roof extension in Sangke Lak, as well as the floor (cement and tiles and painting for the Ta Penh library (see above). That budget line also included overspent of Anlong Thom school for upgrade infrastructure like doors, frames and windows (see below).
1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).
The metallic school gate was built by a local builder, with material brought by ADF, in April 2021. This will allow a better control of the school access and prevent roaming animals to get in.

Anlong Thom primary school:
ADF organized the rehabilitation of the school's roof (building of 3 classrooms, funded and built by ADF in 2010) by replacing the old leaking tin sheet by new ones. On the 9th of March 2021, a meeting with the parents, teachers and school committee was organized to mobilize a financial participation (except for poor families with ID card and widows), so they can get ownership. There were 96 families (457 family members) who gave for a total of 1,895,000 riels (473,75 US$), from 5,000 to 50,000 riels per family. It was replaced in April 2021.
In July 2021, ADF organized the rehabilitation of the school's ADF wooden walls and window frames, damaged by termites, by a local carpenter.
ADF organized the construction of an incinerator with a storage area (2 small, separated cement slabs), to the northeast corner of the school compound, far from the school and households. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of this school and bring them to the incinerator at Preah Ang Thom village. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are tearing the waste bags.
The replacement of the broken playgrounds item was not done. The budget allocated for this was added to the equivalent ones for Khlah Khmum school, to upgrade the existing playground. However, ADF purchased 10 new swings in February 2023 to install on the existing swing structure. Two were installed on the existing swing structure on the 08th of March 2023.

Phum Thmey and Preah Ang Thom primary schools:
ADF organized the construction of two incinerators with a storage area (2 small, separated cement slabs), to the southeast corner of the school compound at Phum Thmey and to the southwest at Preah Ang Thom. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of Preah Ang Thom school and bring them to the incinerator at Preah Ang Thom village. The ones from Phum Thmey will be collected from April 2023. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are opening the waste bags.

Maintenance of the WASH Facilities in 4 primary schools:
This activity was not possible due to the school closure, from March to November 2021. However, in order to disseminate hygiene practices to the students during the C-19 pandemic, ADF decided to distributed soaps (from March to June 2021), to provide buckets (with taps and covers) for hygiene at a household level to the population of 2 villages. This material was purchased and prepared in July 2021 and distributed (a bucket per family + tap) on the 22nd of July in Popel and on the 4th of August 2021 in Ta Penh. This activity was resumed in December 2021 and organized on a needed basis.
For Ta Penh and Khlah Khmum schools, PVC pipes were purchased to replace broken ones. For Khlah Khmum and Popel schools, cleaning equipment were purchased. In January 2023, this budget was also used for hiring labor to fix the road, to set up a new reservoir at the Popel source, providing water to the villagers and the school.

Participatory cleaning of the school area:
This activity was not possible due to the school closure, from March to November 2021. It was resumed in December 2021 and is happening every week, particularly on Thursdays, day dedicated for community work in schools.
Kids are collecting garbage, transport them into the incinerator, sweeping the tree leaves and make their school into a clean and healthy environment, transmitting his behaviour to their household. The burning of the waste in the incinerators is done by the teachers.

Daily English classes given to children in 4 primary schools:
In March 2021, a first assessment by ADF team and teachers from the 4 primary schools (Ta Penh, Khlah Khmum, Sangke Lak and Anlong Thom) registered 142 who were interested in attending the English classes.
Unfortunately, the C-19 pandemic forced to a general school closure in March 2021. In 2021, it only possible for 2 weeks in Ta Penh school and 1 week in Sangke Lak school. The two other schools

(Anlong Thom and Khlah Khmum) planned to start this activity the day of the school closing. Schools reopened in November 2021 but needed time to reorganize after many months closed.
After the reopening of schools in Dec. 2021 and a meeting to organized this activity, English classes started from January, with salaries (50 US$ per month) provided to 1 teacher in Anlong Thom, Ta Penh and Khlah Khmum.
Unfortunately, English classes were not provided in Sangke Lak in 2022 as the teacher was not available anymore, and the ones in this school did not know enough to teach English. This situation changed from February 2023 as a new teacher was appointed to this school. Each teacher has an attendance list to register children attending the classes.
An average of 20 students attended the English classes at each school, for the year 2022. From July 2022, the Anlong Thom primary school teacher stopped giving classes because a new teacher from the Anlong Thom secondary school provided English classes to secondary school students and the primary school students joined. There were no English classes given in January 2023 because the assignation of the teachers was not clearly defined yet. As from July 2022, there were no more support for the English classes in Anlong Thom, for the same reasons. However, the English classes started in February in Sangke Lak, as a new teacher speaking English was appointed.

Monthly hygiene lessons by health centre and ADF staff in 4 primary schools:
At the start of the SEAF 2 project (March 2021), the Anlong Thom Health Centre staff was busy with Covid 19 vaccination and prevention. The objective was to financially support and provide awareness health prevention and menstrual hygiene lessons to the students of the 4 primary schools (Ta Penh, Khlah Khmum, Sangke Lak and Popel), reinforcing ADF's Hygiene and Sanitation project (WISH 2, funded by Almayuda Fundacion).
These prevention disease lessons were provided by the Anlong Thom health centre nurses, and were divided into 12 sessions corresponding to 12 disease prevention. It also gave the nurses the opportunity to check student's health. This activity occurs 1 time per month. Presentations for disease prevention were designed by ADF team and presented during these classes and banner were printed.
From December 2021 to December 2022, there were 13 sessions (13 months) in 4 schools, reaching 1,444 participants (including 850 female). The topics addressed are: influenza, intestinal worms, malaria, dengue, diarrhoea, cold, dental caries, pneumonia, infected wounds, typhoid fever. All these diseases are the most common in Phnom Kulen, according to the hygiene and sanitation project's assessment done by ADF in December 2019. One session is focusing in one issue.

The girl's menstruation training happened 1 time per year in every primary schools. Each of the training is divided is 4 sessions, with a female nurse, assisted by the ADF women's school team. These 4 sessions run from the 23rd of August to the 15th of September 2022 in the 4 primary schools.
The first session (the first steps of menstruation) reached 76 female participants, the second session (the first days of menstruation) reached 74 female participants with 26 mothers to share their experience, the third session (menstruation health) reached 75 female participants and the fourth one reached 63 female participants (exchanging with young boys). Additionally, ADF facilitated the visit of Build Your Future Today Center (BFT Center, a member of the CLLC) on the 4th of March 2022 to provide a training on menstruation and personal care to 112 female students from the Anlong Thom secondary school in Phnom Kulen, with projections, learning material and banners.
Presentations for girl's menstruation training were provided by BFT, including a video.

All these activities were implemented in close collaboration with the Khnong Phnom Health Centre, the only public health facility for the population of this commune (4,926 inhabitants in Dec. 2022). Additionally, the WISH 2 team accompany the nurses in their vaccination campaigns in each village. ADF team attend the monthly meetings at the Heath center to coordinate every activity.

Project Management, oversight and accountability
ADF secured conducive meetings to agree on materials and resources required. All project assets, materials and resources were transparently and professionally managed. ADF coordinated

efficiently human resources, provided technical assistance as required, managed all resources in an effective, accountable and transparent manner. ADF welcomed SEAF team on the 23rd of April 2022. Schools in Popel, Khlah Khmum, Anlong Thom, Sangke Lak, Ta Penh were visited. The visit finished with the Spices Drying facility at Anlong Thom. A follow up one day visit was done by SEAF in 22nd of October 2022, focusing mostly on the alternative livelihood component and on the future toilet project. This project, with an objective of building more than 70 toilets in 2 villages, was drafted by ADF in August 2022 and could be submitted to SEAF in the 2023 or 2024.

Conclusion and perspectives

The impactful WISH 2 project has made a significant difference in enhancing the quality of life for 429 students and 2140 indirect beneficiaries, including their parents, relatives, and neighbors, in the Khnong Phnom commune. By concentrating on enhancing water, sanitation, and hygiene (WASH) conditions in five (5) rural primary schools, the project has not only upgraded infrastructure but also enabled 19 local principals and teachers to assume leadership roles in implementing and maintaining these vital improvements. Here's a closer look at our accomplishments:

Providing clean water for healthier lives: We've constructed new water infrastructure in Phum Thmey primary school and upgraded existing facilities in four (4) primary schools (Sangke Lak, Khlah Khmum, Popel, and Ta Penh), ensuring that students have consistent access to clean water. As a result, there has been a noticeable decrease in waterborne illnesses, leading to substantial improvements in overall student health.

Upgrading sanitation for a safe learning environment: By improving sanitation facilities in the five (5) rural primary schools, we have created a significantly safer and healthier environment for students and teachers. This has resulted in a reduction in the spread of infections and a more conducive atmosphere for learning.

Empowering for sustainability: Through training, ongoing support, and involving local principals and teachers in decision-making, we have instilled a sense of ownership over WASH facilities. This approach ensures that the essential improvements will be sustained long after the project's conclusion, guaranteeing a healthier future for countless children.

Improving learning conditions for better futures: The enhanced WASH conditions have directly impacted student attendance and academic performance, creating a more conducive learning environment. This positive impact on education has the potential to empower children to contribute to a better future for their communities.

Looking to the future: Moving forward, we will continue to monitor the impact of the project and leverage these achievements to ensure sustainable, long-term improvements in WASH for schools in Khnong Phnom commune, PKNP. The WISH 2 project serves as a powerful example of the transformative power of community collaboration and the essential investment in a healthier future for all.

With all these points in mind, the ADF team strongly recommends that the WISH-2 project continues to work towards achieving its objectives by a redefined project who could be submitted to Almayuda Foundation at the end of 2024. It has already been discussed with ADF team during and Almayuda representatives visit in October 2023.

For the next phase (WISH 3, 2025-…), a diminution of the supported activities for each school included in the WISH 1 and 2 projects (just a regular follow up and support for materials and equipment maintenance) could be foreseen.

Sustainability by taking ownership (by the teachers) of their equipment's, hygiene habits for children, and waste management activities.

It could also include the Anlong Thom primary and secondary schools (523 students), where there is no hygiene project presently implemented. Additionally, the next WISH project could also include the Thma Chruogn village school (Kindergarten with only 17 kids).

Training of teachers, particularly the recently appointed ones, and ADF staff.

Disseminate hygiene education to parents: this point will be one of the main challenges for the next years and was raised by most of the principals, mentioning for example and in some cases dirty uniforms and bad hygiene practices at home.

Workshops or training session focusing on proper waste disposal and addressing the issue of plastic pollution in villages.

Monthly disease prevention lessons (by nurse in schools) + menstruation hygiene (both implemented in 2022 by ADF with SEAF funds).
Additional upgrades of existing water system (Khlah Khmum school…) and WASH facilities (dish washing area for the kitchen at schools).
Emergency support budget is always fully used for poor families for extreme health issues. If possible, this support should be continued and eventually expended to support more cases.

The small SEAF 3 K project

ADF received from SE Asia Foundation the amount of USD 2,990.00 US$ on the 27th of March 2023 for a complementary project supporting ADF library (2022 SEAF 3 project, "Quick Impact Library Project Phnom Kulen Primary Schools") and the Emergency Relief support (see above). ADF spent only a part of this budget in 2023 and still has 2325.25 US$ to be used in 2024.

The SEAF 4 project: Phnom Kulen School Library and English classes Project

This project aims to enhance libraries for 6 primary schools (Popel, Khlah Khmum, Sangke Lak, Ta Penh, Anlong Thom and Phum Thmey) and the only secondary school of the Khnong Phnom commune (Anlong Thom), and to support English classes by local teachers in 4 primary schools for 2 years (Phum Thmey, Khlah Khmum, Sangke Lak, and Ta Penh). All of them are located in Phnom Kulen National Park, Siem Reap Province, Cambodia.
BACKGROUND: This project is built upon the activities started by ADF thanks to the South-East Asia Foundation (SEAF) support to set up the Popel Library in 2022 and to support English classes from January 2022 until June 2023. It will be developed and follow up by ADF team, with the technical support of SIPAR NGO.
PROJECT DATE and DURATION: The project was conceived during the year 2023. However, it was only started in January 2024 for a 3-year duration.
PROJECT FOCUS AREA: Libraries upgrades and training of teachers to manage their libraries in 6+1 schools, English classes in 4 primary schools Khnong Phnom commune. It will be therefore presented in ADF 2024 report.

Complementary projects for the Educational support

ADF - AGRISUD International project
Since 2019, the joint project with AGRISUD International (see above, AGRISUD and ADF joint-project in Khnong Phnom Commune) has been encouraging primary schools to grow vegetable gardens. In the schools of Ta Penh and Sangke Lak, this involvement was higher with distribution of equipment, seeds and a technical training. It was expended to Popel primary school in 2023. In 2 other schools (Khlah Khmum and Popel), only seeds were given. These vegetables are associated to the morning breakfast distributed by the World Food Program in rural areas, and in the case of Khnong Phnom Commune (except Khlah Khmum village), with the help of the Cambodian government, and previously Plan NGO. The school also purchase vegetables from local producers trained by AGRISUD-ADF team.

ADF tree nurseries: Tree 2 and HUMY 3 projects
Three primary schools are the beneficiaries of the parallel project funded by Kulara Water factory (producing Eau Kulen): Anlong Thom, Ta Penh and Sangke Lak primary schools. Implemented by ADF since 2018 (Tree 1 project) and from September 2020 to October 2022 (Tree 2 project), these projects provided thousands of forest saplings every year for reforestation operations in Phnom Kulen National Park. The water system set up by ADF in these schools are providing water to both tree nurseries and hygiene facilities.
These tree nurseries also act as environmental educational tool, as they are managed by the teachers and students. They are complementary of the WISH 2 project as they built awareness about environmental protection and regeneration. Additionally, they provide incomes to the schools. Please refer below for this project.

In the same spirit and with the similar objectives, ADF has secured funds from HUMY NGO to set up and run a tree nursery at Popel village primary school. This project, HUMY 3, was started in April 2022 until March 2024, for a 2-year period (see below, HUMY 3 project).

Sala Baï Hotel and restaurant school:
The French NGO Agir pour le Cambodge (APLC), created in 1985, launched the Sala Baï program in 2002 to fight poverty and human trafficking in Cambodia through social and professional training of young underprivileged Cambodians. Every year, Sala Baï Hotel and Restaurant School trains 150 students in hospitality at no charge to them. This program is exclusively devoted to helping underprivileged young Cambodians, with priority given to girls (70%) who are more vulnerable and who have less access to education.
In 2023, ADF and Sala Baï agreed on a common project: Sala Bai present its activities to the remote villages of Phnom Kulen in order to recruit disadvantaged students for the next scholar year starting and ADF help to disseminate the information to the local communities through their network. ADF Kulen also provide a place to do the presentations and help to identify interested candidates.

Sourire Angkor
Sourire Angkor (SA) is a French association founded in 2001, and whose main objective is the schooling and professional training of disadvantaged children in the Siem Reap region. Through a system of sponsorship and donations, children in great social difficulty, identified locally, are financially supported, kept in their family, and followed by a tutor throughout their schooling.
In 2023, ADF was approached by SA to support children in Mount Kulen region of Cambodia. The project will start in 2024.

f. ENVIRONMENTAL PROGRAM

Environmental and social studies

During the year 2023, there was no collaboration with the School of Fields Studies (SFS) for defining and facilitating studies, as the SFS study areas were not focusing in the Phnom Kulen National Park. The research collaboration program is focusing on natural resource governance and management; livelihoods; and the environment interface. No students came to PKNP and no studies were implemented in this area. However, ADF team facilitated the visit in PKNP of two groups from SFS students on the 11 February and on the 15th of September 2023.

ADF was involved in the environmental protection of Phnom Kulen National Park by combining data to the geo-database about the environmental threats, and by disseminating them to the relevant authorities (Ministry of Environment, APSARA Authority, District and commune authorities…). ADF continued in 2023 to integrate in our GIS system all illegal-logging points and recently burned plots of forest for cultivation purposes within the Phnom Kulen National Park and has reported them to the Ministry of Environment (MoE) and APSARA. This was particularly the case within the biodiversity assessment of Phnom Kulen National Park (HUMY 5 project, see below).

ADF continued to support the Provincial Department of Environment (PDoE) with mapping for specific projects, or the PKNP general zoning. ADF team has continued to be one of the main actors to provide information from the field for the implementation of the Phnom Kulen Management Plan, and the Phnom Kulen action plan both under the supervision of the MoE.

Meetings, workshops and events

In 2023, ADF management team met representatives from the Ministry in Phnom Penh and Siem Reap, and attended to various meetings at national level, organised by the PDoE or the MoE.

The TREE 3 Project: tree nurseries in Ta Penh, Sangke Lak, Anlong Thom primary schools

The goal of this project is to continue to grow and plant indigenous trees from Phnom Kulen National Park (PKNP) to regenerate the forest in targeted areas. A participatory education component is also included for the teachers and pupils of the 3 participating primary schools to contribute to the sustainability of the project. The project is providing tree saplings to the Kulara Company (Eau Kulen) compound, as well as deforested areas within PKNP.
The primary objective is to provide indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP). The secondary objective is to promote the regeneration of the forest with indigenous trees of PKNP with the following effect of restoring the natural environment and resources that a thriving environment provides, and increasing the amount of surface water.
The third objective is to increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools. The pupils and teachers are the direct beneficiaries. The pupil's families and the village communities are the secondary beneficiaries.
This project is a continuation of the successful TREE 1 and 2 projects, implemented from June 2018 to September 2019 (27 months) and from September 2020 to October 2022 (26 months), in 3 primary schools in Phnom Kulen National Park (PKNP). The TREE 1 and 2 projects allowed to grow about 121,430 saplings and contributed to reforest 63.3 hectares in Phnom Kulen National Park. The project raised environmental awareness for more than 600 children and 25 teachers from the 3 primary schools of Ta Penh, Sangke Lak and Anlong Thom village.
Reminder: The TREE 2 project was implemented from September 2020 to October 2022. The goal, objectives and activities were very similar to the TREE 1 project but it included the main constraints and recommendations from the first project such as field maintenance in the reforested areas to improve survival rate, maintenance and upgrade of the water systems to the three tree nurseries, continuation of the environmental education and awareness of stakeholders, the better monitoring of the revenue of each school, to introduce a better monitoring system, to diversify as much as possible the tree species but only with trees represented and identified within the 2013 PKNP bio-

diversity survey, to increase as much as possible, depending on the number of saplings produced, the number of reforested areas, focusing on the water catchment areas within PKNP.

The TREE 3 project duration is two 2 years (February 2023 - January 2025, 24 months).

Activities and results:

1) Orientate the village school teachers in all aspects of the project outlining roles & responsibilities, Purchase project resources; mainly tree seeds & other necessary tree nursery tools etc.

The accounting system for the project was set up by ADF accounting person and expenses are updated on a monthly basis for a better financial monitoring of the project.
A meeting was hold between all teachers involved and ADF team at Ta Penh school on the 9th of January 2023 to introduce the TREE 3 project to all stakeholders.
Teachers active during the 2 previous projects shared their experiences and talked about the benefits of having tree nurseries with the new ones and ADF team.
Exchanges about water issues, benefits, prices, equipment:
In Anlong Thom, there are issues of water supply during the dry season, that should be addressed by the project. In Sangke Lak, additional green shade nets and sprinklers were requested to prevent balls entering into the tree nursery during football games of the children. In Ta Penh and Popel, soil quality issues were raised by the teachers as it was often too sandy. In Ta Penh, villagers coming to take shower from the overflow of the tree nursery reservoir, leaving plastic wastes.
Teachers reported that *Thnong* (Pterocarpus Macrocarpus) seeds are harder to grow.
The system of percentage for the benefits of the tree sales was confirmed: 20% for the tree nursery maintenance, 40% for the school maintenance, 40 % for the teachers as an incentive.
The cash generated by the sales of saplings and destinated to the tree nursery maintenance is managed by ADF.
ADF team followed the planning over the calendar year, from January to December, to visualize and monitor the main tasks to be implemented by all stakeholders.
Reminder: in 2022, a new tree nursery project (HUMY 3 project), reinforcing the TREE 1 & 2 project's dynamic, was funded by HUMY French NGO through ADF. This school was selected as the teachers were interested of having this infrastructure as an educational tool and a source of income. ADF is also working intensively since 2018 in this village, with the enlargement and demarcation of the Community Protected Area (CPA, from 188 to 798 ha), the setting up of a water system for the village and the primary school, the construction of a Community-based Tourism Centre with a tourism offer (treks to forest, waterfalls and boulders), the hygiene and sanitation project in the primary school, and the construction of other infrastructure in the school (library, playground, incinerator…).

2) Continue collecting indigenous tree seeds, Upgrade the tree nurseries at Sangke Lak, Ta Penh & Anlong Thom primary schools, ensuring they are efficiently & effectively producing strong healthy saplings, Plant the tree seeds & nurture the tree saplings until they are ready to be planted into designated priority areas.

Reminder: Anlong Thom, Ta Penh and Sangke Lak water systems were designed and set up during the first TREE project, requiring several hundred-meter-long buried and connected PVC pipes; collecting, intermediary and storage reservoirs, providing water all year long for these tree nurseries. Students and teachers were strongly involved in their constructions, so they can take ownership of these water systems.
These water systems also serve the hygiene facilities (toilets, wash bays) built or renovated by ADF in these 3 schools, and allow the implementation of a complementary Hygiene project (WISH project, funded by Almayuda Foundation, ongoing since 2018) in 4 primary schools (Sangke Lak, Ta Penh, Khlah Khmum and Popel).
From February 2023 to January 2024,
The Sangke Lak Water system was fixed twice in June and August 2024, as roaming animals break the pipes collecting the water from the source. This was done by the teacher and the children with the collaboration of the ADF team.

The Ta Penh and Anlong Thom water systems were regularly checked by ADF team to ensure water distribution to the tree nurseries and schools' facilities. No issues were observed for the Ta Penh one but the Anlong Thom one present shortages due to its position. It was also fixed twice in 2023: one time during the rainy season and a second time as monks from the nearby pagoda broke the pipe during the construction of a building.
The Anlong Thom tree nursery signboard was replaced in May 2023 and installed inside the tree nursery, as children had damaged it playing football in front of the tree nursery.
Tree nurseries were upgraded on a needed basis with proper tools, equipment and gravity-fed water systems.
ADF pays a particular attention so each tree nursery and school have a permanent access to water. During the dry season, this becomes more and more critical due to climate change and deforestation. However, the tree nursery water systems are conceived so they can capture and hold enough water reserve until the end of the hottest season. Future upgrades could enlarge the storage capacities as this situation becomes harder to sustain every year, and replace PVC pipes by HDPE stronger pipes.

3) Village schoolteachers & children are taught in fundamental aspects of tree planting & tree growing, nurturing & raising trees.

Reminder: The trainings organized by ADF and provided by a forestry expert from the Ministry of Forest and Fisheries in Along Thom (January 2019) and Ta Penh (January 2020) were designed for all the teachers of the 3 schools, with a technical then a practical session where kids participated. The seed preparation and the composition of the soil for the plastic bags were greatly improved thanks to this training.
In 2022, ADF team (Mr. Seng Samry and Mr. Yon Sokchea) trained again the teachers on the 25th of May in Popel primary school. The training was focusing on tree nursery management and divided into several chapters: general nursery planning, nursery arrangement, seed sourcing, seed growing, income management. All teachers from the 4 schools joined (Ta Penh, Anlong Thom, Sangke Lak and Popel).
In 2023, there was no need for a third training by the forestry expert as most of the teachers remained appointed to these schools.
In 2023, the regular involvement of children and teachers for the tree nurseries in primary schools continued as in the previous years for this activity.

4) Village school children have practical lessons in tree cultivation & it becomes part of their school activities.

The 3 targeted schools have operational tree nurseries growing trees.
The tree growing activities in the tree nurseries are part of the daily life of the 3 schools. They are subject to a particular attention by teachers and students every Thursday during the "labour day" when children do community work.
All children form grade 1 to 6 are participating to the activities: Planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary, planting activities on the plateau.
In 2023, the project was raising environmental awareness for 558 children and 18 teachers from the 3 primary schools, divided as follows: 138 children and 5 teachers in Ta Penh, 102 children and 4 teachers in Sangke Lak and 318 children and 9 teachers in Anlong Thom.
In 2024, the project was raising environmental awareness for 576 children (incl. 268 girls) and 21 teachers from the 3 primary schools (see annex 2), divided as follows: 142 children and 6 teachers in Ta Penh, 102 children and 4 teachers in Sangke Lak and 332 children and 11 teachers in Anlong Thom. These figures do not include the children and teachers from Popel primary school where a fourth tree nursery is supported by HUMY.
Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project (Mr. Yon Sokchea).
To better monitor the project, ADF upgraded in 2023 the tree nursery monitor tool with an Xcel document to follow up: the movements of the trees within the tree nurseries (production and sales),

the stock and production per tree species and tree nurseries, the sales for each client per tree species and tree nurseries and the plantations per location and per species.
The previous monitoring tool system was not recording the movements of the trees but was indicating: the number of saplings per tree nursery, per species, the English name, the Khmer name and the scientific name (in Latin) for each species, the seedling period for each species, the average price of seeds per Kg per species, the processing time for each tree seeds species and the average number of seeds per Kg.
An intermediary recording system was set up in 2022 with 3 documents used regularly by ADF team and shared with PDoE: 1 Xcel document to monitor every 2 months the number of trees per species in each of the 4 tree nurseries, including the sales and the available stock; a total spreadsheet is summarizing the trees grown, 1 Xcel document to monitor each buyer and the number of trees bought per species and per tree nurseries, a total spreadsheet is summarizing these data, 1 Xcel document to monitor each area reforested within PKNP with the date, the location, surface, number of trees per species, and the total of trees per area. This document can include area(s) reforested with tree coming from other tree nurseries.
The system set up in 2023 is now combining all these data and allow a much better monitoring.
Villagers are aware of the existence of the tree nurseries and a network of seed collectors is being developed.

5) Indigenous tree saplings are transported to designated target areas: Kulara Water Company land, PKNP protected areas (APA's, CPA's) or other designated areas of PKNP, Trees are planted appropriately, reforesting the target areas.

From February 2023 to January 2024, tree seeds were purchased or collected and grown in the 3 tree nurseries supported by Eau Kulen. However, for accountability of the trees, areas reforested and incomes for schools, please refer to the TREE 3 report (year 1) of the 4 tree nurseries, including the one in Popel primary school, supported by HUMY.
Reminder:
2020: 12.094.400 riels=3,023.6 US$ (941.2 US$ for Anlong Thom school, 1,021.2 US$ for Ta Penh, 1,061.2 US$ for Sangke Lak).
2021: 8.877.600 riels=2,219.4 US$ (531.4 US$ for Anlong Thom school, 1021.2 US$ for Ta Penh, 1061.2 US$ for Sangke Lak).
2022, 7.768.800 riels=1,942.2 US$ (621 US$ for Anlong Thom school, 520 US$ for Ta Penh, 801 US$ for Sangke Lak, 0$ for Popel school, trees not sold yet).
Incomes for schools from the sales of trees in 2023= 2,204 US$ (478 US$ for Anlong Thom school, 504 US$ for Ta Penh, 467 US$ for Sangke Lak, 755$ for Popel school).
From February 2023 to January 2024, 440.8 US$ of income were given back to the maintenance of each tree nurseries. This corresponds to 20 % of the total sales of trees. This is including Popel tree nursery.

Trees planted inside PKNP in 2023
On the 24th of August 2023, ADF organised with the Ministry of Environment and its provincial Dpt for Siem Reap a tree planting activity to the southern part of the Srah Damrei archaeological Protected Area. The plot reforested after being burnt the previous year was covering 16.03 ha., with 6,619 from ADF / Eau Kulen tree nurseries and around 8400 from the PDoE tree nursery, for a total of 15,000 planted on that area. A total of 250 persons including 70 children from local schools and officials from authorities joined the event to plan. The objectives were to regenerate and protect the eco-systems and biodiversity, to mitigate climate change, and to disseminate to the public the importance of forest cover.
On the 11th of October 2023, the provincial Dpt of Environment organised the reforestation of 1.53 ha with 1520 trees and additional trees from the PDoE tree nursery, to the southeast of Prasat Kok Chen, near Anlong Thom village and O'Lahal river.
In September 2023, 502 trees were planted just to the east of the new ranger station on a 0.24 ha plot during the Kulen Trek Run event, in partnership with Agrisud International.
Several individuals bought trees to plant on their land inside the park or in public spaces:
50 trees, Mr Seng Samry, Ta Penh village; 100 trees, Mr Keo Sopheak, Anlong Thom village; 80 trees, Veasna/ Mr Keo Sopheak, Popel village; 150 trees, Mr Seng Samry, Road to Sangke Lak;

100, Mr South Chantha, Anlong Thom village; 80 trees, Veasna/Mr Keo Sopheak, Popel village; 400 trees, track to Phnom Tbeng, Khnong Phnom commune, Mr Veth Vireak, from Agrisud International, 6th November 2023; 700 trees (500 trees on 5000m2 + 200 trees in Boran Than pagoda), Khun Ream commune, Mr Veth Vireak, from Agrisud International.
For the year 2023, the total of reforested areas within PKNP is more than 18.3ha (8641 trees form Eau Kulen tree nurseries planted during 3 reforestation activities) + 1160 trees on lands inside the park =9801 trees.
Trees planted outside PKNP in 2023
In order to respond to some demand and to promote ADF/Eau Kulen tree nurseries, some trees were sold to clients for plantation outside PKNP: 200 trees (Kan Dek: 50), (Puok: 100) and (Chreav: 50) planted along the road, Mr Veth Vireak, from Agrisud International; 50 trees, Mr Keo Sopheak, Banteay Srey Commune; 200 trees, Mr JB Chevance, O'Meanchey village, Svay Leu Commune; 80 trees, Miss Chhun Phirom's friend, Siem Reap town; 25 trees, Mr JB Chevance for Pou Mi, Run Ta Ek village/ Commune; 13 trees, Mr. Veasna, Kep province. Total sold and planted outside the park: 568 trees.

The total trees planted are 10,369 for the year 2023.
The Kulara Company did not require any trees in 2023 to plant in the compounds of their 2 water factories. The total number of trees produced in 2023 is 20,620. This figure includes trees grown before and after the sales and plantations. The total number of trees grown and planted since the beginning of the TREE 1 project in 2018 is therefore 121,430+20,620=142,050.

6) Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture & sunlight they need to grow & thrive.

As recommended in the final report of the first TREE project (recommendations n.5), the maintenance of the reforested areas was continued during this third project. This requires the employment of local villagers as day labour, to cut with brush cutters the weeds around the small saplings planted in the target areas.
This allows 1) to give them the trees light and moisture they need, giving them a "fighting" chance to grow and develop into mature forest; 2) to better monitoring the reforested areas, the survival rate of the trees, and eventually to replace the dead ones.
In 2023, visits on previously reforested areas were done by ADF and PKNP rangers. It was observed that the maintenance was not urgent and could be done in 2024.
The funds for these operations (maintenance and planting) will be taken from the TREE 3 budget.

7) Previous recommendations and actions taken

Learning for the previous years, ADF submitted this TREE 3 project to Kulara Water for the years 2023 and 2024 in January 2023, including the recommendations from the previous projects. They are reminded below with comments for the year 2023.

TREE GROWING
The collect of seeds and growing of sapling should continue in every tree nursery during the coming months, so saplings can be ready to plant for the next rainy season (June-October 2023). This was done in 2023 and will continue in 2024.
According to the seeds available and their confirmed presence in PKNP, ADF should look to diversify the saplings if possible, according to the recommendations n.8 of the final TREE report. New species, recorded in PKNP, were being introduced in the tree nurseries in 2021 such as Tro Yeng, Pring Phneav, Krolanh. These seeds are harder to get but this will be tried in 2024. In order to attract cashew nut farmers to diversify their offer, ADF will push them to plant other fruits trees in these plots (see below).
ADF will endeavour to use fewer plastic bags for the sapling growing as well as for the transport of saplings to the reforestation areas. The white bags are a solution to extend for the sapling production (the provider in Phnom Penh was contacted) and the rattan baskets for the sapling transportation. This is a point that ADF can still improve.

ADF will install small durable (metallic) signboards to identify saplings in the 3 tree nurseries (with Khmer, English and Latin names). It will be done in 2024.
The monitoring of each tree nursery will continue to ensure a good production and diversification. The new Tree nursery monitoring tool now improves the accountability of trees grown, sold and planted.
The ADF team, in collaboration with the teachers of the schools, will make sure the water systems are viable and that incomes from the sales of trees are properly used for their maintenance when needed. Some of the water system (buried pipes) tends to be broken by animals (pig, cows) during the dry season. ADF will take preventative measures to avoid this. It will be done in 2024 with durable pipes.

REFORESTATION
ADF will continue to better monitor the number of hectares reforested exclusively with the saplings produced by the ADF-Eau Kulen tree nurseries. The PKNP reforestation operations sometimes include trees that are purchased from other tree nurseries. This corresponds to the recommendation n.4 of the final TREE report. It was done in 2023 and will be in 2024.
Additional areas will be reforested during the 2023-2024 rainy seasons within PKNP involving teachers, pupils and local stakeholders and authorities, in collaboration with PDoE. This will depend, as stated in the recommendation n.9 of the final TREE report, 1) on the number of saplings produced, 2) on the available reforested areas within PKNP and 3) on the PDoE capacity of re-taking illegally deforested plots for reforestation. It was done in 2023 and will be in 2024.
Since 2018, this has never been an issue. Moreover, the UNDP-BESD-PES project has introduced a new type of reforestation providing more options for reforested areas: tree planting within existing cashew nut farms (with a lower density per hectare), with an agreement from the farmer to take care of the growing trees and to give back, on a long term, the land to the State (20.9 ha in 2021). This could be an option in the future project. It was not done in 2023 but several owners of land in villages requested trees for their lands in the villages. In 2024, some cashew nut farmers want to plant forest trees with fruits (Kulen, Pniou or Pring) in their farms. ADF will grow these seeds to provide them these saplings and therefore diversity the biodiversity in these plots.
ADF will monitor the forest cover of the park with satellites images to identify the deforested location, so new reforestation activities could take place in rainy season. It was done partially achieved by November 2023 within the biodiversity survey of the park, in collaboration with HUMY NGO. From 60 to 70 hectares were seen as recently illegally burn for cultivation in March 2023. Due to long administrative procedures, these areas could be reforested in 2024.
If needed, additional trees will be sold to Kulara Cie compound, to continue the reforestation of the new factory land (Preah Vihear province). The company did not request trees for the year 2024.
Systematic maintenance activities after reforestation should be done once every 6 months for 2 years (i.e. 4 times), on each reforested area. This was not done in 2023 but will be improved in 2024.
Costs for reforestation activities and maintenance activities should be included in the next project. It was done in the TREE 3 budget.

ENIRONMENTAL EDUCATION
ADF will organize in 2023-2024 visits of the involved teachers at Kulara Water Cie factory and tree nursery. Depending on the budget, some students could be involved. This was done on the 24th of May 2023 with a group of 52 persons: 10 children and 2 teachers from each of Anlong Thom, Ta Penh, Sangke Lak and Popel primary schools. They visited the factory and the surrounding planted areas, with the trees grown by the schools from 2018 to 2020. They achieve the visit by visiting Banteay Srey temple, under the generous guidance of Ms. Sanh Sophoan, professional guide.
ADF could organise environmental education sessions in schools to stress the importance of the PKNP Bio-diversity and the natural environment in general. Educational material will be sourced and disseminated with videos at each primary school. The data from the ADF/HUMY ongoing biodiversity survey could also be used to reinforce the message. Due to time and human resources constraint, this was not done in 2023 but will be tried in 2024.

The HUMY 3 Project: Popel Tree Nursery Project (PTNP)

As for the TREE 2 project, the core of the HUMY 3-PTNP project is to grow and plant indigenous trees from PKNP that will regenerate its natural environment. The project will provide young saplings to reforest targeted areas within PKNP by building and running a tree nursery in Popel primary school (98 children, including 42 girls and 4 teachers, including 1 woman). The practical participatory education (learning by doing) of the young generation, the pupils of this school, will further contribute to the sustainability of the project.
This project is based on the successes of the TREE 1 and 2 projects, supporting 3 tree nurseries in the primary schools of Sangke Lak, Ta Penh and Anlong Thom villages, and implemented by ADF for the last 4 years. This project also reinforces the dynamic to support the Popel Community-based Tourism Center (CBTC), set up by ADF and now funded by HUMY. This center's objective is to generate incomes for villagers by promoting tourism in the Popel recently enlarged Community Protected Are (CPA). Finally, the project come to reinforce the reforestation of the PKNP, initiated by ADF since 2015.

Inception of the project:
Village schoolteachers and all stakeholders were oriented in the project with a participatory meeting (project cycle, project objectives and project goal). The tree nursery materials were procured. The accounting system for the project set up by ADF accounting person to update expenses on a weekly basis for a better financial monitoring of the project.

Construction of the tree nurseries at Popel primary school:
The tree nursery and its water system were built from April to June and inaugurated on the 14th of June 2022, in the presence of the students and teachers, representatives from local authorities and Mr. Jérôme L'Hour, Humy's representative in Cambodia. The project also implies the installation of 2 additional reservoirs.

Continue collecting Indigenous tree seeds, Upgrade the tree nursery at Popel primary schools, ensuring they are efficiently & effectively producing strong healthy saplings, Plant the tree seeds & nurture the tree saplings until they are ready to be planted in designated priority areas.
The Humy 3 project is a continuation of the successful TREE 1 & 2 projects funded by Eau Kulen at 3 other primary schools in Khnong Phnom Commune, this tree nursery project at Popel primary school has received funding from the HUMY through ADF since April 2022. This initiative has been implemented at Popel school, where the teachers have shown keen interest in utilizing the infrastructure for both educational purposes and as a means of generating income. ADF has been actively involved in this village since 2018, undertaking various projects, including the expansion and demarcation of the Community Protected Area (CPA) from 188 to 798 hectares, establishment of a water system for the village and primary school, setting up a Community-based Tourism Centre (CBTC) offering treks to the forest, waterfalls, and boulders, implementation of a hygiene and sanitation project in the primary school, and construction of additional infrastructure such as a library, playground, and incinerator.
Discussions on water-related issues, benefits, prices, and equipment revealed that in Popel, teachers raised concerns about soil quality, noting frequent issues due to sandy soil. They also reported that Thnong (Pterocarpus Macrocarpus) seeds are challenging to grow.
Additionally, the project has confirmed a system of percentages for the benefits of the tree sales: 20% for tree nursery maintenance, 40% for school maintenance, and 40% for the teachers as an incentive. The cash generated from the sales of saplings for being used as a tree nursery maintenance is managed by ADF.
The ADF team diligently monitored and visualized the main tasks to be implemented by all stakeholders throughout the calendar year, from January to December 2023.
From January 2023 to December 2023,
The ADF team diligently conducted regular checks on the Popel water systems throughout the whole year of 2023 to ensure uninterrupted water distribution to the tree nursery and schools' facilities. Fortunately, no issues were encountered during these evaluations, demonstrating the reliability of the water systems for the school.

Additionally, the ADF team undertook necessary upgrades for the tree nurseries, providing essential tools, equipment, and gravity-fed water systems as required.
It is crucial for ADF to prioritize consistent access to water for the tree nursery and school, especially during the increasingly critical dry seasons attributed to climate change and deforestation. To address this, the tree nursery water systems were thoughtfully designed to capture and retain sufficient water reserves until the conclusion of the hottest seasons. However, as this challenge intensifies annually, future upgrades may focus on expanding the storage capacities to better sustain these institutions in the face of evolving environmental conditions.

Village schoolteachers & children are taught in fundamental aspects of tree planting & tree growing, nurturing & raising trees and village school children have practical lessons in tree cultivation & it becomes part of their school activities.
Please refer to the TREE 3 project above.

Indigenous tree saplings are transported to designated target areas: PKNP protected areas (APA's, CPA's) or other designated areas of PKNP; Trees are planted appropriately, reforesting the target areas.
Please refer to the TREE 3 project above.

Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture & sunlight they need to grow & thrive.
Please refer to the TREE 3 project above.

The HUMY 4 Project: Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion

Please refer to the HUMY 4 project above, in the Income generation (ig)/Alternative livelihood program chapter.

The HUMY 5 Project: PKNP biodiversity assessment

HUMY support to ADF started in 2021 (HUMY 1 and 2 projects). It was reinforced in 2022 then 2023 with the continuation of the HUMY 2 project (with the HUMY 2 bis and 4) and the HUMY 3 project (see above). This involvement in the preservation of PKNP biodiversity was also illustrated in 2022 and 2023 by the study of the park's bio-diversity, a project funded entirely by HUMY but with the strong involvement of ADF.
In September 2022, Mr. Vincent Romera came to Cambodia for a 11 month mission, with the objective of updating the last PKNP biodiversity assessment, dating from 2013, and propose recommendations for a better conservation of key species and species in danger (IUCN classification, international and national).
ADF assisted HUMY with its official administrative request to the MoE and has assisted Mr. Romera with all questions concerning existing data and literature, supplies and logistics for field surveys. He was assisted my Ms. Claire Zagala. On some occasions, PKNP rangers or ADF director JB Chevance joined the field surveys. The field studies continued until July 2023 and a final report was later finalised.
The report is entitled "Phnom Kulen National Park: an update on the biodiversity status with an assessment of environmental threats; naturalistic summary, assessment of threats and conservation prospects" was written by Vincent Romera, HUMY's ecologist, in collaboration with Tony Yon and ADF Director, JB Chevance. It was finalised in October 2023, 10 years after the last biodiversity assessment of this park (Hayes et al., 2013, A biodiversity assessment of Phnom Kulen National Park, with recommendations for management) and sent to the Ministry of Environment on the 3rd of November 2023.
The objective was precisely to assess the biodiversity in PKNP with a previous reference. This report presents an inventory or ecological assessment of PKNP with some good news, such as the observation of a third of the bird records in Cambodia (including a first record for country) or the observation of bear claws indicating their presence in PKNP. Some of the specie groups studied

are particularly diverse within PKNP, demonstrating the importance of PKNP for biodiversity conservation in Cambodia.
However, the study confirmed the decline in the number of species and the field surveys gave the opportunity to highlight the threats to species and ecosystems, with a very important level of illegal activities in the remaining forested area of the park (+/- 8000 hectares on a total of 37,370 ha, prior to the park's extension in July 2023). For example, the mapping the illegal logging sites observed between December 2022 and June 2023 reaches more than 1,100 recently large cut trees, with several illegal camps and an omnipresent poaching. On this specific matter, a separated report was presented to PDoE and to the minister of Environment in June 2023 ("Illegal activities in Phnom Kulen National Park, Report to the Ministry of Environment, 30th of May 2023") which is partially integrated in this biodiversity report.
Executive summary and conclusions:
This report presents the general context of Phnom Kulen National Park and the results of field observations made during biodiversity monitoring implemented by HUMY in collaboration with ADF NGO, the MoE and the management of Phnom Kulen National Park (PDoE). Vincent Romera, ecologist and project manager for HUMY, was in charge of the naturalist surveys and inventories carried out between September 2022 and July 2023. The species groups covered by this field study are: mammals, birds, reptiles, amphibians, Rhopaloceran Lepidoptera, Heteroceran Lepidoptera and Odonata. There are also opportunistic observations of other insects and arthropods (beetles, spiders, scorpions, etc.).
Conservation issues relating to species and ecosystems are also presented. Thus, 37 species of flora and fauna present conservation challenges on a national and/or global scale. Some of the species groups studied are particularly diverse within PKNP, demonstrating the importance of PKNP for biodiversity conservation in Cambodia:
- Birds: one third of known species in Cambodia (including a 1st record for country),
- Butterflies: more than a third of known species in Cambodia (including a 1st record for country),
- Moths: more than 430 species/taxa identified (including probably several dozen 1st records for country, to be confirmed),
- Odonates: almost half of Cambodia's known species (including several rare species),
The conservation stakes linked to ecosystems are also very high, with Phnom Kulen's major importance as a water resource for the whole of Siem Reap province (and probably beyond) topping the list. Among other things, the national park's forested areas reinforce the water table and regulate flooding by absorbing and cushioning floodwaters. Over 500,000 people (probably many more in 2023) depend on the Phnom Kulen forests for access to drinking water.
This report therefore presents an inventory or ecological assessment of PKNP, highlighting the threats to species and ecosystems, as well as mapping the illegal logging sites observed between December 2022 and June 2023. More than 1,100 recently cut trees were surveyed.
Finally, the last part of the report addresses possible solutions/suggestions for better consideration and conservation of PKNP's biodiversity. To address these negative findings, the last part of this biodiversity report presents possible solutions and suggestions for a better conservation of PKNP's biodiversity, including the revision of the actual proposed zoning, the restoration of ecological continuities and streams and rivers protection, and the implementation of long-term project focusing on reforestation and a better law enforcement.

This report has updated some of knowledges of the Phnom Kulen National Park's biodiversity and the conservation status of the park's forest blocks.
With almost a third of all bird species, 40% of Cambodian bats species, over a third of all lepidopteran rhopalocerans (butterflies) and almost half of Cambodia's known odonata species (dragonflies and damselflies), Phnom Kulen National Park concentrates a significant proportion of the country's biodiversity. Expert herpetologists also recognize PKNP as Cambodia's second national park in terms of diversity of herpetofauna (reptiles and amphibians), and for snakes more specifically it is even the first national park in terms of species diversity. Still on the subject of reptiles, 3 species of globally threatened turtles have been recorded, one of which, the Elongated Tortoise, has been assessed as "Critically Endangered". In addition to these important results for the above-mentioned taxonomic groups, there are also rare or globally threatened primate species such as the Pileated Gibbon, Bengal Slow Loris and Long-tailed Macaque. PKNP also boasts 10

highly endangered tree species. In total, 37 species with global or national conservation concerns are present in this protected area.
In addition to the conservation of species and natural habitats, there is the crucial issue of the sustainability of water resources for over 500,000 people and all the other ecosystem services vital to the population of Siem Reap province. It should also be noted that tourism, and therefore the entire region's financial windfall, is also dependent on water from Phnom Kulen.
Unfortunately, field surveys have revealed a high level of illegal activities and selective logging, which appears to be highly organized and active. Nearly 1,100 recently cut trees were counted in all the forest areas visited, numerous illegal camps were seen and poaching is omnipresent in the PKNP territory. The overall conclusion is therefore that the patrol system in the national park is deficient and requires a review of the methodology put in place.
To address these negative findings, the report sets out ideas and recommendations such as the establishment of the zoning within the park (in particular for the core and conservation zones), the ecosystem restoration, a stronger law enforcement project starting with a pilot project (financed by a private donor, supported by ADF and under discussion with the MoE), to seek new sources of funding for the management of the National Park and new alternatives for the villagers...
According to the field observations made this year, notably on former abandoned slash-and-burn plots, Phnom Kulen's forest ecosystems seem to have a good capacity for resilience. It is therefore not too late to save Phnom Kulen National Park. However, and despite the involvement of external players such as NGOs and the ongoing activities of the PDoE, this will not be possible without a stronger political position and a more pronounced sense of responsibility on the part of the authorities.

Report on illegal activities, May 2023

While implementing the update of the biodiversity survey of PKNP and observing numerous illegal activities in the remaining forested areas, the HUMY and ADF team have written a report (entitled "Illegal activities in Phnom Kulen National Park, Report to the Ministry of Environment, 30th of May 2023, by Vincent Romera (HUMY), JB Chevance (ADF), in collaboration with Tony Yon) and addressed it to the ministry of Environment. Both teams were received by H. E. Say Sam Al, minister of Environment on the 20th of June 2023, to present this report. It was also the opportunity to present of project addressing the environmental threats observed during the biodiversity assessment (see below).
Executive summary:
Phnom Kulen National Park (PKNP) is the largest forested area and mountain in Siem Reap Province, the source of the entire regional watershed, both underground and surface freshwater, a hotspot for biodiversity, a National Park of 37,373 hectares since 1993 (until its extension form the 17th of July 2023), with a Management Plan and an Action Plan from 2018, a capital of the Khmer empire (early 9th century AD), one of the most sacred mountains in Cambodia, recognised as a high value touristic attraction, included in the regional and national tourism plan, registered by the Royal Government of Cambodia since 1992 (and reviewed in 2020) on its tentative list as a future World Heritage Site.
During the bio-diversity surveys implemented by HUMY, ADF and PDoE from September 2022 to May 2023, at least 1079 trees recently (less than 1 year ago) cut with chainsaw, observed by foot or drone surveys, for a total of 457 UTM locations in PKNP (587 trees cut for zone 1 and 492 for zone 2 to 4), most of them in the potential core zones, an associated network of trails to transport the wood by ox cart or hand tractors, and at least 9 wood drop points to cross the cliffs, about 70 new farms (2023), recently deforested along the Siem Reap River and the O'Kbal Damreï (also called O'Kantuout) River, observed by drone surveys, numerous encroachments in the lower parts of the park, in the plain and on the foothills for agriculture, in some cases linked to illegal logging, a systematic use of poaching tools such as air guns and various types of traps.

Solutions are existing and this report includes recommendations for the urgent implementation a strict law enforcement project, enhancing the PKNP patrolling rhythms, skills and results, to halt illegal loggings, encroachments for agriculture and poaching, to apprehend the perpetrators, if authorized by the MoE, this project could start as soon as funds are available, under ADF and HUMY's management/guidance and in coordination with PDoE. Other experimented partners such

as Wildlife Alliance should be involved. The national policy for the conservation of the protected areas by the Ministry of Environment is in line with such a project.
Several recommendations are also in the conclusion of this report.

The Save Kulen Forest project and the Regenerate and Protect Phnom Kulen Forest projects

As ADF identified the threats on Phnom Kulen National Park while updating its the biodiversity status and environmental assessment, two projects were designed in 2023 to address these issues. The first one, finalized in June 2023 entitled "Save Kulen Forest", was designed to enhance the protection of the remote but highly threatened forested areas and biodiversity hotspots of the Phnom Kulen National Park (PKNP; +/-8000 hectares) by establishing a small group of MoE rangers under the supervision of a manager, patrolling 14 days/night per month. The idea behind these patrols was to be more present on the ground with unpredictable pattern of patrols, to reduce illegal activities. Equipment such as 4G camera trap would be set up to provide information on illegal activities and possible training from WCS for the SMART system could be provided. In the case of perpetrators apprehended, PDoE should apply PA laws accordingly, to set examples.
This project comes after recent alarming observations (summarized in a report by ADF and HUMY, see above), while undertaking a biodiversity survey from September 2022 to July 2023 (see above). Our teams were confronted to a worrying number of illegal activities in PKNP, mostly in the forested areas of park (Community Protected Areas and mostly potential cores zones), in the form of illegal logging, encroachment for agriculture and poaching. The SKF project comes to reinforce a dynamic (initiated by ADF and funded by HUMY) since January 2022, with the training and financial support to Popel and Anlong Thom CPA members and PKNP rangers, to patrol twice a week in and outside the CPAs. This project reinforces the governmental policies to enhance the management of Protected Areas, in collaboration with Provincial Department of Environment (PDoE).
For various administrative reason as well as lack of human resource from ADF, this 6-month project, From July to December 2023, was not possible to set up quickly, in coordination with the Ministry of Environment.

Simultaneously during the first half of 2023, the ADF team met the Soneva Foundation CEO and representatives and, after agreeing on a possible project, designed a much more ambitious project orientated on reforestation, protection and education. It is based on the national guidelines issued recently by the MoE for the Protected Areas in Cambodia and is taking into consideration the recommendations from ADF's recent biodiversity report, implemented in partnership with HUMY NGO and Siem Reap PDoE.
The "Regenerate and Protect Phnom Kulen Forest" is a 3-years participatory tree-growing and protection project to be implemented in PKNP, in coordination with the Ministry of Environment, and most probably renewable. Since it could be funded by carbon credits, it can be foreseen for 20 years. The proposed project encompasses three main interventions.
The reforestation from 350 to 500 hectares in Phnom Kulen National Park (PKNP), with the construction and renovation of tree nurseries for indigenous seedlings. The minimum objective of 350 hectares (120 ha per year) would allow to produce and plant 418,500 over the first 3 years and during rainy seasons, and to upgrade existing tree nurseries at the Orchid ranger station and at Khlah Khmum village. Reforestation could focus on the critical area of the Siem Reap River valley, the Phnom Hop flat lands area and any other deforested areas chosen by the Ministry of Environment (MoE).
The effective protection of the threatened forested areas and biodiversity hotspots to the north of PKNP (+/-8000 hectares) with upgraded ranger patrols, up to international standards, tackling the alarming ongoing illegal activities (logging, poaching and land encroachments), observed during our recent bio-diversity surveys.
The development of environmental awareness for the future generation (for more than 1000 school children) and PKNP villagers, with practical and regular techniques sessions in growing and planting trees, lessons and outreach visits.
At the end of the year 2023, ADF submitted the project proposal to Soneva Foundation which agreed to fund it, and to the MoE, with a request to meet the new ministry of Environment, H. E. EANG Sophalleth.

Reforestation activities

Reminder: Since 2015, ADF participated and facilitated several activities related to tree planting activities in PKNP: selection of the area to be planted, organisation and logistic on the field, design of signboards, plantation, mobilisation of person to plant. From 2015 to 2019, the total of saplings planted in PKNP reaches 241,500 for 97.5 hectares. In 2020, this total figure was largely expended due to the UNDP-C.19 project. The total number of reforested hectares, including the ones from the UNDP-C.19 project, reached almost 90 hectares. 87,100 trees were planted in 32 different locations. In 2021, within the UNDP-BESD, 20,9 hectares were planted within cashew nut farms. 6,8 additional hectares were planted in 3 different locations with a total of 5,600 trees. Apart from the UNDP-C-19 project (2020-2021), 27,7 hectares were therefore planted in 2021 in PKNP. In 2022, the total amount of reforested areas in PKNP reached 14.1 hectares. In 2023, 9801 trees were planted over 18.3 hectares (see "Trees planted inside PKNP in 2023", in TREE 3 and HUMY 3 projects above).
These combined figures include projects in which ADF was the main actor, and projects were PDoE was the main implementing partner.

Patrols by PKNP Rangers and Community Protected Areas members

Please refer to the chapter "Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion (HUMY 4 project)", in the Income generation (IG)/Alternative livelihood program chapter.

Road construction project across PKNP

ADF has participated and advised PDoE and APSARA about the road construction project across the national park. On the 13th of December 2022, ADF advised the APSARA Authority and the UNESCO-ICC sustainable development experts, during a field visit to assess the boulders located on the section of the road which has not been rehabilitated yet. The following recommendations (n. 21.3) was issued at the 36th technical session and 29th plenary session on the 15th and 16th of December 2022.
In 2023, the construction of the road was halted temporarily.

g. ADMINISTRATION

From November 2023, ADF submitted to the APSARA National Authority the draft of the renewal for the ADF - APSARA MoU for the next 3 years, as the ongoing on was due on the 8th of January 2024. ADF has joined the following documents to support this request: the ADF-APSARA ongoing MoU (Khmer and English version), the ADF-Ministry of Foreign Affairs and International Cooperation ongoing MoU (Khmer and English version), the ADF-Ministry of Environment ongoing MoU (Khmer and English version), the ADF-APSARA summary of archaeological and conservation achievements and activities over the last 3 years (2020-2023), the ADF Project Activities and Strategic Plan 2023-2025.

On the 27th of February 2023, ADF and Sala Baï signed a cooperation agreement to define their partnership. During the year 2023, ADF also defined a cooperation agreement with Sourire Angkor NGO, to be signed in early 2024.

On the 24th of May 2023, ADF Director signed a Memorandum of Understanding (MoU) with the Ministry of Foreign Affairs and International Cooperation, government of Cambodia, for a 3-years period, from May 2023 to April 2026. This MoU allows ADF to renew its agreement with the Cambodian government as an International NGO and allows to work legally in Cambodia, with other governmental partners.
Numerous documents were required for this renewal: Requesting letter for renewal of existing MOU from its Country's Representative, a supporting letter for organization's project from line ministries concerned or other Institutions of Cambodia's Government, Project activities and budget plan for the next 3 years, a letter of budget confirmation for 3-year project issued by the organization's

Headquarters/ Boards of directors, updated bank accounts statements for the last 6 months, the Power of Attorney/ Appointment Letter issued from the Organisation's Headquarters (including, passport, CV of Country Director/ Representative), the list of expatriate and local staff and updated address of office, a 3-year report and summary on budget expenditure for the last 3 years, the annual report on activities and budget expenditure, a certificate of Tax Registration & Tax Payment Receipt for the last 3 months, a copy of soon-expired MOU, which was last signed with the Ministry of Foreign Affairs and International Cooperation, the MOU / agreement between NGOs and Royal Government's partner.

In preparing this report, the trustees have taken advantage of the small company exemptions provided by section 415A of the Companies Act 2006.

The report was approved by the Trustees and signed on their behalf by:

Vincent Chevance
Trustee
Date 22 October 2024

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

INDEPENDENT EXAMINER'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2023

Independent Examiner's Report to the Trustee of Archaeology and Development Foundation ('the Charity')

I report to the charity Trustee on my examination of the accounts of the Charity for the year ended 31 December 2023.

Responsibilities and Basis of Report

As the Trustee of the Charity (and its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the Charity are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of the Charity's accounts carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Charity as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair' view which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities [applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102)].

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

This report is made solely to the Charity's Trustee in accordance with Part 4 of the Charities (Accounts and Reports) Regulations 2008. My work has been undertaken so that I might state to the Charity's Trustee those matters I am required to state to them in an Independent Examiner's Report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustee for my work or for this report.

Signed: Hazra Patel Dated: 22 October 2024

Hazra Patel ACA

Lubbock Fine LLP
Chartered Accountants & Statutory Auditors
Paternoster House
65 St Paul's Churchyard
London
EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2023

	Note	Unrestricted funds 2023 £	Restricted funds 2023 £	Total funds 2023 £	Total funds 2022 £
Income from:					
Donations	3	51,203	103,939	155,142	110,339
Investments	4	-	80	80	96
Total income		51,203	104,019	155,222	110,435
Expenditure on:					
Charitable activities	5	41,696	103,663	145,359	140,118
Total expenditure		41,696	103,663	145,359	140,118
Net movement in funds		9,507	356	9,863	(29,683)
Reconciliation of funds:					
Total funds brought forward		(29,891)	41,968	12,077	41,760
Net movement in funds		9,507	356	9,863	(29,683)
Total funds carried forward		(20,384)	42,324	21,940	12,077

The Statement of Financial Activities includes all gains and losses recognised in the year.

The notes on pages 70 to 80 form part of these financial statements.

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee) **REGISTERED NUMBER: 06429421**

BALANCE SHEET

AS AT 31 DECEMBER 2022

	Note	2023 £	2023 £	2022 £	2022 £
Fixed assets					
Tangible assets	10		4,060		3,231
Current assets					
Cash at bank and in hand		47,456		16,485	
		47,456		16,485	
Creditors: amounts falling due within one year	11	(29,576)		(7,639)	
Net current assets			17,880		8,846
Total net assets			21,940		12,077
Charity funds					
Restricted funds	12		42,324		41,968
Unrestricted funds	12		(20,384)		(29,891)
Total funds			21,940		12,077

The Charity was entitled to exemption from audit under section 477 of the Companies Act 2006.

The members have not required the company to obtain an audit for the year in question in accordance with section 476 of Companies Act 2006.

The Trustee acknowledge their responsibilities for complying with the requirements of the Act with respect to accounting records and preparation of financial statements.

The financial statements have been prepared in accordance with the provisions applicable to entities subject to the small companies regime.

The financial statements were approved and authorised for issue by the Trustee and signed by:

Vincent Chevance
Trustee
Date: 22 October 2024

The notes on pages 70 to 80 form part of these financial statements.

1. General information

Archaeology and Development Foundation is a charitable company limited by guarantee incorporated in England and Wales. Its registered office address and place of business is 25 Brooks Mews, London, W1K 4DZ.

2. Accounting policies

2.1 Basis of preparation of financial statements

The financial statements have been prepared in accordance with the Charities SORP (FRS 102) - Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

Archaeology and Development Foundation meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy.

2.2 Going concern

The Charity is in the main reliant on donations and the support of related parties to meet its running costs. Due to the nature of its activities, the majority of the Charity's expenditure is incurred directly on charitable projects and so the Charity is able to control its direct charitable expenditure based upon the level of donation income that it has received and the anticipated ongoing support of related parties.

The Trustee considers it appropriate to prepare the financial statements on a going concern basis on the assumption that sufficient incoming resources will be generated to meet the Charity's running costs. The financial statements do not include any adjustment which would result if there were insufficient funds available in respect of the Charity's operations.

2.3 Donations and gifts

All income is recognised once the Charity has entitlement to the income, it is probable that the income will be received and the amount of income receivable can be measured reliably.

Donations and gifts are included in full in the Statement of Financial Activities when receivable.

2.4 Expenditure

Expenditure is recognised once there is a legal or constructive obligation to transfer economic benefit to a third party, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is classified by activity. The costs of each activity are made up of the total of direct costs and shared costs, including support costs involved in undertaking each activity. Direct costs attributable to a single activity are allocated directly to that activity. Shared costs which contribute to more than one activity and support costs which are not attributable to a single activity are apportioned between those activities on a basis consistent with the use of resources. Central staff costs are allocated on the basis of time spent, and depreciation charges allocated on the portion of the asset’s use.

Expenditure on charitable activities is incurred on directly undertaking the activities which further the Charity's objectives, as well as any associated support costs.

2. Accounting policies (continued)

2.4 Expenditure (continued)

All expenditure is inclusive of irrecoverable VAT.

2.5 Interest receivable

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the Charity; this is normally upon notification of the interest paid or payable by the institution with whom the funds are deposited.

2.6 Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into US dollars at rates of exchange ruling at the reporting date.

Transactions in foreign currencies are translated into US dollars at the rate ruling on the date of the transaction.

Exchange gains and losses are recognised in the Statement of Financial Activities.

2.7 Tangible fixed assets and depreciation

Tangible fixed assets costing £200 or more are capitalised and recognised when future economic benefits are probable and the cost or value of the asset can be measured reliably.

Tangible fixed assets are initially recognised at cost. After recognition, under the cost model, tangible fixed assets are measured at cost less accumulated depreciation and any accumulated impairment losses. All costs incurred to bring a tangible fixed asset into its intended working condition should be included in the measurement of cost.

Depreciation is charged so as to allocate the cost of tangible fixed assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following bases:

Freehold property	- over 10 years straight line
Motor vehicles	- 25% straight line
Office equipment	- 33.33% straight line

2.8 Cash at bank and in hand

Cash at bank and in hand includes cash and short-term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

2.9 Liabilities and provisions

Liabilities are recognised when there is an obligation at the Balance Sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably.

Liabilities are recognised at the amount that the Charity anticipates it will pay to settle the debt or the amount it has received as advanced payments for the goods or services it must provide.

2. Accounting policies (continued)

2.10 Financial instruments

The Charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

2.11 Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the Trustee in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The costs of raising and administering such funds are charged against the specific fund. The aim and use of each restricted fund is set out in the notes to the financial statements.

Investment income, gains and losses are allocated to the appropriate fund.

3. Income from donations

	Unrestricted funds 2023 £	Restricted funds 2023 £	Total funds 2023 £
Donations	51,203	103,939	155,142

	Unrestricted funds 2022 £	Restricted funds 2022 £	Total funds 2022 £
Donations	45,737	64,602	110,339

4. Investment income

	Restricted funds 2023 £	Total funds 2023 £
Bank interest	80	80

4. Investment income (continued)

	Restricted funds 2022 £	Total funds 2022 £
Bank interest	96	96

5. Analysis of expenditure on charitable activities

Summary by fund type

	Unrestricted funds 2023 £	Restricted funds 2023 £	Total 2023 £
Charitable costs	41,696	103,663	145,359

	Unrestricted funds 2022 £	Restricted funds 2022 £	Total 2022 £
Charitable costs	46,815	93,303	140,118

6. Analysis of expenditure by activities

	Activities undertaken directly 2023 £	Support costs 2023 £	Total funds 2023 £
Charitable costs	139,519	5,840	145,359

	Activities undertaken directly 2022 £	Support costs 2022 £	Total funds 2022 £
Charitable costs	134,759	5,359	140,118

6. Analysis of expenditure by activities (continued)

Analysis of support costs

	Charitable costs 2023 £	Total funds 2023 £
Accountancy fees	2,086	2,086
Independent examination fees (governance)	2,500	2,500
Foreign currency loss	165	165
Bank charges and interest	1,089	1,089
	5,840	5,840

	Charitable costs 2022 £	Total funds 2022 £
Accountancy fees	2,105	2,105
Independent examination fees (governance)	2,250	2,250
Foreign currency gain	120	120
Bank charges and interest	884	884
	5,359	5,359

7. Staff costs

	2023 £	2022 £
Wages and salaries	48,874	52,182
	48,874	52,182

The average number of persons employed by the Charity during the year was as follows:

	2023 No.	2022 No.
Average number of employees	11	11

No employee received remuneration amounting to more than £60,000 in either year.

8. Trustee's remuneration and expenses

During the year, no Trustees received any remuneration or other benefits (2022 - £NIL).

During the year ended 31 December 2023, no Trustee expenses have been incurred (2022 - £NIL).

9. Taxation

The company is a registered charity with the Charity Comissioners for England and Wales. It is not liable to corporation tax on any surplus arising from its charitable activites.

10. Tangible fixed assets

	Freehold property £	Motor vehicles £	Office equipment £	Total £
Cost				
At 1 January 2023	28,288	17,750	23,918	69,956
Additions	-	1,900	895	2,795
At 31 December 2023	28,288	19,650	24,813	72,751
Depreciation				
At 1 January 2023	28,071	16,356	22,298	66,725
Charge for the year	217	928	821	1,966
At 31 December 2023	28,288	17,284	23,119	68,691
Net book value				
At 31 December 2023	-	2,366	1,694	4,060
At 31 December 2022	217	1,394	1,620	3,231

11. Creditors: Amounts falling due within one year

	2023 £	2022 £
Accruals and deferred income	29,576	7,639

Included within accruals and deferred income is deferred income of £24,990 (2022 - £nil) that was received in the year ended 31 December 2023 and relates to a project taking place in the year ended 31 December 2024 and beyond and has therefore been deferred.

12. Statement of funds

Statement of funds - current year

	Balance at 1 January 2023 £	Income £	Expenditure £	Balance at 31 December 2023 £
Unrestricted funds				
General Funds	(29,891)	51,203	(41,696)	(20,384)
Restricted funds				
Education project	6,490	33,931	(33,078)	7,343
Income Generation project	25,030	20,007	(31,109)	13,928
Environment project	10,448	50,081	(39,476)	21,053
	41,968	104,019	(103,663)	42,324
Total of funds	12,077	155,222	(145,359)	21,940

12. Statement of funds (continued)

Statement of funds - prior year

	Balance at 1 January 2022 £	Income £	Expenditure £	Transfers in/out £	Balance at 31 December 2022 £
Unrestricted funds					
General Funds	(28,813)	45,737	(46,815)	-	(29,891)
Restricted funds					
Education project	35,555	514	(29,579)	-	6,490
Income Generation project	17,483	39,504	(31,957)	-	25,030
Environment project	10,980	24,679	(31,767)	6,556	10,448
UNDP	6,556	-	-	(6,556)	-
	70,574	64,697	(93,303)	-	41,968
Total of funds	41,761	110,434	(140,118)	-	12,077

Statement of funds (continued)

Education project - this fund contains the following projects:

- WISH 2 - Hygiene and sanitation programme in 4 primary schools. The project was set to run from January 2021 to December 2022 however has been extended into 2023 and 2024.

- Emergency relief - Funds used for emergency relief/complementary support.

- SEAF 2 - Infrastructure project in primary schools, implemented from March 2021 to Dec 2022 and was extended to March 2023.

- SEAF 3L - This is for the construction and equipment of a library at Popel village primary school.

Income generation project - this fund contains the following projects:

- Income generation - This relates to the provision of technical and other assistance to farmers to replace destructive farming practices in PKNP, the IG project, which includes the rice bank project.

- ALIVE - This is for implementing alternatives in agriculture and animal raising. The project is running from May 2022 to April 2025 with donations from SEAF.

Environment project - this fund contains the following projects:

- Tree 2 - This relates to a participatory tree growing project to be implemented in three village schools on the plateau of Phnom Kulen National Park. This project has been renewed for 2 more years from September 2020 to October 2022, and a third tree project is set to start from February 2023.

- HUMY 2 and HUMY 2 bis - This project started from Oct 2021 to March 2022 (HUMY 2) providing training for CPA members of Popel and Anlong Community-based Tourism Centers (CBTCs) and Community Protected Area (CPAs) and promoting local handicrafts. The project continued from April 2022 to December 2022 (HUMY 2bis).

- HUMY 3 - This project is the Popel tree nursery project and began in April 2022 set to run for 2 years.

- UNDP - This relates to a project to implement a project in 2 villages with forest protection (demarcation and expansion of a CPA and alternative livelihoods), from May 2019 to June 2021.

Transfers
During the prior year a transfer was made from the restricted UNDP fund to the Environment project fund totalling $6,556 to represent the amalgamation of projects with concurrent aims.

13. Analysis of net assets between funds

Analysis of net assets between funds - current year

	Unrestricted funds 2023 £	Restricted funds 2023 £	Total funds 2023 £
Tangible fixed assets	4,060	-	4,060
Current assets	5,132	42,324	47,456
Creditors due within one year	(29,576)	-	(29,576)
Total	(20,384)	42,324	21,940

Analysis of net assets between funds - prior year

	Unrestricted funds 2022 £	Restricted funds 2022 £	Total funds 2022 £
Tangible fixed assets	3,231	-	3,231
Current assets	(25,483)	41,968	16,485
Creditors due within one year	(7,639)	-	(7,639)
Total	(29,891)	41,968	12,077

14. Members' liability

Each member of the charitable company undertakes to contribute to the assets of the company in the event of it being wound up while he/she is a member, or within one year after he/she ceases to be a member, such amount as may be required, not exceeding £10 for the debts and liabilities contracted before he/she ceases to be a member.

15. Related party transactions

Included within incoming resources is an amount of $48,888 (2022 - $41,334) which was donated by the trustee / close family member of the trustee.

ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales - Charity number 1122750

Accounts

Registered number: 06429421
Charity number: 1122750

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2022

LUBBOCK FINE LLP
Chartered Accountants
Paternoster House
65 St Paul's Churchyard
London EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

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ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

(A Company Limited by Guarantee)

REFERENCE AND ADMINISTRATIVE DETAILS OF THE CHARITY, ITS TRUSTEES AND ADVISERS

FOR THE YEAR ENDED 31 DECEMBER 2022

Trustees	Vincent Chevance
Company registered number	06429421
Charity registered number	1122750
Registered office	25 Brooks Mews London W1K 4DZ
Company secretary	Jean-Baptise Chevance
Accountants	Lubbock Fine LLP Chartered Accountants & Statutory Auditors Paternoster House 65 St Paul's Churchyard London EC4M 8AB

TRUSTEE'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2022

The Trustee presents the annual report, which includes the directors report, together with the financial statements of the Archaeology and Development Foundation for the period from 1 January 2022 to 31 December 2022. The Trustee confirms that the Annual Report and financial statements of the Charity comply with the current statutory requirements, the requirements of the Charity's governing document and the provisions of the Statement of Recommended Practice (SORP), applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

Since the company qualifies as small under section 383, the strategic report required of medium and large companies under The Companies Act 2006 (Strategic Report and Director's Report) Regulations 2013 is not required.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Archaeology and Development Foundation is a company, incorporated on 16 November 2007, governed by its Memorandum and Articles of Association. It registered as a charity with the Charity Commission for England & Wales on 12 February 2008.

New Trustees are appointed by the members. The Trustees may appoint a person who is willing to act to be a Trustee, either to fill a vacancy or as an additional trustee.

New Trustees are briefed on their legal obligation under charity and company law, the content of the Memorandum and Articles of Association, the committee and decision making processes, the business plan and recent financial performance of the charity.

In setting the objectives and planning the activity of the charity, the Trustees have given careful consideration to the Charity Commission's general guidance on public benefit.

OBJECTIVES AND ACTIVITIES

The objectives of the charitable company as set out in the governing document are:

The Archaeology and Development Foundation has been undertaking archaeological research in Phnom Kulen since 2008. One of the objectives is to understand the extent of this first capital as well as to define the various settlements during the period of time, from pre angkorian period to the post angkorian period. Working in close collaboration with the APSARA National Authority (National Authority in charge of Angkor region), the Ministry of Environment and other institutional partners, ADF is the main institution working on both development and archaeology in Phnom Kulen.

ADF is also disseminating the archaeological knowledge of the findings. Reports and conferences are regularly given and specific publications on archaeological research are also published in specialised review.

Historically, geographically and from a hydrologic point of view, Phnom Kulen is very closely linked with Angkor World heritage site. The Royal Government of Cambodia has registered Phnom Kulen on the indicative list of the world heritage site, and ADF is working closely with UNESCO and APSARA to move toward the recognition of this site and to meet the standards of a world heritage site.

Additionally, ADF is strongly collaborating with the Ministry of Environment, in charge of the Phnom Kulen National Park, for the management of the protected areas. Others activities in the environmental protection field are implemented such as reforestation, environmental awareness campaigns, demarcation of protected areas, training and supporting to ranger patrols in the National Park, mapping etc.

Conservation and protection of the sites

In the post war years (1990's) Cambodia suffered from endless looting. It is well known that archaeological site protection goes hand in hand with an increased local awareness that arises as a result of research and conservation programmes.

The Phnom Kulen programme is providing APSARA Authority a better knowledge of the archaeological value of the plateau, in order to extend its activities on the Phnom Kulen. ADF is also helping the Ministry of Environment by providing information relative to protected area, forest cover, and illegal activities (encroaching, illegal logging etc).

The programme is also helping to define demining areas and specific archaeological protected areas. The regular cleaning of vegetation and the maintenance of the monuments can then occur. Curators and guards/workers have been appointed by APSARA in order to follow up this initiative. The Archaeology and Development Foundation is providing APSARA advice and expertise to improve the management of the sites in terms of conservation and tourism management. ADF has regularly asked APSARA to increase the human and technical resources, to fulfil these missions. For the last years, the Archaeology and Development Foundation is also sponsoring the activities from the APSARA Stone Conservation Unit (transports, salaries, materials) to restore the sandstone artefacts and bas reliefs discovered during the excavations.

Training of Khmer specialists

One of the long term outcomes of this project is the training of Cambodian specialists, in providing them with knowledge, expertise and know how to preserve these sites.

This project provides an opportunity to train the young Khmer specialists on specific search processes. All stages of the archaeological research process, beginning at the preparation phases then field work phases (prospecting to diagnostic trenches or open area excavations, conservation of monuments, inventories) all the way through to annual and final report and publication, is done working closely with ADF and APSARA archaeologists. The project also provides young students graduated from the Royal University of Fine Arts, faculty of archaeology, with their first fieldwork experience.

ADF also provide regular training to the Provincial Department of Environment of Siem Reap staff and the rangers in charge of the Phnom Kulen National Park.

Economic and social impact on local populations

Cambodia has been devastated by civil wars which were fought from 1970 through to the 1990's; this period saw one of the largest genocides in the world which killed between 1.7 to 2 million people. Fighting, aerial bombardments and minefields had a significant impact on the lives of three generations.

Phnom Kulen region was the scene of violent fighting between Khmer Rouge and government troops; the consequences are still evident today. It was one of the last Khmer Rouge strongholds to surrender in 1996.

This project is providing jobs to seasonal workers and, consecutively, full time activity to guards and specialised workers. In providing the villagers with heritage and conservation knowledge it is helping to prevent further looting and is creating a safe archaeological zone by initiating a land mine removal programme and archaeological protected areas.

An important effort is also done towards the villagers from the Phnom Kulen region for food security/nutritional health, medical and health support, hygiene and sanitation (particularly in primary schools), alternative livelihood generating incomes, as well as environmental education and protection.

These initiatives have an important impact on the social and economic development of Phnom Kulen and especially improve the level of education and health care of the inhabitants.

FINANCIAL REVIEW

Income for the year ended 31 December 2022 was $110,434 with expenditure totalling $140,118. At the year end, the charity was holding restricted reserves of $41,968 and the unrestricted reserves were in a deficit position of $29,891.

As the Charitable company has minimal fixed costs its policy is to hold approximately $5,000 in reserves in order to use as much of the funds received each year for charitable purposes. The Trustee will continue to work to bring reserves to this the target level. In the meantime, ongoing financial support will be provided by the Trustee.

PLANS FOR FUTURE PERIODS

For the archaeological activities (maintenance and conservation program), there is no plan to coordinate demining operations in 2023 by CMAC teams. However, and if the budget and work plan allow it, ADF will decide if excavations are possible in 2023. If possible, it would most probably take place on a site already secured over the previous years.

ADF will continue to maintain a regular coordination with APSARA National Authority and provide assistance and advices for a better heritage management of the archaeological sites in Phnom Kulen. This involves advices for the general maintenance of the sites and the control of the Archaeological Protected Areas. ADF will continue to encourage APSARA to increase the material resources for these tasks. ADF will provide any recent and old documentation on archaeological sites to be restored by APSARA in 2022.

For the Kbal Spean and 1000 linga sites, the ADF team will intend to finalize the signboards and with their text and submit them to APSARA, so information panels can be edited and set up by ADF and APSARA, providing APSARA a better tool to manage this area and a better knowledge of the site for the public. The maps and their study will also be published in a specialised review in 2023 or 2024.

In the restoration field, only small sandstone fragments from previous archaeological campaigns will require complementary restoration in 2019. As our requests from 2018 to 2019 were left unanswered, ADF will have to ask again if this small operation can be done.

ADF will continue to encourage the Cambodian authorities (APSARA National Authority, Ministry of Environment, Provincial Authorities) to officially recognise the Archaeological Protected Areas and to allocate more resources for their effective protection, within the PKNP zoning process. ADF will encourage APSARA to maintain the posts and their signs all around each CPA.

The archaeological research, diffusion, communication and training will continue. ADF team will also participate in two publications in the volume dedicated to the Angkorian World, published by Routledge. ADF will also intend to finalise the publication about the 1000 linga and Kbal Spean sites with the most recent maps of these two sites, on Prasat Rong Chen mountain-temple and on the earth mounds fields, discovered thanks to the Lidar and excavated by ADF and APSARA in 2013. Further studies and analysis from previous excavations archaeological samples and artefacts could also be undertaken such as ceramic or roof tiles studies, charcoal analysis for radiocarbon dating and tree identification, or phytolyth analysis.

The continuation of our collaboration with EFEO/Dharma project and APSARA will allow additional surveys for the recording, rubbing and studies of unregistered ancient inscriptions in Phnom Kulen. Additional surveys to check specific archaeological features will also be undertaken in partnership with EFEO.

In 2023, ADF could also continue various photogrammetric acquisitions in Phnom Kulen, in collaboration with APSARA National Authority. Previous excavations at Poeng Tbal (2009 and 2012) and Poeng Eisei (2020) allowed a publication about the rock shelters sites in Phnom Kulen. ADF will continue to complete the surveys of a maximum of these sites over the years, to complete their documentation and the general archaeological map of Phnom Kulen.

ADF will also continue working with the Ministry of Fine Arts and Culture of Cambodia to gather previous documentation and submit reports on artefacts that appeared to be left on site before the Cambodian civil war and reappeared in private or public collections later on. It will allow the Cambodian government to claim the repatriation of these artefacts, strengthening the dynamic started a few years ago. ADF aims to write one report per artefact coming from Phnom Kulen and reappearing in these collections.

In term of communication and collaboration with APSARA, UNESCO, UNDP and MoE, ADF will continue to participate to the ICC meetings (in January, June and December 2021), APSARA meetings, MoE and UNDP meetings and all events related to the Action Plan and the Phnom Kulen Management Program, and any other project related to PKNP.

The ADF Facebook page as well as ADF website will continue to be regularly updated with pictures from our various operations, to share our actions and inform our donors and partners. An ADF Instagram account will be set up.

Regarding the development activities, the main components will continue to be reinforced and adapted, according to their results.

In ADF's operational year 2023, ADF Income Generation (IG) team will continue to monitor and support (financially and technically) every small farming production unit: chicken and pig breeders. ADF will strongly encourage them to re-invest their profit into their micro-enterprise, in order to create sustainable models, and applying a 50% reimbursement rate to ADF. Additional beneficiaries interested in pig and chicken raising will be included.

ADF IG team will continue to develop the IG-agriculture activities in Khnong Phnom commune villages, with the AGRISUD project, proposing alternative livelihoods to more than 200 families. All IG beneficiaries will be registered and will continue to be monitored. ADF will also encourage its IG staff to attend technical training and will encourage exposure visits for the beneficiaries.

The Rice bank sub-component in Thma Chruogn village will continue to be monitored, encouraging the local population and authorities to take their ownership.

Regarding the alternative livelihoods related to tourism, ADF will continue to support and the Anlong Thom and Popel CBTC by advising and training his team, with funding from HUMY NGO to support this initiative. The objectives remain to offer tours with stronger sustainable and local impacts. The collaboration with our partner from the private sector Terre Cambodge will continue and Ms. Chhun Phirom will continue to be employed for these activities.

In 2023, the hygiene project (WISH 2) started in January 2021 for a 4-year period and targeting 4 primary schools (Popel, Khlah Khmum, Sangke Lak and Ta Penh) it will continue to address environmental, hygiene and health issues. It has encompassed the recommendations from the WISH 1 evaluation report finalised in February 2020 and the WISH 2 midterm evaluation report (December 2022) and could include an additional school.

ADF will submit a project proposal to the South-East Asian Foundation (SEAF) to implement a project (SEAF 4) supporting libraries in the primary schools of Phnom Kulen villages. The infrastructure support, English class and hygiene sessions support to the primary schools (SEAF 2) will continue with the remaining funds (SEAF 2).

ADF team will continue to work closely with the local Health Centre (Anlong Thom) to assist poor people, facing emergency situations. As per the previous years, an Emergency Relief Fund will be reserved within the ADF budget, in case of major emergency for the poorest of the people (domestic fire or accident, illness, natural disaster…).

To allow school students from Phnom Kulen a different future, ADF will establish partnerships with other NGO such as Sourire Angkor or Sala Bai school.

Finally, ADF Environmental Support will continue, as ADF is strongly committed to the environmental protection of the Phnom Kulen National Park, and as the MoE is seeking support from our organisation.

ADF will continue to contribute to the Phnom Kulen Management Plan and the Action Plan, in the framework of the Phnom Kulen working group. ADF will assist the MoE for the completion of documents and studies. ADF will continue to recommend the official recognition of the archaeological protected areas (APA). ADF will seek for donors to implement activities corresponding to the Action Plan. ADF will continue to participate to the PES studies for the PKNP, if required.

ADF will continue the dynamic initiated with the HUMY 1, 2 and 2 bis projects regarding the Popel and Anlong Thom CBTCs and CPAs and the training of its members, with the funding from HUMY (HUMY 4). ADF will continue to improve the management of the CBTCs, their related CPAs and the regular patrols in these 2 Community Protected Areas, as well as a support to the Phnom Kulen handicrafts producers.

ADF will make sure that a maximum of households is connected to the water system in Popel and that the water committee is properly functioning.

The TREE 2 project focusing on growing saplings in tree nurseries located in three primary schools should be renewed in January 2023 for a 2-year period. The continuation of the Popel tree nursery should be funded by HUMY in Popel primary school (HUMY 3).

ADF will continue to advise and assist the APSARA Authority and the MoE on large projects such as the Preah Ang Thom / waterfall area and the road project crossing the PKNP.

ADF will assist with tree-planting projects with APSARA and MoE. The continuation of the Income Generation activities and the systematic report to the relevant authority of illegal activities (ex. logging, construction, land speculation) will also contribute to assist the MoE for the protection of the National Park. The HUMY 5 project and the biodiversity surveys will provide an opportunity to report more frequently about the state of conservation of the forested areas and the illegal activities.

ADF will continue to stress Phnom Kulen National Park threat's on every level (local, national, international) and, if funded, to implement the demarcation of additional protected areas, and additional patrolling activities within the park.

ADF will be associated to the project entitled "Integrated Natural Resource Management (INRM) in the productive, natural and forested landscape of the Northern Region of Cambodia".

ADF will be associated to the project entitled "Cambodia Sustainable Landscape and Ecotourism Project (CSLEP)" a partnership project between the Ministry of Environment (MoE) and World Bank Group (WBG), working to improve protected areas management and promote ecotourism in the Cardamom Mountains-Tonle Sap landscape.

Every ADF activities will be implemented in accordance with the Khnong Phnom Commune development Plan. To do so, ADF will continue to attend the regular meetings with the local authorities.

ADF's MoU to be renewed in 2023 will be signed with the relevant authorities: APSARA Authority, Ministry of Foreign Affairs and International Cooperation.

ACHIEVEMENTS & PERFORMANCE

1. INTRODUCTION

This report presents the ADF activities in Phnom Kulen during the year 2022. They are implemented by ADF within the framework of the MoUs signed between the APSARA National Authority and the Ministry of Environment, ADF's two principal governmental partners. Other governmental bodies are also involved on a local scale such as the Health Department (Sotr Nikum), the Educational Department, the commune Council of Khnong Phnom Commune (Svay Leu District, Siem Reap Province).

This report is divided in two main parts, presenting the two axes of ADF's activities: the archaeological component and the development component.

ADF/ Phnom Kulen Program team for 2022
Administration, finance and communication officer:
- Ms. Hoeung Hourapich (ADF)

Archaeological and environmental team
- M. Sakhoeun Sakada (Part time consultant, MoE)
- M. Seng Samry (Environmental assistant)
- M. Yon Sokchea (Tree nursery Supervisor)

Development team
- Ms. Mien Mout (Income Generation Supervisor)
- Ms. Bis Chhoeurng (Income Generation field assistant)
- M. Seng Samry (Hygiene and sanitation Supervisor and house manager)
- Ms. Loem Nimul (Hygiene field assistant)
- M. Khen Savann (Hygiene field assistant), until the 1st April 2022
- Ms. Soeng Seath (Hygiene field assistant) from the 1st June 2022
- Ms. Chhun Phirom (CBTC, patrol and handicrafts supervisor, part-time)

Logistic team
- Ms. Lay Thol, guard
- Ms. Nuon Srey Nath, cook until March 2022
- Ms. Phan Lorn, cook from April to June 2022
- Ms. Loch Leach, cook from July 2022

The ADF international team in 2022:
- M. Jean-Baptiste Chevance (Archaeologist, Phnom Kulen Program Director)
- M. Dave Sandilands (ADF Development Consultant, from October 28th to December 14th 2022).

All fields' activities are implemented with local partners such as the Phnom Kulen National Park Rangers, the APSARA archaeologists and guards, the Community Protected Area members of Popel and Anlong Thom villages, the Community-based Tourism centre teams of Popel and Anlong Thom, the teachers and principals at Sangke Lak, Khlah Khmum, Anlong Thom and Ta Penh primary schools and the Anlong Thom Health Centre staff.

2. ACHIEVEMENTS AND PERFORMANCE

ARCHAEOLOGY: FIELD OPERATIONS

The 2022 archaeological activities are in continuity of the programme launched in 2008 in collaboration with the APSARA National Authority. The 2022 activities can be summarized as below.

a. MAINTENANCE AND CONSERVATION PROGRAM:

Land Mine and UXO removal program

As stated in the Memorandum of Understanding between ADF and the APSARA National Authority, and as implemented from 2008, the ADF team is selecting the sites, after approval by APSARA, and is coordinating the demining operations with the CMAC (Cambodian Mine Action Centre) teams. In the previous years, the annual demining program set up by ADF, in collaboration with CMAC and APSARA, allowed the regular clearing and the maintenance of the archaeological sites in Phnom Kulen. In addition to these demining orations related to archaeological research, ADF team reports and follows up the unexploded ordnances (UXO) founded by villagers to the local authorities.

ADF organised a land mine removal campaign in 2022, prior to the archaeological excavation at Poeng Ta Roet archaeological site (see below). ADF requested on the 16th of February 2022 the intervention of one CMAC team of five persons for a 1012 sq. meter demining operation, just in front of the Poeng Ta Roet rock shelter. The operation was achieved on the 21st of February 2022 and no mines nor UXO were found.

Assistance to the APSARA National Authority for heritage management in Phnom Kulen

ADF is continuing its assistance to APSARA for the conservation and the maintenance of the Phnom Kulen archaeological sites. This concerns the ongoing maintenance and conservation of the monuments and sites and their respective Archaeological Protected Areas (APA, 1,600 hectares).

ADF maintains a regular coordination with the APSARA deputy director, heads of departments, archaeologists, workers and guards in charge of Phnom Kulen sites, and provides assistance and advice for a better heritage management of the archaeological sites.

Restoration of sandstone, ceramic and metallic artefacts

No ceramic or metallic artefacts required restoration/conservation in 2022.

Archaeological protected areas (APA)

The main objective of the APA is to protect the immediate environment of the archaeological sites in Phnom Kulen from damaging agriculture practices, including deforestation and uncontrolled fires and erosion. The LiDAR previous campaigns (2012 and 2015) allowed identification of archaeological sites, and allowed to build awareness towards the population and the local authorities on their cultural heritage and the natural environment.

After the 2017 assessment of each zone, ADF reminded APSARA National Authority to replace the broken posts demarcating the areas and submitted a report in Khmer to APSARA on the 1st of October 2017. It summarises the number of broken (or missing) posts for each zone. A total of 45 should be replaced, as stated in APSARA-ADF MoU, signed at the end of 2017. So far, and considering the time passed since the first assessment, it should be updated and the post replaced.

After their official recognition by the APSARA, the Ministry of Environment and the provincial authorities of Siem Reap (May and June 2015), these zones still need a jurisdictional framework and a clear definition of the responsible authority. Presently, the APSARA National Authority, in charge of the archaeological sites in Siem Reap Province, manages them. Their exact status should be defined within the framework of the zoning of PKNP, implemented within the Phnom Kulen Management Plan and its Action plan. To date, this zoning is still pending and awaits its final version by the MoE.

The additional APA (799 hectares demarcated in the Phnom Kulen National Park) was implemented in 2019 within the UNDP-BESD project around the Prasat Krohom 1 and 2 temples, the dike Thnal O' Srae, and a group or earth mounds, north of Khlah Khmum village (see below, Environmental program, UNDP-BESD project). Patrols by MoE rangers are organised since by the Ministry of Environment to control this area.

In 2022, ASPARA has requested from ADF some maps regarding the Phnom Kulen archaeological sites.

ADF has provided the maps together with a report (summarised here) stressing their importance, their variety and their extension over more than 50 square Km area, in the south and central part of the plateau, as most of them correspond to the remains of the capital from the early 9th century Mahendraparvata: temples, dams, unfinished baray… The 2012 and 2015 LiDAR campaigns revealed the extent of this capital with a grid of orientated earthen dikes linking these sites, with plots aligned along them, platforms and ponds. These results were published in 2019 (Chevance and al., https://doi.org/10.15184/aqy.2019.133). Others corresponds to later occupations of the mountain such as the hermit sites (poeng, 10 to 13th century), earthen mounds, ceramic kilns (both from 10-11th century), or the sites (including 3 temples), located around Preah Ang Thom (10th to 16th century).

Some of these archaeological sites are located in the 5 Community Protected Areas (CPA) defined by FAO in 2001 and others were included in the 6 Archaeological Protected Areas (APA), demarcated by ADF and APSARA from 2011 to 2020. These APAs were established prior having the LiDAR results but were enlarged once the extent of the city grid was discovered. The objective of these APA is to protect the sites from further development, from the extension of cashew nut cultivation by conserving the forest and prevent erosion. However, due to the very large extent of the city grid, not all these sites are protected by these areas.

These zones are encompassing the main sites (mostly temples) but many of the archaeological features remain outside (earthen dikes part of the ancient city grid, ponds, platforms, mounds…) and are subjects to potential destruction when roads development are being developed.

In the framework of the new road in Phnom Kulen, or within the CSLEP project (Cambodia Sustainable Landscape and Ecotourism Project with a trek network; run by the ministry of Environment and funded by the World Bank and UNDP), ADF stressed the importance of minimizing the impacts to avoid the archaeological sites. Smaller infrastructures (gravels instead or a 2-meter-wide road) or bypasses were suggested to protect the sites and their natural environment in this National Park and potential World Heritage Site. The gravel solution implies an easier maintenance compared to cement roads, inevitably broken and washed away after a few rainy seasons.

ADF has also stressed that the importance of the two Community-based Tourism Centres (CBTCs of Anlong Thom and Popel), proposing tourism services such as daily tours and lunch packages to the archaeological sites, waterfalls and forested areas and for the benefit of the local population. The roads and treks construction would represent a risk for the CBTCs, as they could be ignored if tours go directly to the sites, without using the services of the centre.

b. ARCHAEOLOGICAL RESEARCH, DIFFUSION/COMMUNICATION AND TRAINING:

Archaeological Excavation campaign and topographical survey, archaeological research:

Photogrammetric surveys and rubbing of ancient inscriptions

Following the 2021 photogrammetric surveys of Srah Damrei, Poeng Eisei, Poeng Tbal and Prasat Damrei Krap (see ADF 2021 report) and within the excavation operation at **Poeng Ta Roet**, ADF requested the authorisation to undertake photogrammetric acquisition on this site, in collaboration with APSARA National Authority.

As in 2021, the surveys (pictures taken by camera and drones) and the 3D model were done by Mr. Nicolas Josso, independent archaeologist and regular collaborator of the Ecole Française d'Extrême-Orient (EFEO)-Siem Reap center. He was assisted by Mr. Lounrn Leap (EFEO Siem Reap). The ADF and EFEO teams, associated with the APSARA team were involved in the organization of the work for the transportation of the equipment and for the clearing of the small vegetation, in some cases necessary for a proper acquisition of the pictures. The complementary topographical surveys to localize the targets were done by Mr. Leng Sathya (APSARA).

The pictures were taken in April 2022, at the end of the excavations, to provide a maximum information of the features discovered. The treatment of these images was done during the following months by Mr. N. Josso.

The various equipment used for the photogrammetry surveys were a digital camera (Fujifilm XT-4 with a 23 mm lens), a drone (DJI Mavic Air 2) and a laptop computer (MSI 17', Intel i9, RTX 3080, RAM 64Go). A Total Station (Zeiss) with coded targets, generated Agisoft Metashape were used for the topographical surveys. The data obtained (pictures and topographical files) were processed in the Agisoft Metashape 1.7 photogrammetry software. The final documents produced are with the following formats: .psz, .dae. An overview of these files is available on the Sketchfab website, with several links.

Once all models will be finalised, ADF will communicate during the year 2023 on the 2021 and 2022 photogrammetry campaigns, with some of its results shared through a selection of SketchFab links on ADF Facebook page. Some preliminary results were presented at the ICC session in December 2022.

The rubbing of the known and discovered inscriptions at Poeng Ta Roet were done during the excavations on site (for the in-situ one: K.172) or at the EFEO office by Ms. Chloé Chollet, PhD candidate at the École Pratique des Hautes Études (EPHE)-PSL/EFEO and member of the DHARMA project, and the Corpus des Inscriptions Khmères {CIK} project (see below).

On the famous site of the **Kbal Spean** carved riverbed, ADF and the EFEO-DHARMA project organised a field mission on the 21st of May 2022 to undertake photogrammetry and rubbing of the inscriptions.

Along the last years, ADF has been collaborating with APSARA and various EFEO projects (Corpus des Inscriptions Khmères {CIK}, DHARMA, and Yaśodharāśrama) when discovering undocumented inscriptions. Additionally and since 2018, ADF has been partnering with EFEO teams and particularly Ms. Chollet, for the surveys of numerous hermit rock shelters in Phnom Kulen. It was therefore logical that this operation of photogrammetry and rubbing would involve Ms. Chollet, in the framework of her PhD thesis, focusing on the eremitical tradition of ancient Cambodia (6th - 15th century).

The work was completed in one day by Dr. Adeline Levivier (Data Visual Manager, DHARMA Project/EFEO), Ms. Chloé Chollet and Dr. JB Chevance, Archaeologist, Program Director, Archaeology and Development Foundation (ADF), Phnom Kulen Program. Additional observations of the bas-relief's iconography were done by Dr. Sophie Biard, Institut d'Asie Orientale (IAO).
The equipment used was: 1 camera Nikon D750, 1 lens AF-S NIKKOR 24-70 mm f/2.8G ED, 1 tripod K&F Concept + mini tripod, led video lights (x2) and flash (x1), wireless remote for pictures and paper, ink and brushes for the rubbings.

As for Poeng Ta Roet, this field work at Kbal Spean falls under the framework of ADF's studies of Phnom Kulen rock shelters where hermits settled and left bas-reliefs, inscriptions and traces of wooden architecture (10th to 12th century). It was following ADF's recent excavations in Pœng Ta Roet (2022, in collaboration with APSARA and EFEO-DHARMA project, see below) and the previous ones in Pœng Tbal and Pœng Eisei (2009, 2010 and 2012), two other sites corresponding to this important tradition in Phnom Kulen.

Overall, the objective of this mission was to better document and localise the inscriptions, bas-relief and other archaeological evidences at Kbal Spean, in the framework of the angkorian hermit studies.

Kbal Spean inscriptions were registered after their discovery in 1968 by Jean Boulbet, following the indication of the hermit Tep Mey. Kbal Spean has been described in several publications by Jean Boulbet (Boulbet 1970, Boulbet-Dagens 1973, Boulbet 1984). These 10 inscriptions, published in 1999 by Claude Jacques (1999, pp.357-374), indicate the presence of hermits, the visit of the King Udayadityavarman II and more generally illustrate the importance that this site took during the angkorian period, (from the 10th to 12th century). However, some of them have gaps in their reading and their understanding could be enhanced by a 3D model.

Five other inscriptions were discovered later by Mr Chhay Rachana in 2003, within his masters degree, but their location and documentation were not published in details (Chhay R, 2004) and they were not registered in the CIK. Four others were recorded since, bringing the total of inscriptions at Kbal Spean to 19. A complementary photographic coverage and rubbings for these unpublished inscriptions was therefore necessary.

Kbal Spean, as well as 1000 linga on Phnom Kulen plateau, was very precisely mapped by ADF team from 2009 to 2015 to better understand these sites and improve their management. The objective of this mission was also to localise precisely every inscription on the draft map of Kbal Spean. We also took this opportunity to better document and localise on ADF map the artefacts (pedestals, fragments of sculptures…) and other archaeological evidences (carved marks, post holes…). Finally, Kbal Spean, as in the 1000 linga site of Phnom Kulen, is presenting numerous bas-reliefs carved on a river bed and surroundings rocks. Further observations could also be done on Kbal Spean's iconography and be later compared with other bas-reliefs from similar eremitical context in Phnom Kulen and Cambodia.

This upgraded documentation would allow a better understanding of the iconography of Kbal Spean, and more generally a better knowledge of its occupation.

Further work is needed to read and translate the recorded inscriptions as well as the previously known. The general map of the site will be updated with the location of the inscriptions, artefacts and other archaeological evidences. ADF will, in coordination with APSARA, set up information signboards at Kbal Spean and at the 1000 linga site for a better information to the visitors and an enhanced management of the site, and to publish these results and maps.

Excavations

ADF archaeological research is focusing on the ancient settlements in Phnom Kulen and one of its main's objectives is to better define them, from the early capital of Mahendraparvata (late 8th-early 9th century) to later ones during the angkorian and post- angkorian periods. Among the most important sites of these periods are the rock shelters where hermits settled and sometimes left bas-reliefs, inscriptions and traces of wooden architecture (10th to 12th century). Simultaneously to ADF excavations in Pœng Tbal and Pœng Eisei (2009, 2010 and 2012), two sites corresponding to this important tradition in Phnom Kulen, ADF team surveyed a maximum of these sites over the years, to complete their inventory, documentation and the general archaeological map of Phnom Kulen. Some of these results were published in 2015, in the journal Aséanie, dated from 2013 (« Pœng Tbal et Pœng Eisei, ermitages angkoriens méconnus du Phnom Kulen », Aséanie 32, Décembre 2013, p. 11-76). These excavations, the first undertook in Cambodia for these types of sites, indicated their dates and revealed their importance with their associated wooden architecture and hydraulic associated features, with ponds collection water directly from the sources. Numerous artefacts were also unearthed, including an important volume of ceramic sherds. Their function was also enlarged to pilgrim sites, and, eventually, meditation centres and a funerary use.

From April to June 2021 and to strengthen this dynamic and complete the documentation of these sites by obtaining detailed 3 D models, ADF proceeded to photogrammetric surveys in Srah Damrei, Poeng Eisei and Poeng Tbal.

In the same perspective, ADF team signed an agreement with the EFEO to undertake a common excavation at the Poeng Ta Roet rock shelter site, located on the eastern slope of Phnom Kulen, entirely funded by EFEO. ADF provided it experience of this field, the housing for the team in ADF house in Anlong Thom village, its network of relation to set up a team of workers and to get the official authorisation for the demining operation and the excavation.

Along the last years, ADF has been collaborating with APSARA and various EFEO projects (Dharma, CIK and Yaśodharāśrama) when discovering undocumented inscriptions such as in Prasat O Top and Prasat Phnom Sruoch and more recently, in hermit sites of Wat Chas (located just above Pœng Ta Roet) in 2010 {K.1324} and 2019 {K.1342, K.1392, K.1393}), Srah Damrei (K.1327, K.1452.1, K.1452.2) and Phnom Aksar (K.1509) in 2020. Recent surveys done by ADF and EFEO teams have identified a previously photographed inscription from Pœng Ta Roet (archive files from Boulbet EFEO BOU01660 et BOU01878.1) which was missing but recorded under the number K.1323.

Additionally and since 2018, ADF has been partnering with EFEO teams and particularly Ms. Chloé Chollet, PhD candidate at the École Pratique des Hautes Études (EPHE)-PSL/EFEO and member of the Dharma project, for surveys of numerous hermit rock shelters in Phnom Kulen. It is therefore logical that these excavations would involve Ms. Chloé Chollet, in the framework of her PhD thesis, as well as Dr. Dominique Soutif, as supervisor of Ms. Chollet PhD candidate and head of the APSARA-EFEO Yaśodharāśrama archaeological mission and CIK project.

In the framework of the angkorian hermit studies, Pœng Ta Roet site is particularly interesting as it presents a rare iconography (with Sadāśiva and Śiva {?} bas-relief, also present at Pœng Tbal and mentioned in the K.1269 inscription) and an inscription (K.172) mentioning that the hermit named Dharmavasa built a pond and might have received pilgrims. It was published by George Cœdès in 1911 (BEFEO, p. 398-400) and dated then, thanks to the palaeography, from the mid-11th century (late 10th century śaka). Years later in 1966 (Inscriptions du Cambodge, VIII, p.103), probably

reviewing the inscription's rubbing, Cœdès proposed an earlier date corresponding to the 9th century śaka, which would, if this last dating were retained, constitute the oldest inscription of the Phnom Kulen massif, and would make Poeng Ta Roet one of the oldest rock shelters built during the Angkorian period.

The iconography of Pœng Ta Roet is consistent with that encountered on the other rock sites of the massif, dated by inscriptions or by our archaeological operations. Sadāśiva and Śiva bas-relief is surrounded by a roughly sketched, but nonetheless identifiable frieze of the nine deities on their mounts (to their left) and at least five or more likely seven rsi figures to the right. The bas-relief has suffered from rock collapse and recent looting and archive photographs (EFEO archive files from Parmentier, Boulbet) are a valuable resource for identifying these remains and associated sculptures and bas-reliefs previously located on this site and later stolen.

However, the approximation of palaeographic and stylistic criteria alone did not allow ADF to date the occupation of a site with precision. Only excavations could provide more input whereas the dates of this settlement, the length of its occupation and to confirm its function. They could also allow to identify the features associated with the bas-relief such as the pond mentioned in the K.172 inscription and eventually traces of wooden architecture. The site presented, prior to the excavations, at least two pedestals and two fragments of a sandstone tank.

During these excavations, the photogrammetry of Pœng Ta Roet was undertaken by Mr Nicolas Josso (see above) and completed the work started by ADF in 2021 with the photogrammetry of Srah Damrei, Pœng Eisei and Pœng Tbal.

Prior to the demining operation, the site was covered by small vegetation. In order to understand the general topography of the site and to work properly, the team completed the clearing of the grass, bushes and small trees. The excavation took place during 4 weeks, from the 14th of March to the 8th of April 2022. At the end of the campaign from the 7th to the 23rd of May 2022, the trenches were filled.

Once the authorisation was granted by APSARA and the MoE, and as every campaign, ADF and EFEO employed about 30 local workers, from the Phnom Kulen villages (Khnong Phnom commune), to open manually these areas, under the supervision of our national and international staff, as well as one APSARA archaeologist (as stated in ADF-APSARA MoU, article 2.2.4), Mr. Ngin Sarun, in charge of Phnom Kulen archaeological sites. The topographical survey was done by Mr. Leng Sathya (APSARA).

The excavation was conceived as an archaeological diagnostic, opening manually 6 trenches close to the rock shelter, bas relief and the source, as well as a few meters away on the slope. They cover a total surface of 1694 square meters. The LiDAR data did not provide clear information about any pond. The trenches stratigraphy allowed to understand the settlement of the site, its spatial use and its abandonment. Ceramic sherds, charcoals and soils samples were collected for studies and analysis.

A ceramic study was done ("Etude céramique de Poeng Ta Roet", 22 pages) by Ms HONG Raneth and Chloé Chollet in May and June 2002. It presents the detailed results of the analysis of the 5466 ceramic sherds unearthed with 0,8% of importation, 3,2% of glazed stoneware, 2,3% of non-glazed stoneware and 93,8% of earthenware and confirms that the site was used from the 10th to the 13th century at least.

A complementary rubbing of the K.172 inscription allowed to record it entirely as a line was omitted in the first one. Several other inscriptions were discovered (K.1574) or rediscovered (previously photographed inscriptions K.1323 and K.1569) and registered. Several sandstone fragments of sculptures and bas-relief were also discovered. For these last ones, they correspond in some cases to bas-relief still on site or previously photographed but looted since. 1 grinding table, 4 pedestals (in several fragments), 3 sandstone basins and 3 deposit stones were accounted. In some cases,

they were kept in situ (for the pedestals for example) or collected, depending on their size and significance. Some sandstone restoration could also be considered in the future, with the Stone Conservation Unit from APSARA.

A complete excavation report was started after the excavation by Ms Chloé Chollet, under the supervision of Dr. Dominique Soutif and Dr. JB Chevance. It will be finalised in 2023.

Specialised studies
In May 2022, the ADF director transmitted to the Ministry of Culture and Fine Arts a report entitled "Visnu CA3442 A-B-C, Une œuvre disparue des collections nationales cambodgiennes", co-written by Ms. Sophie Biard and Mr. Chea Socheat. This sculpture was originally placed in Prasat Pram in Phnom Kulen and looted in 1970's in Phnom Penh. It has reappeared at a Sotheby's sale on the 14th of November 1988 in London. This report traces all information gathered from its discovery to its disappearance, to facilitate its repatriation from the infamous Douglas Latchford collection.

ADF previous excavations (from 2008 to 2018) provided numerous data. They constitute an ongoing database for ongoing studies and future publications about these sites. More specialised studies with artefacts excavated from these campaigns will be undertaken in the coming years with ceramics and radiocarbon studies.

Diffusion of the archaeological research and communication:

Publications
As in 2021, ADF director has participated during the year 2022 to two other general articles to be published in a large volume on Angkor, by Routledge editor in 2023. For the next publications, ADF team is focusing on the Kbal Spean and the 1000 linga site (with additional survey in rock shelter and hermits' sites from Phnom Kulen), Rong Chen mountain temple and the ancient mound fields.

Communications
On the 24th and 25th of March 2022, ADF director assisted to the 35th technical session and to the 28th plenary session of the International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor. As every year, ADF team presented its activity and perspectives reports for ICC-Angkor at the 36th technical session on the 15th of December 2022.

Prior to this intervention, on 12th of December 2022, ADF led the UNESCO Adhoc Development experts from the ICC-Angkor to Phnom Kulen. ADF team presented the progresses made on the Agro-ecology /alternative livelihoods project, implemented in partnership with AGRISUD International since 2019 (IADA project, animal raising, spices and fruit tree farmers, group of transformers and commercialisation of the products). ADF also presented the Community-based Tourism centres (CBTC) of Anlong Thom and Popel, set up by ADF. ADF joined the visit on the 13th of December where representatives from the APSARA National Authority and the Ministry of Environment respectively presented the progress report on the Phnom Kulen road construction and the Ecotourism Infrastructures and Facility Improvement Projects in Preah Ang Thom and in Phnom Hop area. The UNESCO Adhoc Development experts made 4 important recommendations concerning the above projects, following this visit.

For the 30 years anniversary of Angkor registration on the World Heritage list by UNESCO, ADF has produced a short report for APSARA in May 2022 and a large signboard summarizing "15 years of achievements in Phnom Kulen" in November 2022. It was exposed for several weeks in front of Angkor Wat.

On the 3rd of June 2022, ADF Director presented to Cambodian Leadership Learning Community, initiated by the South East Asian Foundation a presentation entitled "Adapt to the situation of a community and design a corresponding and needed project".

On the 24th of June 2022, ADF Director presented at the Royal University of Fine Arts (RUFA), faculty of archaeology in Phnom Penh, a communication entitled "Phnom Kulen and its ancient occupations throughout previous and recent researches".

On the 25th of November 2022, ADF Director presented a half day lecture for the APSARA vocational training program 2022 – 2024 (Module 3), organised by GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit, German international development cooperation agency).

For the celebration of the 30 years reopening of the EFEO Centre in Siem Reap (1992-2022) and the associated workshop ("research and training") on the 12th and 13th of December 2022, Ms. HOEUNG Hourapich, ADF Administrative, finance and communication Officer presented a communication entitled "ADF archaeological activities in Phnom Kulen, 2008-2022: Research, Conservation and Training".

ADF team regularly update our website (www.adfkulen.org) and our Facebook page where the last pictures and summarised texts of our main activities are shared (www.facebook.com/adfkulen).

Documentaries
From the 27th to 29th April, ADF Director participated together with Ms. Chloé Chollet (PhD candidate at the École Pratique des Hautes Études (EPHE)-PSL/EFEO and member of the DHARMA project, and the Corpus des Inscriptions Khmères {CIK} project), to a documentary, produced by Bright Button Productions Ltd. (UK), a 60' documentary for Channel 4 to be broadcasted in late 2023.

In November 2022, ADF Director participated to the shooting of a promotional documentary about the IADA project, implemented in partnership with AGRISUD International since 2019, which will be shared on social media in 2023.

Training of Cambodian archaeologists

There is a close collaboration between the APSARA Authority and ADF archaeologists. It provides a platform for field training to the APSARA local staff (archaeologist and local workers) during all activities (excavations, surveys, APA surveys and management, site management…).

The 2022 field activities associated the APSARA archaeologist (Mr. Ngin Sarun) to the photogrammetric surveys and excavations in Poeng Ta Roet (see above). He has been closely associated to this campaign for the excavation strategy, the workers supervision and the data recording and analysis, enhancing his technical knowledge. Additionally, Mr. Nhem Sarith, a graduate student from the RUFA in 2019, faculty of archaeology, has benefitted from an internship during the in Poeng Ta Roet excavations.

DEVELOPMENT: FIELD OPERATIONS

Overview:
Since its conception, ADF has closely linked the two main components of its action, archaeology and development. The population of Phnom Kulen, beneficiaries of the development activities, particularly suffered from the darkest chapter in Cambodia history and civil war, since this area was a Khmer Rouge stronghold in the early 1970's and until 1997. The side effects are still tangible today with little public infrastructures, difficult access to education, healthcare, nutrition and sanitation facilities, difficulties to bring products to market, low resources from the governmental bodies (Health dpt, Education dpt, Police, Ministry of Environment…).

Some of the schools are facing an important turn over as qualified teachers are reluctant to work in Khnong Phnom commune, and facilities are poor as compared to other communes in Siem Reap province. This results in inadequate education for the children rendering yet another generation that is very likely to fall into the poverty. There is only one secondary school and one health centre for nine villages of the commune (Khnong Phnom, 4,926 inhabitants in December 2022).

For a significant percentage of this population, peace and stability is enough and they don't see the need for further change and development. Breaking the poverty cycle in any context is challenging. For this population located on a plateau with a difficult access to some of the villages, it is even more problematic. A proportion of the population in Khnong Phnom commune live in extreme poverty or poverty, surviving on 'day to day' bases. Others are now wealthier thanks to the illegal cultivation of cashew nuts.

Seasonal food shortages continually affect some of the population of Phnom Kulen. The ramifications of food shortages are numerous, the most notable being family health and wellbeing. Sickness exacerbates the multitude of issues that poor families have to endure, further interning them into the poverty cycle. A proportion of the poorest population is suffering from the lack of liquid assets. They are subsistent farmers and have little to no money to buy the necessities: soap for hygiene, fundamental household materials, or material to build or fix their dwellings...

However, the new road being built from Svay Leu to the checkpoint on the west side of Kulen is now changing this general dynamic. The southern villages of Anlong Thom, Thma Chruogn and Ta Penh are now accessible by car. Tourist (national or foreigners) can now visit these villages and the archaeological sites nearby. The C-19 pandemic halted all international tourism in Cambodia but international tourism slowly started again in 2022 and many Cambodians are now able to travel to national parks and sites in their country. In December 2022, the section of this new road from Svay Leu to Preah Ang Thom was achieved but not the western section, controlled by a private company who benefits from a tourism concession. This second section, from Preah Ang Thom to the western checkpoint of the park will start in a second phase. The northern villages (Popel, Khlah Khmum and Sangke Lak) remain isolated with very difficult access road.

Other government bodies, for example the Ministry of Environment (MoE) and the police, have limited resource. The result is a lack of law enforcement, illegal logging, poaching, illegal building, a general depletion of the environmental natural resources; which are having serious consequences for the water of Angkor Park and Siem Reap town, as Phnom Kulen is the natural water tank of the region.

For the last 30 years, Phnom Kulen National Park faced a very important deforestation mostly due to the slash and burnt practice, combined with the illegal cultivation of cashew nut. Illegal logging of large trees and hunting are still observed. However, and for the last few years, ranger patrols have been more active and these practices have reduced, at least in the southern part of the plateau, where the population is concentrated.

Under the development program, ADF has set up four main components to address these issues: 1) Income Generation/alternative livelihoods, 2) Hygiene and sanitation/Emergency Relief, 3) Educational support, and 4) Environmental component.

They are all tailored-made to the Kulen problematic and are implemented in coordination with the Khnong Phnom Commune Development plan, the Ministry of Environment and the APSARA Authority.

The 2022 activities are presented below.

c. INCOME GENERATION (IG)/ALTERNATIVE LIVELIHOOD PROGRAM

This component falls under the IADA 2 project, implemented since 2019 in partnership with Agrisud-International NGO, in the Khnong Phnom commune. The donor for ADF's contribution was Terre Cambodge travel agency until April 2022. While the IADA 2 project was extended for 3 more years from May 2022 (with the IADA 3 project) by Agrisud, ADF secured funds from the South East Asia Foundation for the extension of our contribution, with a project entitled ALIVE ("Alternative Livelihood for villagers in PKNP"). The following reports presents the results from May 2022 to May 2023.

The new Memorandum of Understanding (MoU) between ADF and Agrisud international was signed on the 15th of July 2022 for the length of this 3 years project.

Animal raising alternative livelihood project

The objective remains the same as the previous years: to enhance and develop alternative income generation activities, with the purpose of encouraging the Phnom Kulen population to move away from their current unsustainable, illegal and destructive practices (mono-culture of cashew nuts and slash-and-burn) to sustainable and environmentally friendly income generation activities. Even though this practice in forbidden by the MoE since 2019, this activity represents the main alternative option on Kulen plateau. As behaviour change is a process taking time, this component has to aim towards positive examples and repetition. It is therefore one the most challenging component of ADF within the development component.

Reminder: As for the previous years (since 2010), ADF continued in 2022 the support to local communities and villagers from Khnong Phnom commune. ADF propose technical assistance and materials for the families to undertake animal raising (chicken and pig). This was completed by families reached by the other related project started in 2019 (ADF/ AGRISUD project; see 2021 report and below).

In 2022, ADF IG team continued to monitor these animal raisers and their incomes, and provided material if needed (piglets and chicks, nets, nails, cement, bricks, water tanks and feeding tanks). ADF also invited veterinarians (From the Agriculture Dpt, Svay Leu District) to monitor pig farmers and to vaccinate the animals 3 times for each farmer.

With the objective to transform these producers into independent local entrepreneurs, ADF encouraged them to contribute with their incomes to the costs. This allows taking ownership for their business, ensuring sustainable alternative incomes. Beneficiaries were previously asked to repay back to ADF's IG accounts 50% of the amount spent for the materials and equipment they received from ADF. From January 2019 to December 2020, ADF applied the 75% rate for the reimbursements, to encourage the beneficiaries to be responsible. As in 2021, ADF collected in 2022 these reimbursements on a 50% rate again as most of farmers had difficulties to pay back a higher rate. They were collected from pig farmers, rice bank and mushroom producers. This last activity was stopped being supported by ADF in 2018, but some of the previous beneficiaries still had to reimburse ADF. In 2022, they cleared their debt entirely, and it was reused for the IG program.

Pig Raising Activity:

This activity has been ongoing for a few years now, as part as ADF's core alternative livelihood component. Due to its popularity, and additional funds from UNDP in 2019, we have now 2 groups. The ADF team is following up their raising activity, making sure the conditions are favourable (hygiene, health, food…). When budget is available, additional households is being proposed this activity, such as with the SEAF 3P funding (piglet package) of 2500 US$, received on the 12th of January 2022, for 10 new families from various village (see below). This project was achieved in December 2022.

As in May 2023, the first group of pig raisers had 17 families over 4 villages: 3 in Sangle Lak, 5 in Popel, 1 in Ta Penh and 8 in Khlah Khmum village. As in May 2023, the second group (initially funded by UNDP and of 29 pig raisers (23 in Khlah Khmum village and 6 in Anlong Thom village), has dropped progressively from 29 in 2021, 23 in February 2022, 18 in May 2022, 19 in August 2022, 17 in October 2022, to 15 in February 2023, and to 13 families in May 2023 (11 in Khlah Khmum village and 2 in Anlong Thom village). This was mostly due to an epidemy in the villages, the lack vision on the long term, and the lack of financial resources from these villagers (cf. below). The total of pig raisers from both groups in May 2023 is therefore 30 families.

Among these groups, there were the following issues in May 2023: one farmer has let without notice (Mr. Soeum Ya from Sangke Lak), another one wanted to stop (Mr. Deb Tim from Sangke Lak), or had issue with a pig dying (Mr. Reth Reach from Ta Penh and Ms. Norn Heal in Popel).

On June 15th 2022, the team recruited 14 more pig raisers, including 3 families in Sangke Lak village, 6 families in Khlah Khmum, 5 families in Popel. Each family received 1 piglet and material to build the shelter and take care of the pig (4 bags of cement, 500 bricks, 1 water tank, water equipment for pig, 2 meters hose). In October 2022, this figure dropped to 12 families (1 in Ta Penh, 1 in Phum Thmey, 6 in Khlah Khmum, 1 in Popel, 3 in Sangke Lak). The 10 last ones were supported by the SEAF 3P 2500 US$ piglet packages. In November 22nd and 29th 2022, ADF team trained 25 farmers (including 17 females) to raise pigs (5 from Anlong Thom /2 females, 15 from Khlah Khmum /11 females, 5 from Popel/4 females).

To mitigate the risk of disease and death, ADF is cooperating regularly with the Dpt of Agriculture, from the Svay Leu District with one veterinary visiting and spraying disinfectants on the pig shelters. When family moved and/or did not built cage yet, this activity is on hold. This was implemented from April 4th to the 6th of April and the 27th and 28th of April 2023 for 23 families.

In the cases of pig dying and when ADF can ensure that it was not due the neglect of the raiser, a second pig was bought (Sangke Lak, oct 22, and should be reimbursed). In other cases, pig raisers are neglecting their pigs and the pigs died. Another general issue is to ensure that the owner of the female pig can have piglets by mating, before it is sold by its owners. Often, pig raisers in need of quick incomes tends to sell it before having piglets.

To ensure that the existing pig raisers are not giving up, the ADF team will continue in 2023 to encourage families to build cages, to organise the vet's visit and will record pig raisers expenses. It will also encourage the pig owners to have them fecundated by organising a rotation of pig male.
In 2023, the team will recruit additional farmers to raise pigs. As there was and additional budget of 10 pig packages (the SEAF 3P project) on the top of 10 new expected families for the year 1 of the ALIVE project, the ADF team could only develop 12 new farmers during this first year (10 with new pig packages and 2 with original budget).

Chicken Raising Activity:
In January 2022, there were a total of 8 families who raised chicken in 3 Villages (1 in Ta Penh, 5 in Anlong Thom and 3 in Phum Thmey) and 2 additional ones with the UNDP funds (in Khlah Khmum village). ADF monitored them and bought some material for them.

However, and over the year 2022, the chicken raisers tend to give up on this animal raising activity (1 less in Phum Thmey and in Khlah Khmum in August 2022, then none in Khlah Khmum in October 2022).

In October 2022, there was still 8 families who raised chicken in 3 Village (1 in Ta Penh, 5 in Anlong Thom and 2 in Phum Thmey) but in January 2023, no more chicken raisers were continuing this activity. In Khlah Khmum it is mostly due to the neglect and lack of long-term vision of the villagers, despite the efforts of ADF team.

However, in the 3 other villages, the chicken raisers continue to raise and feed chicken by themselves. ADF only intervene when the chicken raisers ask to buy additional material and baby chicken with their own funds. It means this is a successful result as these families are financially and technically independent. ADF will keep the possibility to fund chicken raiser in 2023.

AGRISUD and ADF joint-project in Khnong Phnom Commune (IADA-2), agriculture alternative livelihood project

Reminder: The partnership between ADF and AGRISUD International started in May 2019 with a signature of a Memorandum of Understanding and the beginning of the field activities. AGRISUD International is active in Cambodia since 1995 on supporting family farms to improve their activities for a better and sustainable livelihood. The project "Agroecological and diversification family farming in peri-urban of Siem Reap Province" (IADA-2) is ongoing since May 2016 supporting 820 small agricultural family enterprises to help them increase their income and living conditions.

The concept developed with ADF and AGRISUD is to expend this project to more beneficiaries offering various alternatives to the population, adapting it to the commune of Khnong Phnom specificities, and including ADF existing direct beneficiaries.

The partnership of both organizations commenced in June 2019 with a joint rapid assessment, closely followed by an introduction and dissemination meeting in the 5 legal villages of Anlong Thom, Thma Chrougn, Ta Penh, Sangke Lak and Khlah Khmum. The main purpose of the village meetings was to explain to the existing beneficiaries and the potential new beneficiaries the partnership of ADF and AGRISUD, the benefit of the new synergy of the combined experience of both organizations, and finally the strategy for new agriculture / IG activities. The agreement between ADF and AGRISUD consists in a partnership where both organisations join their funds in the same project. ADF continues to pay for the costs of ADF IG component (salaries of both Ms. Mien Mout and Ms. Bis Cheung, their operational cost: transportation costs, monitoring / reporting costs, stationery, material for ADF beneficiaries, etc…). AGRISUD covers their staff operational costs, all material for the new 120 families, and AGRISUD staff salaries. AGRISUD benefits from ADF's extensive knowledge of Phnom Kulen National Park (PKNP), its population and their local agricultural habits, the local network of influential people and local authorities (village chief, Commune chief), the provincial authorities and the national authorities (Ministry of Environment, Provincial Department of Environment and APSARA National Authority). ADF staff gains in professionalism, learning from AGRISUD long experience in this field of agro-ecology, from the producers, to the group then to the market linkage. The beneficiaries will benefit with AGRISUD approach of organizing the farm families into groups / cooperatives, with prospective new products: black ginger, premium fruit trees and pepper. These new products have a higher value per kilogram, and markets in Siem Reap and Phnom Penh are willing to purchase them. The project aims to set up a marketing chain, from the family to the market.

From 2022, the agricultural production of family farms was strengthened and diversified. 130 new beneficiary farmers from Khnong Phnom and Banteay Srey communes were trained and supported to intensify and diversify their agroecological production system in pig raising, market gardening, spices and fruit crops. 202 farmers from Khnong Phnom commune supported in the previous phase (IADA 2) were supported, diversified and strengthened through master farmers and socio-professional organization. 332 farms in total are effectively in agroecological transition.

Black Ginger and ginger growing Activity

In February 2022, there was a total of 32 families who started growing black ginger in 2020, from 4 villages (5 families from Sangke Lak, 3 from Ta Penh, 22 from Anlong Thom and 2 from Thma Chruogn).

Additionally, there was 70 families from 5 villages who started this activity in 2019: 8 families from Sangke Lak, 9 from Ta Penh, 27 from Anlong Thom, 10 from Thma Chruogn and 16 from Khlah Khmum. The total was therefore 102 families.

The team and trainers have cooperated to monitor the farmers who grow black ginger. The results were not satisfying as the black ginger was not growing well and rotted continuously. As a result, 51 families of the 102 did not plant black ginger in 2022.

This is mostly due to the fact that the growing of black ginger is problematic as it presents rotting problems. Since 2022, the lack of market to sell the product is adding on this production problem. Soil and black ginger tests were made and alternatives sought (see below).

From October 2022, it was decided to proceed to some test by planting the black ginger in bags, to avoid contaminations (see below).

On 11th of February 2022, ADF team participated to a meeting with black ginger transformer group to discuss about how to find funds to buy black ginger from the black ginger producer group. For the 2021-2022 season, the team bought black ginger from farmers a total 1162 Kg for $ 4125.10. In February 2022, ADF team collected black ginger from 30 farmers who owe seeds from Agrisud team.

ADF team collected 120 Kg of black ginger from farmers who owed the group in 2021. ADF team collected 40.6 Kg of black ginger from farmers who owed ADF and Agrisud from 2020.

ADF team organized a meeting to select new farmers who want to plant black ginger and introduce additional techniques to MFs and trainers and farmers who participated, a total of 10 participants, 6 females. ADF team organized and prepared black ginger seeds for farmers to plant in 2022.

In April 2022, black gingers seeds bought by Agrisud from Thailand with Templation company funds was distribute to villagers (for a total of 1367.55 Kg). The results were not good as they all got rotten in December 2022.

In May 2022, the team distributed black ginger seeds to 9 families, for a total of 225 Kg. In May 2022, the team distributed ginger seeds to 11 families (from the Kulen Dry Species group), for a total of 73.5 Kg. Overall, 42 farmers have combined activities and varieties (black ginger, ginger, and fruit trees).

Overall, in 2022, only 51 farmers were able to harvest a total of 1697 Kg of black ginger. For the ginger producers (11 families), only one family was able to produce 5 Kg and all the others had their production rotten.

ADF team facilitated a truck to bring soil to Phnom Kulen, for the experimentation of planting black ginger into plastic bags, to avoid contamination and water issues. They were planted in October 2022 in 665 bags and stored at ADF house in Phnom Kulen. The results of this experimentation are looking promising, however the next harvest season in December 2023 will bring the final results.

In April and May 2022, samples of black ginger were sent to the Royal University of Agriculture in Phnom Penh for analysis to determine the lasting problem of rotting black ginger. It was found that there was a fungal disease. It was recommended to remove infected plants when detected, to improve the drainage systems to reduce water and to treat with chemical pesticide. This last solution was not selected, so these products can be classified as organics.

2 soil samples were also sent for analysis at the same university to determine their quality. Results indicates they are "strongly" to "extremely acidic".

In 2023, the working group has not yet collected the data from the farmers who grow black ginger because some farmers did not yet plant the seeds.

The ADF /Agrisud team has recruited 3 families who volunteered to grow black ginger (Mr. Sambo Vanna from Sangke Lak, 20 Kg; Ms. Hear Mao from Ta Penh, 10 Kg; and Mr. Rem Oun from Anlong Thom, 20 Kg) and to experiment some planting techniques from Thailand. The team facilitated the preparation of land for planting black ginger with 3 these families. On the 23 March 2023, ADF facilitated the purchase of fresh black ginger (300 Kg) from farmers from Phnom Kulen to sell to other dealers in Siem Reap through the Green Framers association.

From the year 2023, ADF team will encourage the 102 farmers to be more active for growing black ginger.

Pepper/Long pepper/Vanilla growing Activity
From 2020-2023, the team is now supervising 13 families growing pepper and long pepper. In 2023, the ADF team will encourage them to extend their production with additional plants. In February 2022, ADF has selected 2 families (from the group of 70 families growing black ginger) to join the group of pepper producers, with 20 poles for each of them. In February 2022, ADF has selected 3 families (from the 50 families growing fruit trees) to join the group of pepper producers, with 20 poles for each of them. In February 2022, the ADF team purchased 9 ring wells for 9 farmers who plant pepper.

In May 2022, ADF has selected 4 families (from the group of 32 families growing black ginger) to join the group of pepper producers, and 2 families (from the group of 70 black ginger producers), with 20 poles for each of them. In May 2022, the project purchased 200 pepper seedlings to distribute to farmers for planting to 5 of the 13 families. In August 2022, the ADF team distributed pepper seedlings to 9 families already growing pepper and to another new family. In October 2022, the group of pepper and long pepper producers reached 11 families. In October 2022, the ADF team facilitated to collect pepper from farmers to sell to the spice drying group. On the 9th of October 2022 the ADF team start the processing of Kulen pepper, into a semi-finished product to supply to an enterprise in Battambang. The forward-thinking mindset is that the Green Farmers Association will become a consistent supplier for the enterprise.

On April 5th 2023, ADF team facilitated the training course on pepper growing techniques and natural pesticides, with a total of 10 participants/4 females. The issues encountered in 2022 were the termites, the lack of water during dry season and the lack of care from some of the beneficiaries. In June 2023, the team plan to visit with the 13 pepper producers the Farmers' Home Association, to improve techniques of pepper growing. In 2023, the team will encourage farmers to grow more pepper and will distribute fertilizer. After planting vanilla vines in 2022 as an experiment at 1 MF house (Mr Ann Ravuth, Anlong Thom), vanilla flowers appeared in February 2023. The Agrisud and ADF teams shared vanilla breeding and caring techniques. Unfortunately, the flowers did not survive the 2023 dry and very hot season. It will be tried again in 2023 with the same MF.

Fruit Tree Growing Activity
From May 2019 until May 2023, the team has encouraged and trained 126 families to plant and grow orchards with fruit trees from 5 villages: 27 families in Sangke Lak, 24 families in Ta Penh, 22 families in Thmar Chruogn, 48 families in Anlong Thom, 5 families in Khlah Khmum.

50 families from 5 villages started in 2019 (16 from Sangke Lak, 8 from Ta Penh, 10 from Thma Chruogn, 13 from Anlong Thom, 3 from Khlah Khmum), and 6 families started in 2020 (2 from Ta Penh, 4 from Anlong Thom). In February 2022, the team and trainers observed that many fruit trees are growing well, and have asked all trainers to record all fruit trees that we have distribute in 2021. The distribution of new trees was done in two times to new fruit tree farmers, as well as to previous one who had trees to replace. Some of them were already implementing other activity (ex. black ginger) previously with the project.

On August 4th 2022, 2640 seedlings of fruit trees were distributed for replacement and start activity to 81 families, with 4 types of organic fertilizer from Agrisud office (50 bags).

From May to August 2022 took place the identification of new beneficiaries. Some of new farmers were recommended by MFs. 100 new farmers were selected in Khnong Phnom commune (70 families) and Banteay Srei commune (30 families). Farmers were exclusively interested in growing fruit trees. For Khnong Phnom commune, they are divided as follow: 11 farmers in Sangke Lak village (including 8 females), 14 families in Ta Penh (including 8 females), 12 families in Thma Chruogn (including 10 females), 31 families in Anlong Thom (including 19 females), 2 families from Khlah Khmum (including 1 female). On September 8th 2022, fruit trees seedlings and equipment

(hoes, digging tools, pruning scissors and organic fertilizer) were distributed to 70 new families identified and selected to grow fruit trees. This represents 768 coconut trees, 779 orange Pursat trees, 705 grapefruit trees, 315 lime trees, 223 lemon trees, 351 Khmer gourd trees, 112 orange trees, 10 Burmese grape trees, 4 durian trees.

From April 2022 to May 2023, the numbers of tree growers raised from 56 to 126. Generally, fruit trees distributed to farmers were coconut, orange, grapefruit, lemon, sapodilla, longan, dwarf coconut, Burmese grape and durian. As in the previous years, the new farmers were trained on planting (digging pits), weeding, fertilizing and pruning techniques. The farmers were also trained about the production costs (income, outcome, revenue and unit price calculation) and marketing (market trend, supply, demand, structuring and information). However, this will need to be reinforced as the farmers are not confident and independent yet.

From the 9th to the 12th of August 2022, ADF and Agrisud teams organised this training on fruit tree planting techniques for 31 farmers in Anlong Thom village, including 19 females. From the 16th to the 19th of August 2022, ADF and Agrisud teams organised this training on fruit trees planting techniques for 12 farmers (including 10 females) from Thma Chruogn village, and 14 farmers (including 8 females) from Ta Penh village. From the 23rd to the 26th of August 2022, ADF and Agrisud teams organised this training on fruit trees planting techniques for 11 farmers in Sangke Lak village (including 8 females), 2 farmers in Khlah Khmum village, (including 1 female).

The challenges observed during the training are that the farmers have in some case a very poor knowledge on handwriting and general knowledges of these concepts. Some farmers also joined the training late. It was therefore advised to spend time for farmers to practice with exercises and practice at home.

In October 2022, ADF team arranged more seedlings of nimtree to the 2022 new farmers. Most of the fruit trees producers are having good results with trees growing well. However, the latest recent issue during the 2023 dry season is the shortage of water for 4 Ta Penh farmers to irrigate fruits trees. Setting up a piped system from a source was too costly so the team borrowed one pump (on April 5th 2023). However, this solution was not satisfying as there was not enough water to pump. The team will have to anticipate this issue for the next dry season.

Over the entire project length, the ADF team is monitoring and providing techniques to farmers who are growing fruit trees. In 2023, the team will monitor and promote additional techniques for fruit farmers and will distribute fertilizer for fruit trees. For this activity of fruit tree growing, ADF and Agrisud will continue to follow and support these 126 farmers.

Overall and for the beneficiary in the Khnong Phnom Commune: are 30 pig raisers, 8 independent chicken raisers, 51 active black ginger farmers, 51 black ginger and ginger farmers to reactivate in 2023, 126 fruit tree farmers, 13 pepper and long pepper farmers. 42 farmers have combined activities and varieties (black ginger, ginger, and fruit trees). Numerous training sessions and weekly follow up of the farmers and animal raisers (see below).

Master Farmers (MFs) and Socio-professional organisation (SPO)
Income from agricultural activities were improved and secured for the small farmers in Khnong Phnom Commune and Banteay Srey Commune / Phnom Kulen National Park

The support for Master Farmers (MFs) and Socio-professional organisation (SPO) was provided through meetings, training technical and educational, networking workshops and visits exchanges. The number of farms monitored by MFs and SPO, among those already supported in previous projects is below target. Restrictions have indeed limited the ability to intervene. Furthermore, requests of support and follow-up have been reduced, due in part to the gradual acquisition autonomy by farms.

Data from the technical and economic monitoring of the 300 new farms make it possible to estimate the average annual income per supported production workshop. The average annual income of farms supported by the commune of Khnong Phnom (except pigs and chicken raisers): value reached= $100 / target value=$325. Khnong Phnom, market gardening workshop value reached =$0 / target value=$400/year, fruit value reached= $100 / target value=$125/year. The average annual income target for farms in Khnong commune Phnom was not achieved ($100/$325) due to poor crop results for black ginger and an overly optimistic initial estimate of potential outcomes in fruit production due to the duration of entry into production of the majority species planted.

The objectives of generating income from market gardening production in the area of Khnong Phnom have not been reached due to the technical difficulties encountered in the production of black ginger. The margins were negative for black ginger producers in or almost zero campaign in the first phase of the project. This new phase is working on adapting techniques.

Income from fruit production in Khnong Phnom commune, the support consisted of supporting the establishment of orchards that haven't really come into production given the fruiting time of many of the species planted. Only the coconut palms have started their production in year 3 of the first phase.

The master farmers (MF) implemented their training and agricultural advisory activities with the previously supported farmers and deploy them to the new farms. The Socio-professional organisations (SPO) consolidate their governance and adapt their operating methods to develop their capacity to provide services to family farms. The Socio-professional organizations (SPO's), networks of master farmers and technical advisers are service providers to farmers.

The interprofessional workshops are biannual and bring together all the players in the sector concerned: farms, collectors, input sellers. They aim to share information about market demands based on figures and trends of the last season. Meeting restrictions made it impossible to organize only 3 interprofessional workshops out of the 6 planned.

The support for the development of the activity of the Green Farmers Siem Reap Association involves advising its managers, networking actions and the organization of exchange visits. The Green Farmers Association adapted to changes in demand for agricultural products to secure marketing on the markets. The marketing of agricultural products is improved by a better integration of producers into local sectors. Stable relationships are established between producers and buyers and new outlets were identified for local products. Local products were promoted to local consumers and tourists.

The multi-actor dynamics initiated at the provincial and commune level lead to the implementation of concrete actions allowing the development of territorialized food systems. The actors are equipped to promote and support the agro-ecological transition of the territories. These last activities were mostly implemented by Agrisud International team.

332 families (32% of the population practicing unsustainable agriculture in Khnong Phnom commune) are now following agroecological principles to generate incomes, reducing their pressure on the natural resources of Phnom Kulen National Park (PKNP). This is combined with other ADF projects (support to law enforcement, zoning and demarcation of forested areas, environmental education and reforestation), and allows a better protected PKNP. There is an increase knowledge of the importance of a protected bio-diversity for the local population of PKNP.

The IADA/ALIVE project provides a concrete response to environmental issues by having developed agricultural systems to preserve and sustain resources productive farms while intensifying cropping systems. Agroecological practices disseminated contribute to improving the resilience of systems and to their adaptation to climate change. Soil and resource protection activities of water supplying crops and villages makes it possible to respond to the problems of hazards rainfall, particularly related to climate change. The project has also promoted systems that

enable carbon sequestration in the aerial and underground biomass (perennial plantations: orchards, hedgerows and windbreaks) and by increasing soil organic matter (fertility management with organic inputs). The project provides alternative options to generate income to population from PKNP, options that does not require deforestation.

Trainings, coordination, visits
On the 13th of January 2022, H.E Mom Thany, State Secretary of the Ministry of Environment and H.E Pin Prak, Deputy Governor of Siem Reap Province and members visited farmers in Kulen Mountain and the Dry Spices Producer group Khnong Phnom.

From the 15th of February to the 21st of February 2022, ADF team participated in the training with Agrisud team about the organization and implementation of Territorial Project for Sustainable Agriculture ("Design and lead territorial projects for sustainable agriculture"). There was a total of 26 participants, 9 females, all of people were present from Commune / Sangkat, Department of Environment, Department of Rural Affairs, Department of Agriculture, Department of Commerce, APSARA Authority, and GRET NGO, Sre Khmer and CIRD NGOs.

On the 3rd of March 2022, ADF team participated in the visit of H.E. Chan Somaly, Under Secretary of State, Ministry of Environment, H.E Meng Monireak, Deputy Director General of the Ministry of Environment, Ms. Alissar Charker, United Nations Development Program (UNDP) Representative in Cambodia, to the Dried Spices Producer group of Khnong Phnom commune.

On the 9th of March 2022, Mr. Hasika and Ms. Sok Neang, consultants from Harvest II (USAid) project trained about 5S to the producer at Dried spice producer group, Khnong Phnom Kulen.
On the 5th of April 2022, ADF team participated in a meeting at Agrisud office to evaluate the project in 2019.

On the 23rd of April 2022, ADF team accompany SEAF (ADF donor for this project in Phnom Kulen) to farms and drying facilities.

From the 24th of April 2022 and for 5 days, the 2 ADF technicians (Ms Mout and Chheung) joined the incentive trip with Agrisud team to Sihanoukville.

On the 12th of May and the 16th of November 2022, ADF team participated to the visit of AGRISUD donor, Haut de Seine Department in France (CG 92).

On the 23rd of August 2022, ADF team participated to the visit of Planète Urgence NGO.

On the 22nd of October 2022, the ADF and Agrisud team welcomed the SE Asia Foundation representatives (Mr. Bill Taylor and Mr. David Brotherson) for a one-day visit in Phnom Kulen, visiting beneficiaries and the dry spices group of Khnong Phnom commune.

On the 12th and 13th of December 2022, ADF led the visit of the 3 UNESCO-ICC experts for sustainable development. A part of this 2-day visit was to evaluate the ALIVE project; together with the presence of the Agrisud team. The official recommendations (n.21.1.1) are the following: "The experts congratulate the ADF and Agrisud International teams for the excellent quality of the work carried out, which, for them, is exemplary in terms of sustainable development and linking conservation with development. The experts recommend ADF-Agrisud international team continuing the exploration to obtain a SIQO (Official sign of quality or origin), rather "of origin" in this case, with a trademark brand "Kulen" allowing to identify products from the 10 villages recognized in the PNPK and give them some potential added value on the market outside the site itself".

On 16th and 17th of March 2023, ADF team joined the workshop with the Green Farmer Association to exchange on marketing.

On the 20th of March 2023, ADF team participated to the visit of AGRISUD donor, the Agence Française de Developpement (AFD).

Regularly over the year, ADF team is doing the following activities: technical advising and follow-up on fruit trees and spices production (see below), technical advising and follow-up on Dry Spice Producer group, Khnong Phnom Kulen (15 members, see below), take photos of every new farmers and take GPS point for archiving data, check the record of incomes and expenditures data in the book for farmers, arrange the seedlings and materials from the Agrisud office to farmers in Phnom Kulen, collect reimbursements from farmers (pig and chicken raisers). All these reimbursements (corresponding to 50% to ADF support) are in cash and reinvested in the project. During the ALIVE project, the team collected 346.16$ from previous activities which were inserted into the funds.
In May 2023, the ADF team had the 70 new families growing fruit trees signed contract with rules to follow. Among these 126 families growing fruit trees, 20 will be selected as model farmers (MFs).

For each beneficiary of the project, contracts were signed between ADF-AGRISUD and each farmer. They present the roles and responsibilities of each parties (ADF/AGRISUD and the beneficiary), in order to engage the beneficiary to take responsibilities. The organisations commit to provide trainings on strengthening agricultural techniques (production of vegetable crops and fruit trees) and marketing to farmers; to facilitate planning, implementation, revenue recording, production costs, and marketing; to provide assistance, technical advices and regular monitoring; to provide materials to farmers according to the project possibilities and upon request. The beneficiaries must comply with the status of the organization and group of farmers, must collaborate with agri-businesses and agricultural extension officers, have to participate in training programs and follow the instructions from the NGO technicians on agriculture, must follow the best instructions from the technicians and share good techniques with other farmers, must commit to grow crops and fruit trees on their farms regularly and until the end of the project, must record their amount of products borrowed and produced and must allow the visit of international and national guests and provide brief explanations. It is agreed that if a beneficiary does not comply with this agreement, he should pay back the cash equivalents of the investment with equipment.

Follow up of the Dry Spice Group
From January 2022 to May 2023, the ADF and the Agrisud teams continue the follow up of the Dry Spice group from Phnom Kulen (15 members, 11 women).

In January 2022, the stock of raw material was 501 Kg of fresh black ginger and the products sold to GFS were 53.5 Kg of black ginger tea, 58.8 Kg of dried roselle. There was a stock of 212.6 Kg of dried roselle and 0 kg of Black ginger tea. The problems identified this month is the lack of capital for the new production in 2022, problem of packaging and absence of label.

In February 2022, the stock of raw material was 700 Kg of fresh black ginger. No products were sold to GFS. There was a stock of 212.6 Kg of dried roselle and 60 Kg of dried Black ginger tea. The safeguard principles (5S) needed to be set up, problem of packaging and absence of label. The accounts were closed and the dividend were distributed to the Dried Spices Producer Group.

In March 2022, the stock of raw material was 425 Kg of fresh black ginger. No products were sold to GFS. There was a stock of 212.6 Kg of dried roselle and 134 Kg of Black ginger tea.

In May and June 2022, the stock of raw material was 100 Kg of fresh black ginger. No products were sold to GFS. There was a stock of 212.6 Kg of dried roselle and 138.5 Kg of Black ginger tea.
In July and August 2022, the stock of raw material was 200 Kg of fresh black ginger. No products were sold to GFS. There was a stock of 212.6 Kg of dried roselle and 216 Kg (220 Kg in August) of Black ginger tea. A problem of groundwater occurred in the storage area.

From September to November 2022, there was no stock of raw material and no products were sold to GFS. There was a stock of 212.6 Kg of dried roselle and 98 Kg of dried black ginger tea (processing group) and 168 Kg of dried black ginger tea (Growing group). The problem of groundwater continues.

From December 2022 to February 2023, there was no stock of raw material and no products were sold to GFS. There was a stock of 212.6 Kg of dried roselle, 94 Kg of dried black ginger tea (processing group), 168 Kg of dried black ginger tea (growing group). The accounts were closed on February 09 2023, and the dividend were distributed to the Dried Spices Producer Group. The products sold to GFS 2022-2023 were the following: dried black ginger = 21.95 Kg, black ginger powder = 8.50 Kg, fresh black ginger = 747 Kg, dried roselle = 68.4 Kg, roselle seeds = 81 Kg; dried long pepper = 0.4 Kg, special young green pepper = 10 Kg, young green pepper = 40 Kg. The total group's expenses were 5,280.75 US$ and the total group's income were 4,860.21 US$.

On the 9th of December 2022, Agrisud and ADF technical Monitoring and Evaluation team and marketing staff went to meet with farmers to collect data on black ginger beneficiaries. The purpose was to focus on farmer's incomes and expenditures, observation on technical performance of crop cultivation techniques, methods of harvesting and post harvesting.

MF and vegetables producers follow up:
On the 21st of January 2022 and in February 2022, the ADF and the Agrisud teams continued to remind to the master farmers (MFs) on the principle of organic and safe veggies production with a training: 10 farmers (4 females).

On the 20th of February 2022, 32 cement nursery beds were provided to 6 MFs in Khnang Phnom (contribution: 40% from farmers): Anlong Thom village: Ann Ravuth =4 units, Throeung Sokei = 4 units, Heng Channak = 4 units, Khlah Khmum village: Toch Yun = 6 units, Sangke Lak village: Sros Saru = 4 units, Sambo Vanna = 10 units.

On the 20th of August 2022, the team also provided 2 concrete ring wells for water storage to 1 MF, Mr. Tol Kreum in Ta Penh village.

In 2022-2023 the team continued to follow up and advices to existing demonstration sites such as the one from Mr. Tol Kreum (in Ta Penh, growing Chinese watercress, jackfruit, coconut, pineapple, papaya, pomelo, passion fruit, king banana, durian, Burmese grape) and the one from Mrs. Peat Loeum (Anlong Thom, growing coconut, lime, papaya, pomelo, orange, custard apple, soursop, chili, black/long pepper, sponge gourd, pumpkin, and black ginger.) Both MFs were trained in producing and using their own solid and liquid compost.

Follow up by MF with KoBo tool for vegetables and fruit trees farmers
The Agrisud project paid indemnities to the MFs according to the number of visits to the farmers.
In January 2022: 8 MFs visited 130 times to 130 farmers: Anlong Thom: 2MFs = 56 times = 56 beneficiaries; Sangke Lak: 2MFs = 25 times = 25 beneficiaries; Thma Chruogn: 2MFs = 21 times = 21 beneficiaries; Ta Penh: 1MF = 14 times = 14 beneficiaries; Khlah Khmum: 1MF = 14 times = 14 beneficiaries.

In March 2022: 8 MFs visited 117 times to 117 farmers: Anlong Thom: 2MFs = 56 times = 56 beneficiaries; Sangke Lak: 2MFs = 21 times = 21 beneficiaries; Thma Chruogn: 2MFs = 16 times = 16 beneficiaries; Ta Penh: 1MF = 11 times = 11 beneficiaries; Khlah Khmum: 1MF = 13 times = 13 beneficiaries.

In September 2022, 5 MFs visited 134 times to 67 farmers: Anlong Thom: 1 MF = 62 times = 31 beneficiaries; Sangke Lak: 1 MF = 22 times = 11 beneficiaries; Thma Chruogn: 1 MF = 24 times = 12 beneficiaries; Ta Penh: 1 MF = 22 times = 11 beneficiaries; Khlah Khmum: 1 MF = 4 times = 2 beneficiaries.

Infrastructures
In February 2022, the ADF and Agrisud team fixed a water tank at Sangke Lak (repainting and put the metallic fence around). This water tank provides water to 60 households in Sangke Lak village. This water reservoir was built with Agrisud funds and ADF facilitation in 2021 but needed renovation (stop the leaks) and completion (proof paints and fencing).

Retailing shop next to Orchid garden, at the western entrance of Phnom Kulen National Park
Initially planned at Preah Ang Thom village in Phnom Kulen, where most of the tourism is concentrated, the Ministry of Environment recommended on the 15th of August 2022, to build it at the western entrance of the park.

On the 23rd of November 2022, ADF requested to redirect some part of the funds from SEAF first year to be used for the construction of a shop to sell the Green Farmers products. It was approved and funds were shared with Agrisud who had a contract with a contractor.

The total cost of the construction was 27,664.00 US$, divided as followed: total from Agrisud: 18,078.80 US$, total from ADF: 8,350.00 US$, total from Green Farmer: 1.234.20 US$.

On March 13th 2023, ADF team joined the meeting with Agrisud team to discuss about the opening of the shop, near the orchid garden. The shop was built, after the authorization from the Ministry of Environment (MoE) was granted, just to the north of the Orchid coffee shop, north of the Orchid Garden. The shop will be located at the entrance of the park, at a strategic location.

The construction started on the 11th of December 2022 and was achieved on the 31st of January 2023. The construction was interrupted a few weeks due to administrative challenges. The shop could not be opened before Khmer New Year 2023, just before the celebration. It has been open since. However, it is still not formally opened has the name is still under discussion with the MoE. Once agreed, the signage will be done and installed.

Communication and participation to fairs
ADF team selected farmers for photo documentation and sent the photos to the Ministry of Environment.

On 8th of April and 24th and 28th of April 2022, ADF gathered farmers who grow black ginger for a media team from the Ministry of Environment, to record video and produce a documentary.
On 16th of June 2022, ADF and Agrisud participated to an exhibition in Siem Reap, about selling veggie and fruit tree from communities.

From the 24th to the 27th of February 2023, ADF and Agrisud participated to the 16th Cambodian Products Fruit and Vegetable Exhibition on the central garden by the river, selling locally grown and transformed spices from Phnom Kulen, in collaboration with Agrisud. 30 farmers from Phnom Kulen were invited.

In September and October 2022, ADF team participated in the documentary with interviews for the project's video, in coordination with Agrisud team. It was released on social media on the 12th of May 2023.

Schools and agro-ecology activities
In 2022, the Agrisud team follow up cultivation techniques in Sangke Lak and Ta Penh primary schools.

On 21st February 2023, ADF team facilitated the teaching by Agrisud about cultivation techniques to students of Ta Penh School, (37 students, 25 girls) and Sangke Lak School, (34 students, 18 girls) for a total of 71 students, 43 girls.

Various
In March 2022, ADF team and director participated to the independent evaluation of the previous project (IADA II) by ARTE-FACT. It was delivered with a report in April 2022: "Évaluation finale du projet IADA – Phase II (Intensification agro-écologique et diversification de l'agriculture familiale à Siem Reap - CAMBODGE), by J.-M. Brun.

In 2022, ADF continued to be part of the "ALiSEA", the Agroecology Learning alliance in South East Asia, a network of Agroecology practitioners and supporters (sharing and supporting common goals on agroecology) that actively engages its members into information/knowledge sharing and vibrant collective actions promoting an agroecological transition, and providing meaningful benefit for all participants.

Related websites and online publications
https://greenfarmerssiemreap.com
https://thebettercambodia.com/introducing-green-farmer-siem-reap-a-sustainable-and-socially-conscious-partner-for-a-better-cambodia/

Rice bank for the households in need in Thma Chruogn village

Reminder: The ADF input and support for the Rice Bank, set up in 2013 in Thma Chruogn village, is now mainly of a technical nature, guidance, monitoring and recording. The objective of this project is to alleviate food insecurity during the dry season amongst the target population. The concept is similar to a bank: beneficiaries can borrow rice when they have a shortage of supplies and have to give it back with a low interest, after the harvesting season (usually in November each year).

The beneficiaries are divided into 8 groups of household members, an equivalent to 34 families. The rice bank committee consists of 4 permanent members who are organizing in-house activities, ranging from administration to the maintenance of the rice bank. They are also responsible for lending to and collecting rice from the household members. 10 families borrowed rice in 2021, 13 families borrowed rice in 2020, 18 families in 2019, 24 families in 2018, 27 families in 2017, 39 families in 2016, 23 families in 2015 and 34 families in 2014. Less families tend to borrow over the years. This shows food security in this village is less a problem than before.

The rice bank committee and ADF team collected and distributed rice to the households in need in Thma Chruogn village, with the following data:
Previously to the funding of this project, in 2021, the rice paddy collected in the bank was distributed to 10 families, for a total 2,700 Kg.

On January 19th 2022, the rice paddy stored in the rice bank was representing a total of 3141 Kg (Origin of rice paddy 2,700 Kg, Interest 441 Kg).

On April 7th 2022, the rice paddy was distributed to 19 families, in total 5,950 kg (184 people, 89 females and 99 persons able to work). The loan period is 12 months. 1 family could not reimbursement the rice paddy and owes 236 Kg.

On January 10th 2023, ADF team and Rice Bank committee have collected 7,021 Kg of rice paddy (origin of rice Paddy 5,950 Kg, interest 1,071 Kg) to store in the Rice Bank.

In that case, 13 families have paid 4138 Kg of rice paddy in cash (1241.40 US$). The total amount of rice paddy that keep in stock was 2,883 Kg.

On January 31th 2023, villagers asked to borrow rice paddy. This represents 22 families, 113 people (including 52 women, of which 64 persons able to work), for a total 7,700 Kg of rice paddy proposed. Additionally, 192 Kg of rice paddy was purchased with for 57.60 US$ from the rice bank/ALIVE budget to meet the community's demand. The total rice paddy to be distributed in 2023 is 7,892 Kg.

Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion (HUMY 2 and 2 bis projects)

Community-based tourism centre (CBTC) in Anlong Thom and Popel villages
Reminder: Summary of the HUMY 1 project (from April to June 2021)

From May to June 2021, HUMY NGO supported a first project exclusively dedicated to Popel Community-based Tourism Centers (CBTC). 1,170 US $ were received on the 22nd of April 2021. This project came as complementary project to the UNDP-BESD-PES one granted to ADF from 2019 to 2021. This UNDP funded project was built around a primary project initiated in 2018 by ADF and supported by a private donor, Mr. Deroo (Terre Cambodge visitor in Phnom Kulen), to support the enlargement of the Popel Community Protected Area (CPA).

The main objective of the HUMY 1 project was to provide the last infrastructures and material necessary for the CBTC, related to the Popel CPA. The Popel CBTC was set up by ADF with the support of the UNDP-BESD-PES project from 2019 to 2021. ADF and its long-time private partner and donor Terre Cambodge travel agency designed the CBTC offers (building, information, tours) and organized its management by the Popel CPA members.

As for the Anlong Thom CBTC, the center objective is to bring economic benefits for the villagers by offering general information and tours to local and international tourists. They also present the extraordinary values (environmental, geographical, archaeological…) of PKNP to the visitors and villagers, both centers displaying information panels and helping villagers to consider their natural environment and historical heritage. They also allow a shared knowledge and an increased protection of the Phnom Kulen bio-diversity.
The Popel CBTC was meant to open in April 2021. However, the Covid-19 pandemic has delayed the opening and additional light infrastructures and materials were necessary to have a fully operational center. It was finally open in December 2021 (see HUMY 2 project).

Within the Humy 1 project, from April to June 2021, additional facilities related to Popel CBTC and its tracks were built, complementing this UNDP funded project:

- The construction of a kitchen for Popel CBTC, used by Popel CBTC trained cooks, in order to provide lunch for visitors. It was built by a local builder and has a cement slab, brick wall up to 1,2m, metallic structure and a teen sheet roof. It is large enough to provide space and hygienic conditions to cook meals for the tours.
- The construction of 2 checkpoint booths: The first one was built by a local builder at the entrance of the CPA on the Preah Ang Thom/Popel main road with a cement slab, a metallic structure, wooden short wall and a tin sheet roof. The second one at Veal Ta Lo was built in wood buy the CPA members with a concrete basis for the 4 pillars. The wood came from the CPA (under the approval of the PKNP rangers, dead tree cut on site in pillars, boards and beams) and it is covered by a locally-made thatch roof. The objective of these 2 checkpoints is to control the access of the CPA and to facilitate the sale of the CBTC tours.
- The payments of the costs for one short video (3'), shoot by a young team of Cambodians, promoting the Popel CBTC. The Covid-19 pandemic has prevented ADF to open the Popel CBTC in April 2021 and to promote it by posting this video on the Facebook page of the Popel CBTC (https://www.facebook.com/PopelCommunityProtectedArea). The Popel CBTC was finally open officially on the 12th of December 2021 and the video was posted on the 22nd of December 2021 and on the 23rd of May 2022.
- A survey about the local handicrafts was implemented to localize producers and identify products. The objective is to have a few of them on display and for sale in the CBTC, in order to offer additional incomes for the producers, the center and to promote this threaten know-how and tradition, only done by the elders of the villages.

HUMY 2 and 2 bis backgrounds and rationales

The HUMY 2 project was implemented by ADF from October 2021 to March 2022 and the HUMY 2 bis was implemented as a continuation, from April 2022 to December 2022.

CBTCs background:

Both CBTC were set up by ADF with the complementary expertise of Terre Cambodge local travel agency (TC), ADF's long-time partner and funder.

Popel CBTC was funded through an UNDP-SIDA project (BESD) to help Popel village and its CPA members, while enlarging its CPA from 188 to 798 ha, from 2019 to 2021. During the early phase of the project (under the sole "Popel project" funded by Mr. Deroo, see above), the local community (CPA members and villagers) requested eco-tourism options as an alternative livelihood, when the demarcation of the CPA was considered. The Popel CPA ("Prey Thom") and the 4 non-visited secondary waterfalls could be encompassed into an enlarged Prey Thom Popel CPA and were identified as sources of incomes via eco-tourism services. The combined UNDP-BESD and Popel project allowed to implement this with a clear demarcation of the CPA and capacity building of CPA members. Surveys with ADF team and CPA members to identify potential areas for eco-tourism facilities (boulders, forest, secondary waterfalls) were undertaken from April to December 2020, with complementary surveys in January and February 2021, inside the existing Prey Thom Popel CPA but also in areas encompassed into the enlarged Popel CPA.

Eco-tourism facilities were defined between CPA members, ADF and PDoE and set up: a Community-Based Tourism Centre (CBTC) at Popel village (with maps, signboards and tourism offer); rest-stop facilities near Anlong Run waterfall (wooden rest huts, toilets) associated with trekking route traced (max 1 m width) from one waterfall to the other and according to the defined tours, linked to the existing "Nature trails" established in 2015 by the PDoE and the Popel CPA. The homestays initially considered were not chosen as a viable option as villagers preferred a Community centre.

The Popel CBTC was built on a land donated by the Popel village chief, along the main road of Popel village. The construction started from August until December 2020 but was slow down by the heavy rains in October. It was completed by a water reservoir in early December 2020. In May and June 2021, ADF completed this infrastructure with the construction of kitchen and materials / labors were funded by the HUMY 1 project.

All informative material to be presented in this center were designed by ADF team from August to October 2020. They were printed and set up after the center was fully completed (January 2021). They are similar to the ones in Anlong Thom CBTC; minor modifications were made (pictures) and the texts were adapted for the Popel context.

As for the Anlong Thom CBTC, they are divided as followed: 4 signboards both in Khmer and English presenting general information about PKNP on 1) history, archaeology and heritage conservation; 2) geography, landscapes and hydrology; 3) fauna, flora and environmental protection; 4) Local life and handicrafts; Popel CPA rules for visitors; Popel CPA centre context and actors; A Large map of the Phnom Kulen area.

From January to May 2021 and together with the CPA members, ADF and TC set up the CBTC organization and define the tourism offer of the Popel CBTC, operated by the Popel CPA members. The design of the tracks, the eco-tourism facilities and the tours packages were discussed between all stakeholders (ADF team, PDoE, CPA members, village chief), taking into account the options for a viable system. The CBCT should charge visitors to ensure the maintenance of the facilities (center, rest-stop areas) and to prevent and act against the dissemination of garbage in this part of the forest.

ADF was advised by its private sector partner, Terre Cambodge tour company (TC) to set up the Community center organization, the tracks and the services provided, with the half-time position of Ms Chhun Phirom.

A meeting to select the 2 responsible persons and to expose the different activities and positions (local guides and cook) was hold on the 13th of January 2021. The 2 responsible persons were elected by the CPA members. An important criterion is the ability to write Khmer and to use Facebook and Telegram. Unfortunately, very few people in Popel could response to these. A Telegram group was created to facilitate the communication between all actors. All CBTC members received 2 shirts with CBTC mention and logo.

The trekking routes options were studied during the previous surveys and were cleared (from 1m. to 2m. width) in January 2021 (from Poeng Gnogneat to Preah Ang Thom/Popel main road) and in February 2021 between Anlong Run waterfall to Tiep waterfall, Sman Teang and Thnous Pok waterfall. 2 large fallen trees have been cleared by CPA members at the Tiep waterfall in March 2021, with the participation of the ADF staff and the help of 2 rangers.

Anlong Thom CBTC was funded from 2018 to 2020 by E-Changeons le Monde (ECM) and TDS French travel agencies, both TC partners. It was opened in November 2020 and operational for a few months. In 2021, the C-19 pandemic has prevented to promote further these centers and to receive the expected local and international visitors. A new road is now crossing PKNP through Anlong Thom village and will, in the near future, allow more tourists to come in this part of the Phnom Kulen National park, located 80 Km by road from Siem Reap-Angkor.

The activities from both CBTC were strongly impacted by the C-19 pandemic, as very few visitors came and booked tours from the center. ADF and TC took this opportunity to reinforce the CBTC members capacities and to better organize the center management. During the year 2021, ADF reinforced the capacities of the AT CBTC with different projects. From January to June 2021 and thanks to the UNDP-BESD project and the Popel CBTC support, ADF supported the 2 centers with the salary of Ms. Chhun Phirom, two salaries of the CBTC leaders and the training of their teams by TC and ADF. The remaining funds of the CAR project (project initiated to set up the AT-CBTC; 1,312 US$, see ADF 2020 activity report) were used for the payment of ADF/TC CBTC supervisors (Ms. Chhun Phirom, from July to September 2021) as well as 2 CBTC managers (from January to June 2021).

Over the year 2021, several documents and guidelines were designed to facilitate and better organized the PP and AT-CBTC: the receipts note books, the safety check list for moto driver before taking visitors, the emergency contact numbers, the rules for CPA/CBTC members, ID Cards for each CBTC members, a signboard outside indicating the location of the center from the main road, the CBTC accounting system, a general guideline for the local guide for Anlong Thom and Popel CBTC, an archaeological summary guide for Anlong Thom CBTC and the prices of the tours offered by both CBTCs. Numerous meetings between ADF and the two CBTC teams were organized over the year 2021 to coordinate and agree on these documents.

Later in 2021, ADF secured funds with HUMY 2 project to support Anlong Thom and Popel CBTCs from October 2021 to March 2022. These funds ensured numerous trainings, forest patrols and payments to ADF/TC CBTC supervisors (Ms. Chhun Phirom) as well as 2 CBTC managers (see below for more details on HUMY 2 and 2 BIS projects).

At the beginning of this HUMY 2 project (October 2021), both CBTC were already operational and offering services such as half day or one-day trek tours to archaeological or natural sites (forests, waterfalls) led by local guides, moto taxi (if needed) and local lunch package with hygiene and eco-friendly standards.

The Anlong Thom CBTC and CPA consist in:

- A team of 15 members (for CBTC) including the 9 CPA members lead by 1 person, in charge of offering trekking tours to visitors to the archaeological and scenic points of Anlong Thom CPA (Poeng Tbal, Kok Chen, Prasat O Paong, Prasat Rong Chen, Poeng Eisei, Prasat O Top, Prasat Damrei Krap…), 3 cooks in charge of cooking local lunch with environmentally friendly packages (not using plastic),
- A CPA of 365 ha, demarcated by a track with additional signboards for villagers and visitors at strategic locations. Most of these 365 ha are forested,
- An information center in the western entrance of Anlong Thom village, with information signboards, facilities (water pump, toilets, showers, wash bays and water system) and a small tree nursery. There is no fully equipped kitchen for Anlong Thom CBTC but cooking materials were bought and are used by the cooks at their houses,
- A selection of local handicrafts products. The CBTC also provide an opportunity to promote and sell the traditional handicrafts, usually done by elders of the villages.
- A network of trails for treks to the archaeological and scenic points mentioned above,
- A selection of trek/packages.
- 1 short video (3') promoting the Anlong Thom CBTC (funded by HUMY 2). This video was posted on the Anlong Thom CBTC Facebook page (https://www.facebook.com/PhnomKulenCommunity) as well as ADF website (20th of January and 15th of May 2022), to promote the tours.
- O'Ta Chork camping: Following the start of Covid-19 crisis in March 2020, some Cambodians from □iem Reap town camped near the river passing just north of the Anlong Thom CPA, at three distinct points (Peam Kre, O'Ta Chok, O'Chup Thnal). The Anlong Thom CPA members tried to organize these areas to take advantage of the economic benefits of these campsites. They invested in buying tents, building toilets and cleared some areas by the river to set up the tents. It was not the intention of TC or ADF to encourage the practice of camping in these conditions, but with no choice regarding this situation, ADF and TC provided their advice to improve these camping conditions. On a fourth location, the Angkorian dyke of Thnal Dac, members of the CPA had previously built picnic kiosks. ATC and ADF helped define the prices for the rental of kiosks, equipment, security and parking, and finally the prices of the meals offered.

The Popel CBTC and Popel CPA consist in:

- A team of 14 members (for CBTC) including the 9 CPA members lead by 2 persons, in charge of offering trekking tours to visitors to the scenic points of Popel CPA (Poeng Gnogneat and 4 secondary waterfalls), with guides and guards, 4 cooks in charge of cooking local lunch with environmentally friendly packages (not using plastic).
- A recently extended CPA (from 188 ha to 798 ha), demarcated by a track and 170 robust concrete posts one placed every 80 meters, each of them marked and geo-referenced, with additional signboards for villagers and visitors at strategic locations. Out of these 798 ha, 555 ha are forested and 243 ha consists in cashew nut farms.
- An information center in the middle of Popel village, with information signboards and facilities (toilets, wash bay and water system),
- A fully equipped kitchen for Popel CBTC, to be used by Popel CBTC cooks in order to provide lunch for visitors (funded by HUMY 1),
- A selection of local handicrafts products. The CBTC also provide an opportunity to promote and sell the traditional handicrafts done by elders of the villages, (funded by HUMY 1),
- A network of trails for treks to the scenic points mentioned above,
- A selection of trek/packages
- 3 rest-stop facilities (wooden kiosks built near the Anlong Run waterfall, built in August 2020,)
- 2 toilets (with 2 units, 1 septic tank and 1 water reservoir) built in December 2020 in the vicinity of these kiosk, but hidden in the forested area.

- A wooden gate (at Veal Ta Lo, one of the entry points of the Popel CPA) to prevent motorbikes to go to Poeng Gnogneat, one of the most spectacular points of the area with giant sandstone boulders (funded by HUMY 1),
- □everal small wooden stairs, a wooden footbridge (at Tiep waterfall) and handrails where necessary on the waterfall trekking path, to facilitate the walk on the tracks between the waterfalls (funded by HUMY 1),
- 2 checkpoint booths: one at the entrance of the CPA on the Preah Ang Thom/Popel main road and at one at Veal Ta Lo. They allow to control the access of the CPA and facilitate the sale of the CBTC tours, (funded by HUMY 1),
- All wood used for these facilities was taken from fallen and dead trees from the CPA,
- 1 short video (3') promoting the Popel CBTC (funded by HUMY 1). This video was posted on the ADF (the 22nd of December 2021 and on the 23rd of May 2022) and TC Facebook pages then relayed on the Facebook Popel CBTC (funded by HUMY 1).
- A Facebook page was created to promote the center: https://www.facebook.com/PopelCommunityProtectedArea page to promote the tours, after the opening of the center in December 2021.
- Anlong Run camping: as in O'Ta Chok for Anlong Thom CBTC, the Anlong Run waterfall inside Popel CPA attracted some campers during the pandemic. As for the AT-CBTC, ADF advised the PP-CBTC to set up a system of camping fees, guards and parking, to bring additional incomes. PP-CBTC has no tent to rent.

Despite all these infrastructures and general organization, both centers CBTC and CPA members needed a longer training focusing on tourism management, environmental education and law enforcement. The C-19 pandemic in 2021 has prevented the arrival of visitors to CBTCs. However, ADF has seen this period as an opportunity to build up the capacities of the CBTC and CPA members, preparing for the coming years and the recovery of the tourism industry. Moreover, a World Bank / UNDP funded project has selected PKNP and the 2 CBTC set up by ADF and TC as basis to develop an eco-tourism project (Cambodian Sustainable Landscape and Ecotourism Project, CSLEP).

Patrols and handicrafts background:
The CPA members should also be trained to develop local patrols to better protect their CPA from the long-term identified threats: illegal logging, poaching and hunting, encroachment and deforestation for farming. Apart from random patrols by the PKNP rangers, they were no patrols implemented in these protected areas. The management of the Anlong Thom and Popel CPA, the 2 largest of the 5 CPA in PKNP (respectively 365 and 798 ha), could be increased; environmental awareness, ownership and team spirit developed among the members.

This third main component of the HUMY 2 and 2 bis projects is to promote the handicrafts products (mats, baskets, knives…) from PKNP. These high-quality traditional objects (pandan mats, baskets, knives…) are crafted by a few elders in villages, a particular vulnerable proportion of this population, and sold only in the local villages. The know-how to make these environmentally friendly products is threatened to disappear, if it is not transmitted and supported by a larger market. ADF has identified this as a source of potential income for villagers since 2012 but, due to lack of funding, was unable to implement a dedicated project.

HUMY 2 and 2 bis objectives

The main objectives of these projects were therefore:

- to provide the necessary training for the two Community-based Tourism Centers (CBTCs) members and their related Community Protected Area (CPA) staff, in Phnom Kulen National Park (PKNP), □iem Reap Province, Cambodia. The project aimed to develop the capacities of these villagers by providing training sessions regarding tourism management, environmental education; protection, law enforcement and patrolling. The project also aimed to support the capacities of these villagers by providing a minimum incentive per month for the 2 CBTC leaders.

- to organize, train and financially support mixed patrols in both Popel and Anlong Thom CPAs (rangers and CPA members), to prevent illegal activities and raise environmental awareness (from January 2022).
- to support and promote the PKNP handicrafts producers. The project aimed to transmit the knowledge of making these products by providing training from the elders to the younger generations. The project should promote the products with the setting up of a brand, selling points in □iem Reap or Phnom Penh and at the CBTCs, promotional material (video, catalogue, leaflet…). Additionally, it should provide incomes for these vulnerable villagers as well as for the CBTC.
- Finally, the project should also facilitate the administrative procedures prior and during the bio-diversity's assessment of PKNP by Vincent Romera from HUMY, assisted by Claire Zagala, from □eptember 2022 to March 2023 (see HUMY 5 project).

HUMY 2 and 2 bis activities and outcomes

Training and management of the Popel and Anlong Thom CBTC members by ADF team and 1 TC guide.

The training of Popel and Anlong Thom CBTC and CPA members was divided between thematic and provided by various partners: TC Cambodian guide knowing PKNP, PKNP rangers and director, long-experienced and successful community-based centers in other provinces.

Hospitality training:

This first training presented the Khmer History; hospitality and tourism management. It was provided by Mr. Po Ratana, a Terre Cambodge guide very familiar with PKNP and took place over 3 days (2nd to 4th of November 2021) at the AT-CBTC to 5 persons from PP-CBTC and 5 persons from AT-CBTC.

The content of this interactive training was designed by Ms. Chhun Phirom and Mr. Po Ratana in a 15-pages document in Khmer distributed to all trainees. It should be noted that not all the beneficiaries know how to read. The introduction included basic notion about geography, history, local life, health care and health center, education, population and tourism impact. The second part was a reminder of the creation of the 2 CBTCs with their goals and benefits. The following chapter focused on the basics of being a tour guide with notions about knowledge, hospitality, responsibility, honesty and research. The last part of the theorical training focused on the key points of being a tour guide such as a friendly welcome, to give clear explanations, to notice about the guests' reactions, to find something interesting showing to guests (beside temples for example) and to be flexible. It was concluded by the presentation of the 2 videos promoting the 2 CTBCs.

The practical part was organized so the CBTCs members from Popel were received and welcomed as guests by the Anlong Thom CBTC, and the CBTCs members from Along Thom were received and welcomed as guests by the Popel CBTC members, under the supervision of the TC guide.
Following the two introductory sessions to Khmer History and archaeology, with a particular focus on Phnom Kulen archaeological sites, by JB Chevance to members of the CPA and the CBTC (June 3rd and November 18th 2020, for AT-CBTC members), a simplified archaeological guide (a bullet points list for each site) was developed in 2021-2022. Numerous training sessions by video with Mr. Heng Puthea, the AT-CBTC responsible and the only English-speaking guide, took places over the year 2022, to get familiar with these data and present them in English and Khmer to the visitors on site. This guide still needs to be translated in Khmer.

PP-CBTC opening:

The Popel CBTC grand opening was planned on the first week of April 2021 but it was cancelled due to the C-19 outbreak in February 2021. It could not be opened before the 31st of May (the end date of the UNDP-BESD project) and was only officially opened on the 12th of December 2021, once the pandemic situation got better.

The opening took place in presence of Dr. Chhean Ratha, Acting Director for the department of the Monument outside the Angkor Park, APSARA National Authority, Mr. Chueum Tang, Khnong Phnom Commune Chief, Mr. Jérôme Humy, HUMY representative in Cambodia, Mr. Sakhoeun Sakada (ADF consultant and PKNP Director-PDOE), all CBTC and ADF team, representatives of local authorities and villagers. No representative from UNDP could join. In total, about a hundred people were present. This ceremony included the prayers and blessings of the monks from Preah Ang Thom Pagoda, a series of speeches followed by the official opening, the visit from the center and a meal. These speeches gave the occasion to present the objectives of the center to a greater number of villagers. Two sets of T-shirts / polo shirts were designed and distributed to each of the CBTC members.

Costs for the opening (renting table, food, local music band, presents for monks and elderly people from Popel) were secured by ADF financial resources for admin costs.

The previous day, on the 11th of December 2021, a cleaning operation was organized by ADF and the PDoE team to collect garbage on the road from Preah Ang Thom to Popel village today. Apsara National Authority guards, Park rangers, Popel Community Protected Area members, teachers and pupils from Popel primary school and ADF team participated. More than 30 large bags collected and brought to the Preah Ang Thom incinerator.

CBTC Management and training:
The continuous training of the CBTC responsible and members was ensured by Chhun Phirom with numerous meetings (1st and 17th of March 2022, April 2022) and working sessions over the period project.

The financial incentive for both CBTC responsible allowed to keep a permanent link between ADF and the CBTC and guaranteed a way to keep control over the center's objectives. These incentives are completed by the incomes generated thanks to the tours sold by the CBTCs.

On the model of the AT CBTC, the PP CBTC rules were defined and explained to the CBTC members (safety, hygiene, environment…) for the visitor's tours in PP CPA. ADF designed in Khmer and English the description of each tour offered by the 2 CBTCs and posted them on each CBTC Facebook page. A printed book was designed to register all incomes and expenditures per tour. The PP-CBTC booklet was also design and printed. It is designed to be presented at visitors on their arrival at the center and present pictures, maps of the tours and various information. ADF designed in Khmer and printed the PP CBTC organization chart. It is defining the responsibilities of the 14 members (cooks, guards, guides, responsible) displayed in the center. ADF designed 2 PP-CBTC signboards and display them at each kiosk (Veal Ta Lo and CPA entrance), in April 2022. ADF organized the fixing of the base of pillars for 2 kiosks at Anlong Run, which appeared unstable, with additional cement.

From the 26th to the 28th of April 2022, Ms. Chhun Phirom organized and led a training for the CBTC members on 1) hygiene cooking and packaging, at the CBTC kitchen 2) Being a local guide on the CBTC tracks, 3) Being a guard for camping visitors at Anlong Run waterfall.

From August 2022, it was decided that one guard should stay on standby from each Friday to Sunday, for Popel CPA at the checkpoint n.1, to better control the arrival of visitors and campers at Anlong Run waterfall.

Promotion of the CBTCs:
One promotion video (3') was also ordered to promote the Anlong Thom CBTC. The video for the promotion of Popel CBTC was funded with the HUMY 1 project. However, both were not posted on Facebook before the end of 2021 and early 2022 (see the dates above), as the C-19 pandemic restrained ADF to promote the center.

The general promotion of the 2 CBTCs was done of the 2 CBTCs Facebook respective pages, relayed on TC and ADF Facebook pages, with regular publications about the CBTCs activities, prices, contacts numbers and promotional videos.

From the 23rd to the 27th of August 2022 Ms Chhun Phirom travelled to Phnom Penh to promote the CBTC to the local travel agencies specialised in treks: Solo Landscapes, Vanna Adventure and 12Go Adventure. These 3 companies showed interest but later said they need longer/ harder treks (2-3 days).

Once the road construction in Anlong Thom village were achieved, ADF designed the new and larger signboard to indicate the location of the AT-CBTC from the main road. It was paid by the CBCT incomes and installed on 6th of December 2022. Pictures from Humy and ADF were integrated.

On the 12th of December 2022, ADF hosted the UNESCO sustainable development *adhoc* experts from the International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor and Sambor Prey Kuk (ICC-Angkor, 36th Technical Session and 29th Plenary Session, December 15 and 16, 2022) to Phnom Kulen. Among other projects, the group visited the AT-CBTC and had a presentation of the centre and its services. The recommendations are the followings: "The ad hoc experts: 1) Congratulate ADF for this initiative, its coaching Terre Cambodge and working along with it. 2) Recommend focusing on having the centre self-sustaining through cost control and better planning of its objectives.

Training sessions in PKNP by other local Community members to 10 CBTC members:
Conceived prior to the inception of the project, this activity did not appear as relevant once the project was started. With the agreement of HUMY, ADF decided to combine the credit allocated to this activity to the following one (n.4).

Exposure visits and training for CBTC to other community areas:
Over the course of these 2 projects, ADF identified 3 programs involving local communities, patrolling and protecting their natural environment, as well as benefitting from visitors and tourism, to be visited and serve as examples for PP and AT CBTC/CPA teams.

The first was the Be Treed Eco-tourism center in Phnom Thnaot / Phnom Pok Wildlife Sanctuary, Preah Vihear province, run by Mr. Ben Davis and his wife Sharyn. Due to the threats on this protected area and the long and renown experience of the initiators of this project, ADF requested a training focusing on "Patrolling in Protected areas by local communities". The agenda and planning were set up in coordination with Be Treed. A two-day exposure visit 7th and 8th of December 2021 for both AT and PP CBTC and CPA members took place: half day theory, half day practice on the field + travelling time. The program of the visit and training was divided between theoretical and practical parts.

The first part allowed the presentation of the respective projects and teams and their conservation issues, the main fauna/flora species in each area, the different methods of surveillance (camera traps for wildlife, drones and satellite imagery…), the patrolling and law enforcement (basic rules of patrolling, use of applications (Timestamp, Avanza maps, GPS test, google map, google earth, sentinel-hub), communications (Icom…), simplified knowledge of the Protected Area laws and CPA rules, protected area zoning and demarcation, the recording of illegal activities and procedures for reporting to MoE (form to fill, phone call, Telegram group…). Discussions also involved the community involvement, environmental awareness/Education, community-based tourism centres, tourism revenues, CPA members Training, NGO and Gvt support.

The practical training (day 2) focused on patrolling (divided in 2 groups) with discussions about field problematics. The emblematic figure of Ben and Sharyn, their dedication and the presence of numerous wild animals in the vicinity enhanced and highlighted the message spread to the group. Persons attending: 15 from AT, 15 from PP, 3 ADF, 1 Humy.

ADF organized a visit on the 18th of May 2022 at Teuk Chob Khnar Po Community Forest, a forested/swampy area located to the southwest of PKNP.

The objective was to provide to the 2 CBTCs members an exposure visit to a site managed by a nearby local community, with similar practices: lunch possible on site, forested area to visit, fauna and flora to observe. The overall objective is to reinforce the capacities of the 2 CBTC by showing successful and concrete examples, explained by their actors. The group was welcome by the 4 persons, responsible of the Teuk Chob Khnar Po Community Forest followed by a presentation and a discussion. The group visited the swampy forest, the footbridges and watchtower, had lunch on site, before getting back to PKNP. Persons attending: 15 from AT, 8 from PP, 4 ADF.

On the 15th of June 2022, ADF team organized a visit at ACCB for the Popel and Along Thom Community Protected Areas and Community-Based Tourism centers. The objective was to build awareness on wildlife and bio-diversity conservation in Phnom Kulen National Park for these CPA members, patrolling in their forest.

The group had a presentation of ACCB general activities and the problematic they are facing, by Christel Griffioen, ACCB country director, and Mr. Van Sokchea, Education Manager. It was followed by the guided visit of the entire ACCB complex.

Following on, the group visited Beung Chouk Community at Banteay Srey, where members of this organization exchanged experiences with these 2 Phnom Kulen CPA and CBTC members. Exchanges were focusing on the internal organization and its economic model, based here with a private partner. Persons attending: 15 from AT, 8 from PP, 4 ADF, 1 Humy.

Training for local patrol by PDoE:
This second training was organized by ADF and given in Phnom Kulen by the Provincial Dpt of Environment (PKNP Director Mr. Sakhoeun Sakada) and 2 Park rangers about patrolling and law enforcement (theoretical and practical). It took place on the 10th and 11th of November 2021 for AT-CPA members and on the 24th and 25th of November 2021 for Popel CPA members.

The 2 CPA members were trained to develop local patrols to better protect their CPA from the identified threats: illegal logging, poaching and hunting, encroachment and deforestation for farming.

A simplified knowledge of the Protected Area laws and CPA rules, the law enforcement with the recording of illegal activities and procedures for reporting to MoE (form to fill, phone call, Telegram group…). The use of the applications for patrolling: trekking application and others georeferencing pictures on smartphone: Timestamp, Avanza maps, GPS test, Google map, Google earth.

After each full day of theory, field sessions were organized to practice the use of the applications and the reporting system (half day practice).

A form to register the patrols activities incusing the numbers and names of the participants and the eventual illegal activities was designed by ADF and PDoE and proposed to the patrols. A form to record the payment of the participants to the patrols was designed by ADF, to be used systematically for each patrol. Both forms have MoE, ADF and Humy's logo.

Support to local patrols in CPA by CBTC and CPA members:
From January 2022 to Dec 2022, regular funded patrolling allowed CPA members from Popel and Anlong Thom with PKNP rangers from MoE to visit their respective protected area on a weekly basis, to prevent illegal activities: illegal logging, poaching and hunting, encroachment and deforestation for farming.

Local patrols by CPA members were deployed and paid by the project from January 2022 to January 2023, in both Popel and Anlong Thom CPA to better protect them.

These patrolling training sessions were organized from October to December 2021 and field patrols in PKNP only started in January 2022, with preliminary meetings between ADF, MoE rangers and CPA members for their organization, and preliminary patrols (only 1 in AT CPA) in December 2012. Patrols were organized and monitored over the project's period. During this year of patrolling implementation, CPA members and rangers organize themselves to implement these patrols and gain in autonomy and confidence from ADF.

The reporting system was organized with patrol and attendance forms, pictures, recording treks on Avenza software with smartphones. As most of CPA/CBTC members shave smartphones, this trekking application was chosen rather than GPS, requiring a computer. It is completed by other application georeferencing pictures, particularly in case of illegal activities.

Since January 2022, patrols are organized randomly (not the same day every week and not the same area within each CPA) one to twice a week and monitored by ADF-PDoE teams, with a systematic report for each patrol (track location, time of departure and arrival, form to complete with participants, reporting form, pictures…) sent to two specially created Telegram groups (one for each CPA) and addressed to all partners involved (MoE, PDoE, Park direction, CPA and CBTC Members, ADF, TC, HUMY…).

During the year 2022, ADF has set up and organized more than 150 patrols in 2 Community Protected Areas (Popel and Anlong Thom), implemented by Phnom Kulen National Park rangers and CPA members. This allows to reduce illegal activities and raise environmental awareness for Phnom Kulen population.

To better spread the funds over the project length and more discretion during patrols, it was decided, in April 2022, in accordance with CPA members and MoE rangers to reduce the number of participants to each patrol from 5 to 4 persons, and to do patrol from once to twice a week.

Detail of 145 patrols and illegal activities:
Patrols by Popel CPA members and rangers (from 06/01 to 29/12/2022), 79 patrols, an average of 6 to 7 per months: this represents 356 individual payments of 7 US$ to the Popel CPA members + 1 ranger, for a total of 2,492 US $.

Illegal activities observed: 1 large tree cut down with 35 boards found on site, brought to Preah Ang Thom ranger station (06/01/22), 1 shelter of hunter destroyed (30/03/22), 1 large tree (*Yeng/Dipterocarpus alatus*), fell down naturally (24/05/22), 2 trees cut down (*Pa*) (15/08/22), Clearing of a small forested area to enlarge a cashew farm (12/10/22), traces of bird hunted (feathers) (24/11/22), 2 wooden traps destroyed (21/12/22), 36 small trees cut (*Bos Neak*/*Mesua ferrea*), 4 to 5 m. long (24/12/22).

Patrols by Anlong Thom CPA members and rangers (from 08/01 to 27/12/2022), 66 patrols, average of 6 to 7 per months: this represents 287 individual payments of 7 US$ to the Anlong Thom CPA members + 1 ranger, for a total of 2,009 US $.

Illegal activities observed: 5 wood traps to catch wild rooster destroyed (04/03/22), 2 small trees cut down (diameter 10 cm) (16/03/22), People from outside come to collect fruit (25/03/22), 300m of low wooden fence with 49 snares destroyed (01/06/22), 1 large tree cut down (diameter 40 cm x 4m/*Pring*) (15/07/22), 7 small trees cut down (diameter 15 cm) (19/08/22), 1 tree cut (diameter 20 cm), (*Chan Crassna/Aquilaria Crassna Pierre*) 24/08/22), 2 wooden traps destroyed (21/09/22), 1 large tree, 10 m long, 40 cm diameter (*Bos Neak*/*Mesua ferrea*), fell down naturally (05/10/22), 6 small trees cut down, 15 cm diameter (5 *Sambour + 1 Pring*) (20/10/22).

Conclusions of 1-year of patrolling activities

Illegal logging is the most recurrent illegal activity: 9 occasions (5 in AT CPA, 4 in PP CPA). Poaching evidences (feathers of shot bird, wood traps, hunting hut, fence, snares) are not so common (3 occasions in AT CPA, 3 in PP CPA). However, it does not include the hunters with air-guns heard on multiple occasions by V. Romera (HUMY) during his bio-diversity survey in both CPA. Patrols' schedules should be changed accordingly. Outsiders collecting fruits during fruit season (*Kulen/ Litchi Chinensis*) is also observed (1 occasion). Burning a cavity inside the trunks of *Yeng/Dipterocarpus alatus* to collect resin has also been observed and should be reported as an illegal activity. Patrolling activities should be scheduled accordingly to illegal activities: at night during illegal logging and early morning for hunters. It is harder to get patrolling activities unfolding during April and May, when there are festivities and day off in Cambodia (Khmer new year, King's birthday…). Six walkie-talkies were bought for Popel CPA and CBTC teams on the 21st of October 2021. 9 aluminium water bottles were bought for PKNP rangers involve in patrols. 2 First aid Kits were bought for the 2 CBTC and can also be used for the CPA members.

Training by handicrafts producers from PKNP to villagers and young students:

The third component within the HUMY 2 project aimed to support and promote the PKNP handicrafts producers. Traditional objects (mostly mats, baskets, cutlasses and knives) are crafted by vulnerable elders in Phnom Kulen villages and this know-how is threatened to disappear, if it is not transmitted and supported by a larger market.

The project aims to transmit this knowledge of making these environmentally friendly products to younger generation and to promote them at the CBTCs and other selling points in Siem Reap or Phnom Penh, offering additional incomes to the artisans.

During a first period (started before the inception of the project in October 2021, and reinforced when it started), the handicrafts producers were identified in Phnom Kulen villages by Ms. Chhun Phirom and ADF's team and network. The surveys focused on 3 villages: Anlong Thom, Sangke Lak and Popel. However, nobody from Popel wanted to benefit from a training. The artisans were classified by activities: mat weavers, blacksmiths, baskets weavers, broom producers. A first list was developed and can be expanded.

Mat weavers, women exclusively:

Observing a difference in the quality of these products, Ms. Chhun Phirom organized the trainings of the mat's producers from Sangke Lak and Anlong Thom villages, on a weekly basis, from October to November 2021, then from January to February 2022, by the best artisan.

A traditional mat weaver from Sangke Lak village was identified for her advanced skills (Ms. Chheun Tev) and selected as a trainer for other women willing to join the training sessions. From October to November 2021, and over 6 days (20th, 21st, 27th and 28th of October; 3rd and 4th of November 2021), 8 women from Sangke Lak village (from 33 to 68 years old) joined this training, producing 42 mats. The trainings sessions were organized as follow: a general discussion about the experiences of weaving mats, learning techniques to mix the pigments with pandan leaves and to mix the pigment to get different color, learn weaving with different patterns, and finally, exchanging on each trainee final product. Every trainee expressed the desire to continue to produce mats and to be helped to sell their products.

The training of the mat weaver from Anlong Thom village was organized from January to February 2022 (5th and 6th, 19th of January and 2nd and 17th of February) and led by Ms. Chheun Tev from Sangke Lak village. 5 women from Anlong Thom (from 58 to 63 years old) joined this training, producing 7 mats. The teaching steps of the training were the same as the Sangke Lak one. Every trainee but one expressed the desire to continue to produce mats and to be helped to sell their products.

The training of the young students was not developed as scheduled during the HUMY 2 and 2 bis project. It will be from February to April 2023.

Basket weavers and blacksmiths, men exclusively:
The training of the basket weaver and blacksmiths could not happen in 2021 due to the difficulty of finding trainees willing to learn these ancestral techniques.

Over the year 2022, the 2 identified blacksmiths at Anlong Thom were supported by promoting their products. No trainee was found to learn, as this represents a hard, long, a little profitable work compared to labouring for harvesting or maintaining cashew nut farms.

The basket weaver Mr. Sao Tum, from Sangke Lak village, was identified as the best artisan but nobody wanted to be a trainee, for the same reasons as for the blacksmiths. However, and since December 2022, his permanent production answering to Kulen Craft's orders has motivated one man from the same village (mentally handicapped), to improve their skills with him. The husband of the mat trainer, also a producer of baskets, has also seen a source of incomes and is interested in making baskets.

Additional products: bamboo straw, vine glass holder and cotton ball were also identified as possible incomes from handicrafts for PKNP villagers. However, bamboo straws are hard to clean, vine glass holder bring a very small benefit and there a market for the cotton producers was not identified. The old ladies producing cotton balls only use it to make lamp wick. Depending on ADF time and market access, these products could also be developed in the future.

Financial support: The HUMY 2 and 2 bis project supported the costs for the trainings: Per Diem at 7 US$ per day for the trainer, transportation costs for the trainer, complementary tools and equipment, and raw material (ex: pigments for mat dyeing).

Promotion of handicrafts from PKNP
From the end of 2021 and during the year 2022, a banner, a leaflet and a catalogue (both in Khmer and English) were produced, distributed to selling points and promoted on ADF Facebook page. The catalogue was updated once and printed on a limited amount of copies (2 x 10 units), due to the high price for printing it.

Tags with Kulen Crafts logo, mentioning the price, the producers' name and its village were also designed and printed. Their final version is still to be finalized.

One video of 5 minutes long was also produced and promoted on ADF Facebook page and on Kulen Crafts Facebook page on the 10th and 13th of February 2022. 2 photographers teams came graciously before the project inception (October 2020 and March 2021) to Phnom Kulen (Mr. Kao Kosal, Mr. Keuom Vitou) to shot pictures of the making of the handicraft's items.

A distribution name/brand was created with its logo (*Kulen Crafts* with a Facebook page: https://www.facebook.com/Kulencrafts). The item list was defined, with their corresponding prices, season availability and care instructions.

Since October 2021, contacts with potential buyers or retailers (Enso Healing shop in Phnom Penh, Beyond Retail Business, Frangipani Spa…) were developed and listed.

On the 12th and 13th of February 2022, Kulen Crafts team and 4 mat weavers from Phnom Kulen participated to the Khmer Products Fairs - ពិព័រណ៌ផលិតផលខ្មែរ in front of Angkor Wat temple. Mats, knives and baskets were available for sale. The costs of the event (renting space, transportation and food costs for producers in Angkor Vat) were paid by the HUMY 2 bis project. The 4 mat producers were graciously invited (housing) by Ms. Chhun Phirom in her house in Siem Reap.

On the 19th of February 2022, Thmey Thmey newspaper (Ms. Rohany Isa) published an article online about Kulen Crafts: https://thmeythmey.com/?page=detail&id=112684

Early in March 2022, ADF presented to our partner from the Ministry of Environment and UNDP Cambodia some of the current activities: 1) Training and promotion of the Phnom Kulen handicrafts products with Kulen Crafts, 2) Alternative livelihood for villagers, with the Dried Spices Producer group of Khnong Phnom Commune producing dried black ginger, implemented in partnership with Agrisud International Cambodia, 3) Setting up, training and promotion of Phnom Kulen CBTC.

From the 23rd to the 27th of August 2022 Ms Chhun Phirom travelled to Phnom Penh to promote Kulen Crafts and met with 1) Bopha Bassac Boutique, 2) Gray Boutique, 3) Ms. Chap Sopheara (Chief of Education and Publication Office, National Museum of Cambodia) about displaying and sale Kulen Crafts objects.

On the 21st of November 2022, ADF and its private sector partner, Terre Cambodge, participated to the 3rd National Ecotourism Forum, in Phnom Penh. It was the occasion to expose and sale handicrafts products.

From November 2022 and as part of every TC tours in PKNP, a visit to the handicrafts producers per group is included. Depending on the program of the groups, a training session is included or a simple visit. The handicrafts producers receive 5 US$ for a visit, or 10$ when the tourists are participating. These incomes are paid by the visitors through TC, and will be recorded with the general incomes of Kulen Crafts, from Jan 2023.

<u>Production and incomes follow up:</u>
The list of sold items since the start of the project was set up. It is combining the date, the item description, its size, the number of units sold, the selling price including eventual discount, the profit, the expenses, the buyers and the villager. From January 2023, this list will include the incomes made from the TC groups (see above). 356 items were sold since the inception of the project.

The capital fund defined in September 2022 (1,090 US$) was reserved for early 2023 (but accounted in the 2022 project as an expense) to purchase handicrafts items before selling them in CBTCs (AT and PP) and other retailing places (PKNP shop) and Siem Reap.

It was conceived thanks to the help of Mr. Jérôme L'Hour from HUMY, taking into consideration all aspects of the handicraft's component.

This capital fund, provided by the HUMY 2 bis project, does not including the margins. It was calculated according to: the average number of hotels agreeing to display and sell, the average number/prices of Items displayed at each hotel, the availability of each products (rhythm and period of production).

The Humy 2 bis handicraft budget also included the reimbursement of 595 US$ personally spent by Ms. Chhun Phirom during the HUMY 2 project to purchase: 1) a first series of handicrafts items for 295 US$, 2) 2 closets to preserve items at her home in Siem Reap for 300 US$.

The transportation costs of the products from Kulen to Siem Reap or Phnom Penh was ensured by ADF car. They usually correspond to small quantity.

A stock list was also developed with the following information: item number, size, unit, unit price, total, village, producer name and remark.

2 particularly large orders were requested by Angkor Grace Residence and Wellness Resort (25 mats with natural and red color stripes, 50 natural color mats, 80 natural color table mats in Dec. 2022; 75 Flat oval baskets, small size in Jan. 2023, a total of 230 items). Transportation costs of the items are added to the price defined by Kulen Crafts. 50% of the costs were paid for both order at the inception of the order. Since December 2022, ADF team regularly check the production to ensure quality and timing.

Incomes and profits from October 2021 to January 2023: the total buying cost of 356 items = 5,308.75 US$, the total selling price of 356 items = 7,558.75 US$, the total expenses costs = 388 US$, including 233 US$ for students in Sangke Lak (see below), the total net profit of 356 items = 1,862 US$. The large Angkor Grace order (230 items) clearly helped to increase the profits.

Redistribution of profits:
The Kulen Crafts' profits are destinated to buy new products and to cover expenses (pigments, transportation costs…). However, in January 2023, it was decided that some portion of the Kulen Crafts benefit could be used in 2023 to promote and facilitate the education of 23 of the poorest students going to secondary school from Sangke Lak village, by purchasing material (notebooks, pens, rulers and bag pack). 256.45 US$ were spent for this.

Monitoring the HUMY 2 and 2 bis project activities:
ADF team worked and exchanged on a weekly basis on this project, to make sure the expected results were achieved on time and to solve the inevitable issues implementing such a project.
During all ongoing aspects of the HUMY 2 and 2 bis projects, key stakeholders and particularly the PKNP rangers and the villagers from Sangke Lak (for handicrafts), Popel and Anlong Thom (CPA, CBTCs and handicrafts) were actively involved and consulted. Capacities were built upon and their ideas were enmeshed into the project activities, as they are the beneficiaries of the project.

For the CBTC component, pictures were sent to the 2 CPA/Patrol Telegram groups to document each step of the project, with associated dates and comments. This allowed following up the activities and facilitates the writing of this report.

For the patrol component, pictures were sent to the 2 CBTC Telegram groups to document each step of the project, with associated dates and comments. This allowed following up the activities and facilitates the writing of this report.

For the handicraft's component, pictures were sent to ADF, HUMY 2 project/ADF and ADF/HUMY Telegram groups to document each step of the project, with associated dates and comments. This allowed following up the activities and facilitates the writing of this report. The continuous payment of a financial incentive for the 2 CBTCs leaders, for each patrolling members and for the project supervisor (Ms. Chhun Phirom) over the entire project period developed motivation for the achievement of the project's objectives. On request, the advices from Mr. Jérôme L'Hour were asked. For special occasion (opening, training or exposure visits), Mr. Jérôme L'Hour joined the events.

Collaboration with stakeholders:
As for the HUMY 1 project, ADF worked during the HMUY 2 and 2 BIS projects in close collaboration with: the local authorities (village chiefs, commune chief), the Ministry of Environment (in charge of PKNP) and particularly with the PKNP rangers and the Provincial Department of Environment (PDoE), Be Treed, ACCB, Beung Chouk Community and Teuk Chob Khnar Po Community Forest, CSLEP team (MoE and World Bank). However, the MoE and World Bank representatives were not always involving ADF in the meetings.

ADF finalized and signed a Memorandum of Understanding (MoU) with HUMY NGO. It formalizes all responsibilities of the two parties. It was signed for a 3-years period, from March 2021 to March 2024.

Activity and financial reporting:
A final report was submitted to HUMY in February 2023. All expenses per budget lines were closely monitored and receipts are checked and recorded into the HUMY 2 and HUMY 2 bis project Xcel spreadsheets, on a weekly basis, to ensure the correct spending of the budget per activity; by ADF Finance, admin and communication officer. All invoices for these 2 projects were scanned, translated when needed, and sent into combined pdf to HUMY, every 3 months.

Next steps, challenges and risks analysis for HUMY 2 and 2 bis projects

The HUMY 2 bis project was developed from October 2021 to December 2022, for a 15-months duration. It can be continued with a proposal of a third phase (HUMY 4), from February 2023. The details of this project are presented below.

Training and management of the Popel and Anlong Thom CBTC members

AT CBTC :

The archaeological training of Mr. Heng Puthea (AT-CBTC responsible and the only English-speaking guide) should continue (with videos regularly sent to follow up).

The archaeological simplified guide should be translated in Khmer and disseminated by Mr. Heng Puthea to the others AT-CBTC members. This dissemination should be completed with a guided visit on every archaeological site visited by the AT-CBTC tours, given by Mr. Heng Puthea and JB Chevance to every AT-CBTC members. A bank account should be opened for both CBTC, to facilitate the cash flow management. However, since it has no legal status, it should be opened on the name of Ms Chhun Phirom and Mr. Heng Puthea.

PP CTBT :

Popel, due to its relatively remote location and level of poverty (illiteracy, alcoholism, food security issues), is one of the most challenging village to work in PKNP. There is simply not enough food easily available in Popel village to prepare lunch package in advance for the visitors. Moreover, the PP-CBTC cooks do not have the financial reserve to buy food and they have no motorbikes to go to Preah Ang Thom village (4 Km away) where they could find ingredients. ADF is developing pig raising in this village to provide alternatives livelihoods but this is requiring time.

On a short term and to fix the issue of insufficient food supply at PP-CBTC in the next project, ADF propose to meet all stakeholders (HUMY, CPA, CBTC) to find a solution. Reminder meetings should be organized by ADF to explain to the PP-CBTC members the CBTC's rules and CBTC emergency contact list and organize the regular maintenance of the tracks along O'Thom river (between the 4 waterfalls) and from Veal Ta Lo to Poeng Gnogneat.

Both CBTC :

The financial incentive guaranteed by the project for both responsible of the 2 CBTCs allowed to keep a permanent link between ADF and the CBTC teams, and guaranteed a way to keep control over the center's objectives. These incentives are completed by the incomes generated thanks to the tours sold by the CBTCs. Over the time, they should fully replace these incentives. The next project should focus on "having the centre self-sustaining through cost control and better planning of its objectives", as the December 2022 ICC-Angkor recommendations (n.21.1.2.ii). Both CBTC were conceived as alternatives and not permanent source of incomes. However, their economic model should tend toward more fix and long-term revenues, also considering their expenditures with more sustainable jobs, and the maintenance of the installations. It is necessary to take advantage of voluntary work and subsidies to check the "profitability" of the operation and prepare for its empowerment.

In some rare occasion, Cambodian visitors of the Anlong Run waterfall and O' Ta Chok did not want to pay any fees while camping (for guarding and cleaning) to the Popel-CBTC members. The following actions should be taken: design signboards with corresponding prices for each service, to set up at O' Ta Chok and Anlong Run; establish a clear line of communication, responsibilities and action to be taken, to deal with visitors who do not want to pay the CBTCs teams. The newly established price list of handicrafts (in Khmer and English) should be explained to the 2 CBTC leaders, printed and displayed at both CBTCs.

ADF permanent presence in Kulen allows weekly contacts, exchanges and multiples occasions of trainings. Archaeological on-site trainings should be spread over several sessions to avoid the risk of information saturation for the trainees. Both names on 1 bank account ensure a better control of the funds. Pig raising in Popel village should start to generate incomes, however, not enough

families would benefit from it to produce/buy food to prepare lunch package for PP-CBTC visitors. Short term solution needed with meeting all stakeholders. ADF will work toward the CBTCs self-sustaining by defining with their respective teams the cost control and a better planning of their objectives.

Coordination with the CSLEP project

The World Bank / UNDP funded project selected PKNP and the 2 CBTCs set up by ADF and TC as a basis to develop an eco-tourism project (Cambodian Sustainable Landscape and Ecotourism Project, CSLEP). The coordination should be increased and improved. In December 2022 and January 2023, contacts were made at high level at the MoE with this objective. In February 2023, meeting about existing and future tracks were discussed between the CSLEP and ADF teams to define a vision and the framework to ensure quality and sustainability.

Examples of infrastructures to build and upgrade could be integrated in this project and should be discussed: cutting 4 very big fallen trees, east of Thnou Pok waterfall, purchasing tents for PP-CBTC for rent at Anlong run waterfall, kiosk construction at the O'Ta Chork camping place, requested by AT-CBTC, meeting room and kitchen construction at the AT-CBTC, requested by AT-CBTC.

Private 30 hectares tourism concession at Anlong Run, Tiep and Sman Teang waterfalls:
This 10-ha x 3 concession was granted by the MoE to private investors to develop eco-tourism in Popel CPA. Demarcation of the zone was done in Jan 2023. ADF has expressed to MoE its concerns about such a project, if it does include the CPA and CBTCs members (letter sent to H. E. Sao Sopheap on the 11th of March 2022). The first exchanges with MoE have revealed that the company should employ only CPA/CBTC members and could built a meeting room in the village. More regular contact with CSLEP team will be kept by ADF to guide/advice and insure (if possible) common objectives and no overlapping. Regular contact with PDOE team will be kept by ADF about this point. ADF will remain attentive to this question.

Promotion of the 2 CBTCs

Promotion to other receptive agencies in Cambodia. Terre Cambodge was the only one offering the tours to foreigners. From 2023, the CBTCs, in accordance with TC, could propose their existing services (half day and full day tours) to other agencies, as long as they do not propose homestays for foreigners. A few of them were interested and came to visit the CBTCs: Asian Diver, Kouprey Adventures, Cambodia Jeep, Angkor Grace Resort. Some agencies are only asking food, or moto services, which is not the best solution to develop. Selling the full tours should be prioritized.

Some of them already have treks in Phnom Kulen and they usually ask the rangers to guide them. This point has been discussed with the park director and it is apparently in the ranger's duty. However, considering the need of stronger law enforcement in the CPAs, APAs and other parts of the National Park, the fact that the CBTC are designed to support alternatives incomes for villagers whereas rangers have a fix salary, ADF would like to move away from this practice and promote the CBTCs members as the only guides. Other treks were recently developed by the AT-CBTC and ADF (CBTC - Srah Damrei, CBTC - Phnom Sruoch, CBTC - Khlah Kon, CBTC - Royal Palace) and will be proposed to Terre Cambodge visitors' and corresponds to longer treks, using AT-CBTC services. A 2 day-long trek from Kbal Spean to Popel was also developed by Terre Cambodge as a longer trek, using PP-CBTC services. For a better promotion of both CBTCs, ADF would also like to design banners, leaflets, and posters to display and distribute during fairs (Ex. National Forum on Eco-tourism) and to reach new partnering agencies and clients. Writers of widely distributed guided books (Lonely planet, Petit Futé, Guide du Routard….) should also be contacted to reference the CBTCs.

Tourism industry should only get better after such a crisis. However, this is a particular market to be developed with specialized agencies. The recent contacts made by agencies to the AT-CBTC is a good indication that there is a demand. The existing tours need to be promoted to the agencies as full products/packages. The PP-CBTC needs to be involved by ADF in this dynamic.

Training sessions in PKNP by other local Community members to CPA/CBTC members.
After the Be treed visit, ADF believes it would be positive to invite the Cambodian counter-part of Mr. Ben Davies for additional training on patrolling activities, in both Popel and Anlong Thom CPAs.

Exposure visit and training for CBTC to other community areas
Sorng Rukhavoan Wildlife Sanctuary in Oddar Meanchey, previously managed by Mr. Bun Saluth, ex-monk) could be a good example to propose as an exposure visit. Additionally, and depending on the budget, the work of Wildlife Alliance NGO in Cardamomes mountain could also be a good example to visit for law enforcement in protected areas.

Training for local patrol by PDoE
A refresher of the use of Avenza application should be done for all CPA members, particularly for the Popel ones. PKNP rangers could do it.

Patrols in CPA by CBTC and CPA members
After one year of patrols in both PP and AT CPA's, there are a few conclusions for a better law enforcement. These should be mandatory requirements for the future patrolling project: Each patrol should be of 4 h minimum, an Avenza map with the trek, length and duration of the patrol, has to be provided, with each report through the Telegram group. The 2 forms (report and presence list), the activity pictures, and the Avenza screenshot map, have to be sent on the Patrolling Telegram group, the same day of the patrol. Patrols are possible in APA and anywhere else in PKNP, (except in other CPAs, to be confirmed), the schedules of patrols have to change, taking into consideration the observations of HUMY team, for example important and systematic poaching observed early morning (5h30-7h00) in AT- CPA by V. Romera (HUMY). Night patrols, when most of illegal activities are suspected to happen, are considered by both CPA members but they have requested additional funds for gasoline and food costs. One additional ranger is also requested by the PKNP rangers.

A system of bonuses should be set up to encourage the patrols members and increase law enforcement. They could be based on the Be Treed model, should be finalized and proved by PDoE, should be given only when perpetuators are caught in action and should be share equally between all participant of the patrol.

A draft of these bonuses and the conditions to obtain them is under reviewing between all partners (ADF, HUMY, PDoE). Once approved, it should be included in the project's next budget. Higher payment of patrols in April and May could ensure more patrols during this festive period. With this improved system, ADF believes the CPA members will prevent more environmental illegal activities crimes, will take more ownership of their protected areas and will enhance their environmental awareness.

Over a year of patrolling collaboration between ADF, CPAs and PDoE ensures a good collaboration. Preliminary meetings between HUMY/ADF/ PDoE should ensure the basis for a new, larger and more efficient patrolling system, to be discussed and agreed with the 2 CPA, before starting. Bonus retribution conditions should be made absolutely clear between all parties to avoid any misunderstandings and given only when they correspond to the predicted cases.

Training by handicrafts producers from PKNP to villagers and young students
In order to transmit this knowledge and raise awareness among the young generation, ADF will organize trainings in 2 schools for mat production: 4 trainings per month in 2 schools for children (grade 5 and 6 in SL {23 children in 2023} and 5 to 6 in AT (# of children to confirm}), from February to April 2023 in SL then from May to July 2023 in AT.

Whereas the mat transmission of knowledge and production does not seem threaten, the 2 other training (baskets and knives) should really be implemented, otherwise this knowledge will not be transmitted and the products will not be available anymore.

For the basket production trainings, ADF will follow up and encourage the production so the 2 trainees (including 1 handicap person) in Sangke Lak village can get more experience and produce by themselves high quality products. For the knife/cutlass production training, ADF will follow up and encourage the production and seek for trainee, to assist the producers. Other identified producers could be involved in the project such as the ones from, Popel, Khlah Khmum, Ta Penh, Thma Chruogn and Phum Thmey villages.

Difficulty to find trainees for baskets and knives trainings should be mitigated by the large order Kulen Crafts received. However, this does not solve the transmission of knowledge problem and ADF will endeavor to find persons in need and motivate them to attend trainings.

Promotion of handicrafts from PKNP

Kulen Crafts should be set up as a social enterprise, with its own bank account (with 2 names to control it: Ms. Chhun Phirom + 1 to be selected). The model of this social enterprise could be based on the Siem Reap Green Farmers Association, set up by Agrisud International to sell the products grown by the farmers they have supported. More information is required. It will ensure transparency, respectability and sustainability to Kulen Cratfs.

The price tags to update should be standardized with the Kulen Crafts logo, price of the item, size, name of producer and village.

Any large order (as the Angkor Grace one in 2022-2023) helps to increase the profits. However, and since the production is small and slow, it is recommended to get only one similar per year, carefully balancing it with other smaller orders, as the offer cannot easily meet the demand. Time should be left to the producers to create items to be bought and sell in several retailer's places, identified in a list. This list is a work in progress and many contacts need to be (re)activated to promote Kulen Crafts on a wider scope. As the production is limited, a large stock quantity is not possible for each of these retailers. The scarcity of the objects will ensure a higher value.

Priorities has been defined between all these retailers to constitute a stock large enough for each of the most important ones. The shop funded by ADF and Agrisud International (managed by the Siem Reap Green Farmers Association including Phnom Kulen beneficiaries of Agrisud International /ADF alternative livelihood project) at the eastern entrance of PKNP (by the Orchid Garden) should be given priority for buying and exposing handicrafts items, considering ADF's financial participation for the shop's construction (from ADF's alternative livelihood component).

This shop is now built and its management team and internal design for displaying items should be organized in the 2 coming months, with an expected opening before Khmer New Year, in April 2023. The Kulen Crafts stock should also be maintained accordingly to the sales. The list of rivers (where pandan grow) and places where artisans collect their raw material should be collected with GPS points. ADF and PDoE should after define small protected areas (PA) to ensure the permanent availability of the raw materials (bamboo, pandan and rattan). Cotton is rarely product in PKNP. When it is the case, it in only by a few old ladies to produce cotton balls, only use it to make lamp wick. Other use and possibly market could be thought with a further project.

Lack of items due to a low and insufficient production can be mitigated by buying items as soon as they are produced and sold, and stock them in Siem Reap and/or at retailer's shops. Ensuring protected areas to allow raw material to row can be establish by setting up meetings with villagers, PDoE, Park direction and rangers, after identification of the areas by GPS. The identification of these areas can be asked to CBTC responsible and/or CPA members and the data collected and combined by ADF/ Park direction.

Funding, management, monitoring and reporting of the project:

The donor for this project, HUMY French NGO, has agreed to continue its support for the years 2023 and 2024.

Since January 2023, Ms. Chhun Phirom is only available one week per month. However, due to the 15-months project period (since October 2021) and ADF long and permanent presence in PKNP, we believe this should not affect the supervision of the project, considering her strong commitment and the practices deployed already for every aspect of the project (CBTC, CPA patrols and handicrafts production).

ADF will continue to monitor the administration, the activities and the financial aspects of a further project, in close coordination with HUMY, PDoE and all other partners.

However, the objective is to get away from the villager's dependence from ADF so they reach autonomy, in particular for the 2 CBTCs and the handicrafts. The funding of patrols is still essential to ensure motivation and results.

ADF's permanent presence in Phnom Kulen and good relation with all partners involved was developed over the years. Some activities (CBTC tours by CBTCs and patrols by CPA) can be fully delegated once upgraded. Handicrafts processes and contacts are made (producers and retailers) and need to be motivated and re-activated. It can be partially done from Siem Reap.

Development of eco-tourism and ADF presentations to Terre Cambodge travel agency visitors

Reminder: In order to create another source of income for the villagers, ADF previously helped Terre Cambodge to select families who are willing to develop home stays in Anlong Thom and Sangke Lak villages. Terre Cambodge built toilets for the beneficiaries and they received cooking and hygiene training. The tour organiser can also buy the products farmed by the villagers (vegetable, mushrooms, fish, chicken). ADF has also advised Terre Cambodge to select motivated villagers to join the group of visitors, as a local guide. Having westerners' visitors in their households, or being a local guide, also provide an opportunity for a unique cultural exchange, for both visitors and villagers.

From January to March 2020, this Income generation/agriculture project (IG) component was still supported by Terre Cambodge travel Agency and Frangipani Spa. Due to the C-19 pandemic, international tourism has completely stopped in Cambodia in March 2020 and these donors were no longer able to support any longer ADF. From March 2020 onward, it was no longer funded by these two donors but financial reserve of funds was made over these years of regular funding, and ADF was able to go through the years 2020 and 2021 by using them. The funding of this component was then ensured by SEAF with the ALIVE project. The regular donations from a faithful private donor (Mr. Eric Bettens and his friends) was also fully allocated to the Income Generation Component.

In return, ADF provides presentations to the visitors from these tour operators about the ADF activities. Visitors are encouraged to give private donations in cash to ADF, which are dedicated to the IG budget. In some cases, if the tours are long enough, visitors can also participate in the IG activities with the beneficiaries (ex: help the farmer to maintain his vegetable farm).

Since the C-19 pandemic stopped all tourism activities and Terre Cambodge is not sponsoring the IG component, there were no presentations done during the year 2022.

d. HYGIENE AND SANITATION PROGRAM/EMERGENCY RELIEF

Hygiene and sanitation program: the WISH 2 project

Reminder: The WISH (Water In-environmental Sanitation and Hygiene) 1 project, focusing on Hygiene and sanitation, was designed and proposed to the Almayuda Fundación (Spain) in March 2018 and started in June 2018. The WISH 1 project was based on the Karolinska Institute report from the assessment of the Start Me Up (SMU) project, but also on the activities undertaken by ADF in Sangke Lak primary school, with the KURERE project (KUlen REhabilitation and REgeneration project), from September 2016 to February 2018.

The objective of the project was to promote and disseminate correct personal hygiene behaviour change, building and expanding on the successful KURERE project. The project aimed to promote and develop Water Sanitation and Hygiene facilities in two primary schools on the plateau of Phnom Kulen National Park (Klah Khmum, Sangke Lak). The project was combining hygiene (multiple daily hand washing and teeth brushing, regular nail-cutting, weekly training sessions) and environmental awareness practices (regular school cleaning). Both interventions will foster preventative healthy behaviour to primary school children, resulting in affirmative life skill behaviours. The third intervention was to rehabilitate or built efficient water systems and hygiene facilities in the primary school of Ta Penh, Sangke Lak and Khlah Khmum.

The project started in June 2018 with an assessment or baseline survey until August 2018 (See ADF 2018 activity report). Almayuda Fundación representatives visited the Phnom Kulen schools with ADF team late February 2019. Two reports were submitted to the donors (in April 2019, covering the period from June 2018 to March 2019 and in June 2019, covering the period from April 2019 to June 2019). These project reports narrate the activities implemented during the first 12 months of the WISH project (June 2018 to June 2019), presenting every activity, challenges met and solutions found, as well as plans for the futures and expenses and were summarised in the 2019 ADF activity report for the Charity Commission.

The **WISH 1** project was originally planned from June 2018 to May 2020 (24 months). Due to the C-19 crisis and the closure of all schools in Cambodia on the 17th of March 2020, it was decided with Almayuda Fundación to shorten it until the end of April 2020, one month prior to the original closing date. The remaining budget was used for an adapted project (C-19 WISH, see below). Before the end of the C19-WISH project, another project (WISH 2) extended to additional schools, was submitted for funding to Almayuda Fundación. The final report for the WISH 1 project was submitted to Almayuda Fundación in May 2020 and was summarised in the ADF 2020 report. The C19-WISH report was also summarised in this report and submitted to the Almayuda Fundación in January 2021 and is summarised below.

The WISH 1 external and independent evaluation started in November 2019 until February 2020. It assessed how the project performed and provided recommendations for further action. It was done by medical student Mr. Sebastian Von Shreeb and his assistant Ms. Kong Leaksmy (at no cost for the project). A mixed methods approach was applied, including research-administered surveys, semi-structured interviews, site inspection, microbiological testing and analysis of health centre admission data. The result was a high-quality report, evaluating positively the methodology and the results of the WISH 1 project. The Evaluation report encapsulated some very positive results and findings, alongside with 17 recommendations. They included a filter water campaign, a module on menstrual hygiene, a review of hygiene teaching methods, fact-checked health information for monthly teaching sessions and educational opportunities for staff-training. Some of them were piloted from February 2020 but had to stop from the 17th of March 2020, as all school in Cambodia were closed due to the Covid 19 pandemic.

Others recommendations, such as the expansion of the project in the nearby schools of Ta Penh and Popel (as requested by their teachers and where ADF has an important level of Involvement for the development of the villages: agriculture alternative livelihoods, tree nursery, forest zoning and protection, CBTC, water systems), where water and sanitation facilities were missing and with numerous children registered, required a larger project and were therefore included into the WISH 2 project. Other challenges remained and should also be addressed in a future project: For instance, the evaluation found high levels of faecal contamination in the tap water the children drink from. Also, a large majority still practice open defecation, which contaminates soil and water sources. Project staff lack basic education in the concepts of water, sanitation and hygiene, as well as the principles of health behaviour change. Moreover, girls largely lack access to any information about menstrual hygiene management. Finally, there is a large risk that achieved improvements will be lost if involvement in the schools ends abruptly.

The COVID 19 Water In-emergency Sanitation and Hygiene (**C-19 WISH**) project was adapted from the WISH 1 project, after the C-19 global pandemic struck the world in the first quarter of 2020. It started in May 2020 and lasted until December 2020. The predominate effect on ADF's WISH 1 project was the closing of the Khlah Khmum and Sangke Lak primary schools. Like all schools in Cambodia, they were closed to contain the spread of the C-19, from 16th of March to 7th of September 2020. From 30th of November 2020 to 11th of January 2021, a second closure of all schools in Cambodia was decided by the government.

Due to these extraordinary circumstances and after communications in late April 2020 with the Almayuda Foundation, the donor supportively agreed to change the WISH 1 project into an emergency COVID 19 Awareness and Avoidance Campaign and to support the under-resourced Khnong Phnum Commune / Phnom Kulen's Health Centre. The objective of this project was to help fighting the pandemic in the villages of Phnom Kulen with C19 preventive activities. It was combining C-19 awareness sessions with environmental education, hygiene sessions for hundreds of Khnong Phnom Commune villagers and preventative health care equipment and materials distribution (posters, disinfectant, cleaning materials and soap). Additional donations allowed to distribute more hygiene materials.

From the project inception (in partnership with the Anlong Thom Health Centre staff) to the procurement of all equipment and materials and their transportation to Phnom Kulen, ADF-WISH team has hold 57 C-19 preventative sessions, organized in 9 villages and involving 708 participants. ADF team insisted on getting the right information (from the World Health Organization and from the Cambodia Ministry of Health as opposed to rumours), on being safe by following the basic health precautions (social distancing, repeated hand washing, distribution of 180 sealed water buckets with a tap to every household in Khlah Khmum and Sangke Lak village and numerous hygiene related items, all listed in ADF 2020 report.

Cambodia has been -on a sanitary point of view- very little affected by the virus, compared to other countries in the world. However, the economic consequences are very important, with a total shut down of the international tourism for example. As the general pandemic is evolving, facts and mitigation / prevention measures were also evolving and updating. Consequently, clear communications, flexibility in planning and activity implementation were essential in implementing this emergency projects. The Anlong Thom Health Centre and the Svay Leu district authorities were very supportive in working with the ADF C-19 WISH team, adjusting activities on a need's bases.

If the C-19 pandemic in Cambodia is not as dramatic as in other countries, the C-19 WISH project in Phnom Kulen has given the opportunity to raise awareness towards villagers about the risks of a pandemic and to reinforce messages on general hygiene practices in households. Lessons learned from this project, and particularly the fact that hygiene practices at home are not always respected as in schools, should be associated, as much as ADF can, within the WISH 2 project, starting from January 2021 onward. Overall, the final incomes and expenditures are balanced and all the funds allocated for the C-19 WISH project were spent.

WISH 2, 2021 (=year 1) summary report, see ADF report 2021.

Reminder

Proper personal water-based hygiene practices (washing hands and body with soap, tooth brushing) are positive habits vitally important, for both individual's health and for the community in general. It is now even more vital in stopping the development and spread of illnesses, infections or viruses such as the COVID 19 pandemic.

The purpose of the WISH 2 project (2021-2024) is the expansion of the Water In-environment Sanitation and Hygiene (WISH 1) project. It was formulated in the WISH 1 project's 16th and 17th recommendations, from the external independent End-Line evaluation. The WISH 1 project addressed basic hygiene practices and infrastructures in Khlah Khmum and Sangke Lak primary schools. The WISH 2 project aims to develop them in Popel and Ta Penh villages and to address issues observed in the WISH 1's external evaluation.

Many schools still do not provide access to toilets with running water, wash bays and waste facilities in Cambodia. Open defecation is still very common in rural areas (Water, sanitation and hygiene UNICEF Country Programme 2019–2023). Providing children with clean drinking water and adequate toilets, and instilling in them the need to wash their hands are the most effective ways of reducing illness, ensuring they develop into healthy adults. Diarrhea, which often results from poor sanitation and hygiene, is a major cause of children's illnesses. Anaemia and worm infections is impeding mental development and lead to a loss of physical and mental energy. Heavily infected children will not grow as expected for their age and in more severe cases, it leads to stunting and impaired brain development.

At the inception of the WISH 2 project, Popel primary school had no piped water, Popel and Ta Penh toilets schools were not functioning and had no rubbish bins and waste disposal. On the other hand, Sangke Lak and Khlah Khmum primary schools where the WISH 1 project was implemented had functioning hygiene equipment and children had very regular hygiene practices.

In light of the Coronavirus pandemic and such as in 2020, when the WISH 1 project was modified into a C-19 WISH project, ADF expected particular circumstances challenging the WISH 2 project's implementation. In 2021, the WISH 2 project was very disturbed by the closure of the schools. However, ADF team adapted to the pandemic situation with a clear communication with all project key stakeholders (health centre staff, teachers, parents, local authorities) and the donors, Almayuda Fundaciòn. In December 2021, as the challenges imposed by the pandemic eased in Cambodia and the schools reopened in November 2021, ADF was able to relocate the project as originally conceived in these 4 primary schools of Khnong Phnom Commune.

The main activities of the WISH 2 during the year 2021 were described in 8 paragraphs in the ADF 2021 report: arranging a meeting venue to inform all stakeholders; develop a baseline survey methodology along with questionnaires; project management, oversight and accountability; procurement of WISH 2 supplies, provisions, materials; rehabilitation, construction and maintenance of the water and sanitation (WASH) facilities in the targeted schools; preventative sanitation hygiene health care educational training; environmental education in the targeted schools and Covid 19 pandemic restrictions for the WISH 2 project and adaptation of the project.

WISH 2, 2022 (=year 2) summary report.

Project inception, introducing the project to all stakeholders

RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in details in the first progress report, covering the period from January to October 2021. The WISH 2 project is conceived as a 4-year project, from 2021 to 2024.

Conduct a baseline survey

RESULTS: This objective was successfully achieved at the inception of the WISH 2 project and narrated in details in the first progress report, covering the period from January to October 2021.

WISH 2 Project management, oversight and accountability

RESULTS: This objective is being successfully achieved. The achievement of results and the progression of activities were narrated in details in the first progress report, covering the period from January to October 2021. From November to December 2022, some refinements and minor adjustments were done as results unfold and were attained during the implementation of the WISH 2 project.

Management, project oversight and especially accountability were thoroughly explicated monthly and minor adjustments to the project activities are implemented, streamlining the interventions of the project to maximize outcomes / results.

One of the main events was the departure in April 2021 of Mr. Khem Savann from the WISH/ADF team for personal reasons. A selection of candidates from Phnom Kulen villages was done by ADF. After interviewing three of them, Ms. Soeng Seath was recruited in June 2022 with a 3-month

probation period (June to August) then proposed a contact until the end of the year 2022. She was briefed by ADF WISH team and closely monitor by ADF Hygiene and school supervisor (Mr. Seng Samry). Ms. Soeng Seath settled into her position extremely well and alongside with the rest of the WISH team. She has been very supportive in the WISH 2 Mid-Term Evaluation.

Trainings of ADF WISH Team:
From the 20th to the 22nd of September 2022, Mr. Seng Samry attended to the training in Battambang city organized by CWASH, CWAST, WaterAid, Australian Aid, on "Design and construction of latrines in normal and environmentally challenging areas". This will be particularly helpful as ADF is planning to apply for funds for toilet building in the Kulen villages and if additional toilets are built in the WISH targeted schools.

On the 1st of November 2022, ADF WISH team (Mr. Seng Samry, Ms. Loem Nimul, Ms. Soeng Seath) attended to the workshop in Siem Reap city entitled "Household water treatment and Safe storage", organized by the Ministry of Rural Development (MRD). A few important documents were shared such as the National Action Plan, Rural Water Supply, Sanitation and Hygiene, 2019–2023, MRD; the National Guideline for Household Water, Treatment and Safe Storage (HWTS), Department of Rural Water Supply, MRD.

After 15 years of implementing archaeological and development projects on Phnom Kulen, ADF has adapted, and refined its project management and accountability in 3 key areas: 1) close and clear communication with all stakeholders, 2) Initiation, planning, execution, monitoring of projects; 3) working within constraints like global pandemics, limited infrastructure (tracks as opposed to roads), budgets limitations and evolving schedules. With this professional management, project oversight and transparent accountability, ADF has successfully concluded numerous projects, which have been documented in numerous reports and evaluations.

Procurement of WISH 2 supplies, provisions, materials
RESULTS: This objective was successfully achieved. The achievement of results and the progression of activities were narrated in detail in the first progress report, covering the period from January to October 2021. From November to December 2022, some refinements and minor adjustments were done as results unfold and were attained during the implementation of the WISH 2 project.

Procurement of essential hygiene products are purchased as required by ADF team, on a needed-basis. This activity has been scaled down during the school holidays and scaled up in 2023 when the schools reopened.

Rehabilitation, construction and maintenance of the WASH facilities in the targeted schools
RESULTS: The main requirement post installation of the school's water, sanitation and hygiene facilities is maintenance, to insure they are fully functional. The WASH facilities of Sangke Lak and Khlah Khmum needed to be refurbished to ensure an above minimum standard to hygiene. Water facilities needed to be overhauled; some toilets required minor repairs to prevent blockages. Broken tiles were replaced and leaking pipes and taps needed to be either resealed or replaced. Khlah Khmum and Sangke Lak primary schools essentially needed the most upgrading, as their WASH facilities were the oldest, as they were constructed in the WISH 1 project. In Sangke Lak primary school, ADF proceeded to the refurbishment of the old "Halo Trust" water tank at Sangke Lak school. Some minor cracks were sealed, to ensure it was watertight and it was covered with a tin sheet roof to prevent contamination.

The common maintenance issues with all 4 targeted primary schools are blockages and leakages, from the water sources, as the water source of all 4 targeted schools comes from springs by gravity, with system of buried pipes and control points with ring wells. The recurrent causes of blockages and leakages for all 4 schools are leaves, plants root intrusion, soil accumulation. Roaming animals gathering around the springs, ring wells and pipes are another common cause of the leakages, as

they dig-up and destroy the water pipes. This is anticipated to be an ongoing challenge as roaming animals, both domestic and wild are extremely difficult to keep away from water sources.

Preventative sanitation hygiene (WASH) health care educational training

RESULTS: From January to December 2022, the implementation of these sessions was done by the teachers of each school and ADF staff (each teacher responsible of his class), using the functioning wash bays. These training sessions are repeated on a daily basis, 6 days per week. Monitoring was undertaken on a regular basis by ADF WISH team, not only to ensure the activities were undertaken, but also to improve the training, making the activities more exciting, user-friendly and relevant.

Health prevention is far more advantageous than cure, as it strives towards student absenteeism, one WISH's 2 objectives. This central objective is being achieved with the support of Phnom Kulen's health center staff, who visit all 4 primary schools 1 time per month and check on the health and well-being of the students, with their medical expertise and resources.

Another important sanitation and hygiene intervention is the teaching of the very sensitive, but crucial subject of your girl's menstruation. These teaching sessions happened 2 times per year (4 sessions each time) in all 4 primary schools: one time with the 2 WISH women's team and the second time with the WISH team, combined with the health center staff. These activities are sponsored by the South East Asia Foundation (SEAF). Presentations were designed by ADF team and presented during special classes to facilitate the 12 diseases prevention sessions and menstrual hygiene sessions.

In order to ensure sustainable behavioural change, ADF is strongly encouraging schools and their communities to adopt regular Hand Washing With Soap (HWWS) as when applied regularly will serve as a barrier for further transmission of communicable diseases including COVID 19.

This critical objective is to prevent the spread of infectious diseases and helping children to have long and healthy lives. It also prevents them from missing school, resulting in better learning outcomes. A better hygiene means avoiding illness and spending less financial resources on healthcare.

Conduct a mid-term evaluation

RESULTS: The midterm evaluation begun on Monday 28th of November 2022 for 4 weeks. Initial plans included the preparation a literary review, the midline questionnaire and methodologies, the securing of the survey resources, to prepare and mobilize human resources and to secure and organize transport, among other logistics arrangements.

The literary review of all relevant documents provided the evaluation team with an in-depth view of the core aspect of the project. This combined with internet research was helpful to gain a regional and country prospects.

The questionnaire survey designed was the main "On the Ground" tool as it was used to find out more about the views and experiences of the beneficiaries and related stakeholders. The use of a "tick the box" questionnaire (that can be answered with a yes or no response) was developed, as the evaluation team would like to survey as many beneficiaries as possible. In-depth interviews with beneficiaries who were largely involved with the project gave the evaluation team particular insight. Focus groups discussions were a useful tool to triangulate and clarify information gained from the other evaluation tools, including ground observations, ground truthing and in-depth interviews. All these tools gave the evaluation team insights and provide valuable information to formulate the evaluation report, recommendations and conclusions.

The midterm evaluation was sent to the donor in a separate report together with the 2022 second report.

WISH 2 Mid-term evaluation report and recommendations:
Due to the nature of the WISH 2 project -- a sanitation, hygiene, and water accessibility project, targeting 4 primary schools on the Phnom Kulen plateau -- the survey tools, techniques, and methodologies were tailored specifically to the primary schools WASH project, rather than for a community WASH project.

Moreover, the midterm evaluation focuses on the value of education and awareness of personal hygiene of menstruation hygiene and education among girls and adolescents. In essence, it represents the importance of personal hygiene and the interconnectedness between family health and thriving environments.

Two important qualities of this evaluation, as with all measurement instruments, are consistency and validity. If different instruments and questions were asked and used, the consistency, accuracy and validity of the midterm evaluation would have little to no meaning significance or purpose.
The main objective of this WISH 2 midterm evaluation is to compare the data of the respondents / beneficiaries over a 2 year period, since the WISH 2 Baseline Evaluation was published in 2020. The midterm evaluation paves the way for the WISH 2 project's improvements and attainment of the objectives, stated in the WISH 2's project proposal.

During this midterm evaluation, a total of 119 interviews were conducted, from November to December 2022: 104 students were interviewed across the 4 villages (Sangke Lak, Khlah Khmum, Popel and Ta Penh), as well as 5 parents at the Household level. The midterm evaluation team also consulted with 7 teachers (2 from Sangke Lak, 2 from Khlah Khmum, 1 from Popel and 2 from Ta Penh Primary schools). Finally, 3 of the ADF – WISH team were consulted on a daily basis.

The methodology fundamentally remains the same as in the WISH 2 baseline, using tools and techniques predominantly used in the sphere of ethnographic research with qualitative research methods which include: on-site observations (ground truthing), randomly chosen one-on-one interviews, focus groups discussions (grounded theory).

The evaluation tool was a responsive questionnaire, based on the previous baseline questionnaire from WISH 2. Questionnaires are a powerful tool for gathering quantitative data, particularly if budgets and time resources are limited. However, the evaluation team should be aware of the advantages and disadvantages of relying exclusively on a questionnaire.

The main advantage of the questionnaires is that they are highly representative, consistent in standardization, and they can be scaled up as and when necessary. The main disadvantage is that if the question and explanation are not very clear, the response can be subjective. The best way to avoid this situation is to create simple questions that are easy to answer, by a positive or a negative answer. Too many open-ended questions can produce inconsistencies in data. In order to avoid this situation, it is recommended to formulate the questions as simple and straightforward as possible.

Additional Midterm Evaluation Instruments, Key informant and parents' interviews:
These interviews were conducted to obtain dynamic information about the community. The key informant interviews were also used to correlate, cross-check, confirm or challenge the questionnaire responses. In some cases, the questionnaire responses were disproved. A primary example is the responses to question 2 "Do you have a functional toilet and shower room at your house?". In some cases, the site inspection confirmed or disproved the response to that question. Key informant interviews can also be an effective tool to assess whether the needs of the community have changed over time. This is a particularly useful tool for the midterm survey. Parents interviews were included in the key informant interviews.

The parent interview comprised of a group of people, who formed a representation from the WISH targeted village primary schools. A qualitative sampling methodology was applied, by asking those who had children at the respective primary schools. Their views, response and feedback were valuable source of information that contributed to this evaluation.

A visual observation checklist was used during the baseline survey, as well as a physical walk around the school compounds and surrounding areas. The school areas were also photographed from the ground using a digital camera. The combination of these observation tools determined what was there and what was not there, in terms of water, sanitation and hygiene infrastructure and materials. This also included the Information, Education and Communication materials (IEC).

The visual observation survey explored the accessibility to water, the availability of purified drinking water, the hand washing facilities and the latrine conditions amongst other sanitation and hygiene accompaniments. Please refer to the photographs in the photo gallery section of this report and the tables below.

As in previous evaluations, testing of the water quality at all targeted primary schools was analyzed by Water for Cambodia, a Siem Reap-based NGO. Water for Cambodia used the microbiological testing method which identifies total coliforms (a type of bacteria) and faecal coliforms in drinking water. The faecal coliform test (most commonly tested for thermotolerant coliforms or Escherichia coli) indicates the level of faecal contamination in the water and how safe the water is to drink.
The test results for all 4 primary schools were positive, meaning that the water is safe for drinking.

One of the strongest aspects of the WISH 2 project is the daily hygiene practice, which has resulted in an increased hygienic level among schoolchildren, due to the extensive effort made by ADF team and the teachers of each school. Group sessions for hand washing with soap, toothbrushing and nail-cutting has two benefits. First, the intervention establishes a habit of hygienic behavior, second, it meets the daily needs of appropriate daily hygiene requirements.

This midterm evaluation report presents the results of the WISH project. They were presented in a similar format to the End-Line Evaluation reports of the WISH-1 and the Baseline Evaluation for the WISH-2 projects in a separate report. The achievements of results can therefore be compared more easily. The results were depicted in chart forms with justifications and explanations narrated beneath.

The evaluation recommendations are based on its findings, data analysis and verifications, together with the triangulation from the respondents of the various instruments employed in the WISH projects Mid-Term Evaluations. The proposed recommendation is designed to be clear, therefore brief, realistic, and actionable, with the purpose to enhance the project for the next two years.

Recommendation # 1
Recommendation 1, arguably the most important one, is to add chlorine into the water in the primary school's water holding tanks. By chlorinating the water correctly, it will eradicate dangerous germs like bacteria, viruses and parasites and therefore, reduce sickness and intern student's absenteeism in attending schools.

This will work towards attaining the WISH 2's project objective to further promote (build upon the WISH 1 project) sanitation and hygiene behavior change, and to scale up the hygienic and sanitation practices in four rural village primary schools in order to improve the pupil's health and wellbeing, and improve their school attendance. In order to get safe water to drink, the correct dose and timing of chlorine is to add on a weekly basis, a general ratio of around 1.5 full teaspoon of chlorine per 1,000 litres of water, to achieve 3-5 ppm of chlorine. Chlorine is a cost-effective method to eradicate E-Coli and other water pathogens that are harmful to human consumption.

Recommendation # 2
It is recommended to investigate a new water source for Khlah Khmum primary school, as indicated from the information from the ADF team and the teachers at Khlah Khmum school. The actual water source sometimes dries up in the hot season. Domesticated and wild animals were also reported in some cases to drink there, with the risk of polluting the water with their excrement.

The evaluation team suggest to build a facility around the new source to protect it from the risks of infection. A long steel tube (of 3 to 4 meters in length) could be placed into the ground and the source could be surrounded by a fence and protected by a roof to prevent it from roaming animals. The exit pipe taking the water to Khlah Khmum school should be deeply buried, at least ½ a meter. This was already done by ADF for the Sangke Lak and Khlah Khmum water sources.

Recommendation # 3
It is recommended to repaint the footprints from the toilets to the wash bay with a stronger paint, as the original ones are getting worn out.

Recommendation # 4
It is recommended that all of the key stakeholders and particularly all teachers from the 4 primary schools received a training from Water for Cambodia. This training should focus on 1) maintenance and benefits of the cement water filters provided by the WISH 2 project, 2) maintenance of the school water systems, 3) appropriate use of chorine (doses and timing) to ensure the water reaching the schools is of the best quality and as fit for human consumption as possible. This training should be taking in consideration the particular context of Phnom Kulen, with its remote and harsh environment, water system from natural sources functioning by gravity, presence of roaming animals, necessity to maintain these systems…

Recommendation # 5
It is recommended that the 2 female members of the ADF WISH team (Ms. Soeng Seath and Ms. Loem Nimul, ADF's Hygiene Assistants) receive a training on menstruation, to disseminate the importance of menstrual hygiene to the relevant students.

Menstruation courses could be implemented in partnership with local NGO such as Build your Future Today (BFT), which has already been active in Phnom Kulen to the invitation of ADF, using the Information, Education and Communication materials available.

Recommendation # 6
The school libraries (funded by the S.E Asia Foundation) are proving to be very popular at all 4 primary schools. Therefore, it is recommended that books in Khmer on the importance of clean water, sanitation, personal hygiene and environment should be procured. This would reinforce the importance of personal and community hygiene and sanitation, thus helping to achieve the WISH 2 project goals.

Recommendation # 7
Khlah Khmum school is the only one of all the 4 targeted schools not to have an ADF supported tree nursery. If outside funds from the WISH 2 project could be acquired, the Evaluation team recommends to set up a tree nursery that would help the children to understand the importance of the natural environment, the need to live in an eco-friendly and sustainable environment and the interlinkages between a thriving environment and healthy personal wellness. It would also provide to the school a funds through tree sales to purchase some sanitation and hygiene materials and maintain their equipment. Alternatively, a partnership with the existing (but not functioning, funded by UNEP) tree nursery under the responsibility of the Khlah Khmum Community Protected Area members, involving teachers and students, could be set up.

Recommendation # 8
Outreach visits are suggested by the Evaluation team. The rationale behind this recommendation is that a small number of school age children cannot attend school, for a variety of reasons: they have to work on the family subsistence farms, they have to guard the family house, they have to look after ageing or handicapped family members.

The Evaluation team recommends outreach visits to children that cannot attend school to promote sanitation and hygiene for these unfortunate children, promote sanitation and hygiene to their families and other practical advice, gain contact with the outside world and gain the feeling that they have not been abandoned, target the poorest of the poor.

Recommendation # 9
The Evaluation team recommends hosting a "Lessons Learned" meeting, where all teachers from the 4 targeted schools can meet together with the ADF team. The "Lessons Learned" meeting should be a structured meeting. The value of having this meeting is that there is a greater likelihood to deliver all the information necessary in an orderly fashion. This ensures all participants are well-informed before making and discussing their responses. Minute meetings should be taken so that the achievable decisions / outcomes of the "Lessons Learned" meeting can be incorporated into the next phase of project.

The water reaching all 4 primary schools was tested by Water for Cambodia (November 2022). All water samples were taken from the tap at all 4 wash bays and at each school. They were taken according to the rigorous standard set out by Water for Cambodia. The results are better than all key stakeholders were expecting, which is a positive sign for the WISH 2 project.

Recommendations issued in this report are focusing on:

- Insuring permanent access to quality water to each of the primary schools through repetitive actions (chlorination), infrastructure building (such as the construction of a shelter over and around Khlah Khmum source) and regular maintenance of the water systems.
- Improvement of hygiene and natural environment by continuing the existing hygiene sessions and cleaning up days, with a larger dissemination for the students (books in libraries) and to children that are not attending school, with the eventual setting up of a tree nursery at Khlah Khmum primary school.
- Building capacities for the 4 primary schools' teachers with a training provided by Water for Cambodia on the use of the cement filters and their maintenance, the advantages of chlorination, on for ADF WI□H team on hygiene, water and sanitation in general.
- Continue to build capacities of ADF WI□H team, focusing on water, hygiene and sanitation as well as menstrual hygiene dissemination.
- A lesson learned meeting with all main actors of the WI□H 2 project (ADF team and every teacher) should be hold soon to move forward and establish clear basis for the next phase of the project (2023-2024).

WISH-2 anticipated outcomes have been significantly impacted by the Coronavirus pandemic. Its effect on the results were understandable and expected. School closures affected the dissemination of the hygiene practices as the sessions were not possible at school. If there are any lessons to learn from the COVID-19 pandemic is that hygiene and sanitation are more relevant than ever before.

This can explain the negative answer with 26.67 % percentage to the question "Do the school teachers teach you how to bush your teeth and wash your hands at school?", as well as the negative answer with 51.78 % percentage to the question "Do wash your hands after going to the toilet? [if they go in the forest out: NO]" to the students. ADF team is confident that these rates will evolve positively if the project is continued over the next 2 years.

The lack of toilet in many households is also a problem that keep the hygiene standards quite low in the Phnom Kulen villages. In 2024, ADF will apply for funds to build toilets to tackle this issue.

In general, and over these 2 years of the WISH 2 project (2020-2022) and considering the global C-19 pandemic and its consequences (numerous and repetitive schools' closures, travel restrictions, lockdowns…), the results are globally satisfying. However, they could largely be improved in the next two years (2023-2024) if funds are provided.

Environment education in the targeted schools

RESULTS: In all 4 primary schools WASH facilities and their surroundings are cleaned every day. The clean-up day happens on every Thursday, where the whole school compound is cleaned and rubbish is burnt in the WISH incinerators. Children collect rubbish, teacher burn them.

Since 2022, the MoE set up a system of garbage collection for the schools of Ta Penh and Sangke Lak, every Thursday. In these 2 schools, plastics were previously burnt in the school's incinerators. Access road to Sangke Lak is not possible for the truck, so ADF car regularly brings the Sangke Lak garbage to Ta Penh school. For Popel and Khlah Khmum schools, wastes are burnt in the school's incinerators.

Preventing environmental pollutants can reduce health problems like respiratory diseases and water borne diseases. A cleaner school environment can also be repeated at home by the students. The integration of the Environmental Educational objective in the WISH 2 project helps the children to understand the importance of the environment and provides them with the building blocks they need to live eco-friendly and sustainable lives.

WISH 2 project challenges and constraints

The predominant challenge of the WI□H 1 and 2 projects has been the lack of infrastructure in the project area. Unlike a developed country there is no access to 24/7 water distribution and electricity. The difficulty of access to the project sites, with no proper road network, is another main challenge in particular during the rainy season. Popel and □angke Lak villages are often not accessible by car during the rainy season. Khlah Khmum and Ta Penh are now easier to access.

Other noteworthy challenges are securing a constant supply of water to the 4 primary schools, particularly during the dry season. ADF mitigates against this constraint by adding extra water storage tanks and repositioning water pipes at Popel and Ta Penh primary schools. This requires constant coordination and discussions with local authorities (Commune and Village chiefs) and villagers. In 2022, the source providing water to Khlah Khmum school dry out and ADF team had to reposition the pipes to another one in the village.

Ensuring the quality of water that comes out of the taps all over the world is a constant challenge. It is also a challenge for the WISH 2 project. ADF recognizes this fact as a risk to a successful outcome of the project, and is constantly seeking solutions to address the challenge. During the WISH implementation period, ADF has put into place cement water filters and applying minimal and correct dose of Chlorine into the water storage tanks. Thus far, these have resulted in a fair to good results. However, there is a general belief that this product his very harmful and a strong education campaign has to be done toward teachers, students and villagers.

In the near future, ADF will experiment a UV water purification system at the Ta Penh primary school, when it will be connected to the new electrical grid system. If this system is giving good results, it could be extended to the 3 other schools with additional funding to install large solar systems.

Despite these constraints, the WISH 2 project is achieving positive results, changes and outcomes, that should be reinforced.

COVID 19 pandemic restrictions

As the world is learning to live with COVID and due to the fact that the vaccination campaign in Cambodia was one of the best in South-East Asia, the situation gradually went back to normal. As of November 2021, schools were mainly functioning normally in Cambodia. Children are now mostly

vaccinated against COVID-19. Despite a small percentage of contamination with the Omicron variant (mostly in Phnom Penh), the governmental strategies seemed to be working and the closure of schools appears to be an event of the past.

Other interventions implemented by ADF but not funded by Almayuda Fundación are also contributing to the hygiene of the students and the environment of the schools. They are complementary to the WISH 2 project and objectives and are made possible thanks to ADF's multiple partners and global approach to the Phnom Kulen National Park. The other institutions, partners and donors contributing to the hygiene of the students and the environment of the schools are detailed in the chapters below (Complementary projects for the Educational support and Environmental component: Tree 2 and Humy3 projects).

Emergency Relief support and collaboration with Khnong Phnom Health Centre in Anlong Thom

The Khnong Phnom Health Centre in Anlong Thom is the only public health facility for the population of this commune (4,926 inhabitants in Dec. 2022). ADF hold monthly meetings to coordinate activities. The Wish 2 project is implemented in close collaboration with the centre. As every year, a coordination meeting with the Health centre staff and ADF team was hold (in January 2022) to determine the needs of the centre (both material and financial) and to agree on following the Emergency Relief support.

In 2021, ADF continued its support to the centre by allocating the left over from SEAF 1 (from the Educational support, see below) to fund ADF's for the Emergency Relief support (D5).

For the year 2022, the funds allowed to pay the transportation costs of the Village Health Facilitators to meetings in Anlong Thom Health Centre (for a total of 40 US$), and the transportation costs for poor people presenting severe health cases to the Health Centre or hospitals (Sotr Nikum or Siem Reap) and back (for a total of 400 US$). In most cases, these poor families have no transportation mode to travel this distance, the roads are in bad conditions, and don't have enough financial resources to buy food while in town. In 2022, 7 persons benefited from this emergency fund to reach hospitals. They came from the villages of Anlong Thom (x2), Sangke Lak (x2), Preah Ang Thom, Khlah Khmum (x2) and were suffering from high blood pressure, injury of the eye, liver issue, amputated foot, centipede bite, surgery cleaning and high fever. They were sent to Damdek Referral hospital or Siem Reap Referral hospital, depending on the cases.

ADF's budget was not sufficient to fund the transportation costs for nurses to the villages for the vaccination campaigns. No material support nor equipment to the Anlong Thom Health Centre was purchased in 2022.

Finally, ADF was also given on regular occasions some clothes by friends to distribute to the poorest families identified by the team, and facilitated the transportation to Siem Reap Physical Rehabilitation centre of one handicapped man (M. Pou Hiep) to change his leg prosthesis.

e. EDUCATIONAL SUPPORT

The objective is to enhance local school facilities and resources, to provide a favourable educational environment in Khnong Phnom commune. If appropriate, facilities are built to create a conducive learning environment that entices the children to come to school and learn, as opposed to staying at home and/or working on the subsistence farms. ADF provide infrastructures according to the teacher's needs.

Reminder: In February 2018, ADF finalised the "Kurere" (for Kulen Rehabilitation and Regeneration) project, started in late 2016, focusing one sole primary school, corresponding to the needs of the most neglected primary school of the plateau: Sangke Lak. It allowed to enhanced the school facilities and encouraged good hygiene and environmental practices. The WISH 1 project started in June 2018 and evolved into the C-19 WISH project from May until December 2020). It was a continuation of the hygiene activities in Sangke Lak, with an expansion to Khlah Khmum and Ta Penh primary school (see above: Hygiene and sanitation program). The TREE 1 project from 2018 to 2020 (funded by Kulara Cie/Eau Kulen mineral water, see below: environmental program) was also focusing in Sangke Lak primary school on the field of environmental education with a tree nursery (as well as Ta Penh and Anlong Thom schools).

To reinforce ADF actions and to answer additional and basic needs in these two primary schools (Khlah Khmum and Sangke Lak), ADF approached in August 2018 the South-East Asian Foundation (SEAF), a US charity, to provide basic missing infrastructures to other primary schools. The original project proposal (funding the construction of a single storeroom in September 2018 at Sangke Lak school) was expanded to a much larger project (SEAF 1), benefiting the 2 schools of Sangke Lak (119 students (64 girls), 5 teachers) and Khlah Khmum school (86 students (40 girls), 4 teachers). This project started in September 2018 until November 2019 and had seen numerous buildings, and construction in both school (see ADF report 2020).

On the 5th of December 2019, several meetings were held between ADF team, the principal of Preah Ang Thom school and the principals and teachers of Anlong Thom, Ta Penh, Sangke Lak and Khlah Khmum schools. The objectives of these meetings were to evaluate the existing collaboration (TREE and WISH projects) and to assess the needs for each school in term of infrastructures and materials. A detail list was established for a further project. On the 14th of January 2020, ADF team met the SEAF Director to discuss further project. It was decided to submit a project in February to SEAF, including the school's needs identified in December 2019. This project was unfortunately not funded.

The SEAF 2 project: Phnom Kulen Primary Schools Development Project

Reminder: This project objective was to build upon the activities started by ADF by providing basic hygiene and learning infrastructures, for three primary schools (Sangke Lak, Anlong Thom and Ta Penh), located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. It is targeting 5 primary schools (Popel, Khlah Kmum, Sangke Lak, Anlong Thom, and Ta Penh), with additional minor infrastructures in 2 others (Phum Thmey and Preah Ang Thom). English classes and hygiene sessions were also provided.

The original starting date was March 2021, for a 12-month duration. However, due to the Covid-19 pandemic, many activities were delayed (English classes, health sessions at schools) due to the school closure, and were implemented when school reopened. It was achieved in March 2023.

The project focus is the renovation of existing classrooms (roof), construction of basic sanitation and hygiene facilities (UV light purification systems, incinerator…) and construction or renovation of basic learning infrastructures (black boards, tables, playground), in combination with providing English classes (for 1 year). It has also funded the costs for the nurses of Anlong Thom Health centre to provide monthly awareness lessons about basic disease prevention and menstrual hygiene, to students of 4 schools.

This project was designed to provide basic facilities to children in primary schools, located in five (5) primary schools (Popel, Khlah Khmum, Sangke Lak, Anlong Thom and Ta Penh villages), all located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. These primary schools do not have the financial resources to upgrade their facilities and little support for the Cambodian Government. Basic hygiene and learning facilities are missing or broken. The project aims to correct this. These facilities correspond to a request from each principal, ADF is only relaying them here with this project.

Phnom Kulen five primary schools are often isolated and there is only one secondary school for the whole population (4728 pers., Jan 2021, Khnong Phnom commune data), providing teaching from 7th to 9th grade only (i.e. not the last three years of secondary school, from 10th to 12th grade). This secondary school is located in Anlong Thom village and kids from other villager located miles away often do not continue to study, due to the lack of transportation needs. This has been partially addressed by a personal donation of 25 bicycles to the students in January 2021, by Mrs. NGUON Rothsophal (Country Director of the S.E Asia Foundation) and her friends.

The objectives of this project were to provide basic infrastructures for these five schools, both for hygiene and learning (including English classes). This project offers a support to the teachers to disseminate better learning and hygiene practices. This proposed project is built on ADF significant experience from implementing similar projects in this same area.

This proposed project focused on young pupils and their teachers of five (5) of the poorest schools on the plateau of Phnom Kulen (Popel, Khlah Khmum, Sangke Lak, Ta Penh and Anlong Thom villages), located in Phnom Kulen National Park (PKNP), Khnong Phnom Commune, Siem Reap Province, Cambodia. Phnom Kulen villages are often isolated and difficult to access due to the road conditions. Some villages, such as Khlah Khmum and Sangke Lak are only accessible by motorbike. At the inception of the project, the population of Phnom Kulen plateau (corresponding to Khnong Phnom administrative commune) was populated by more than 4700 pers. (Jan 2021, Khnong Phnom commune data).

The pupils and teachers were the direct beneficiaries of the project. This represents at the inception of the project: 98 children (including 50 girls) and 3 teachers at Sangke Lak primary school, 107 children (including 56 girls) and 5 teachers at Ta Penh primary school, 69 children (including 31 girls) and 4 teachers at Khlah Khmum primary school, 98 children (including 42 girls) and 4 teachers at Popel primary school, 311 children (including 172 girls) and 10 teachers at Anlong Thom primary school. Additional infrastructures, such incinerators were built in 2 other primary schools: 47 children (including 23 girls) and 2 teachers at Phum Thmey primary school, 300 children (including 156 girls) and 10 teachers at Preah Ang Thom primary school.

The total number of beneficiaries, at the inception of the project was 719 children (including 358 girls) and 38 teachers (including 16 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 2020-2021). Indirectly, the project had repercussion on basic hygiene habits and learning environment for the children and families of the 9 villages, totalling 4728 persons (data: Jan 2021, Khnong Phnom commune data).

At the end of the project, in March 2023, the pupils and teachers were the direct beneficiaries of the project were: 102 children (including 37 girls) and 4 teachers at Sangke Lak primary school, 135 children (including 71 girls) and 6 teachers at Ta Penh primary school, 55 children (including 28 girls) and 3 teachers at Khlah Khmum primary school, 99 children (including 41 girls) and 4 teachers at Popel primary school, 332 children (including 157 girls) and 11 teachers at Anlong Thom primary school. Additional infrastructures, such incinerators were built in 2 other primary schools: 49 children (including 25 girls) and 2 teachers at Phum Thmey primary school, 340 children (including 170 girls) and 11 teachers at Preah Ang Thom primary school.

The total number of beneficiaries, at the end of the project was 1112 children (including 529 girls) and 41 teachers (including 21 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 1st of March 2023). The five targeted villages (Sangke Lak, Ta Penh, Khlah Khmum, Popel, Anlong Thom) represent in December 2022 a total population of 700 families or 3002 persons. Including Phum Thmey and Preah Ang Thom villages (where only incinerator at schools were built), it represents a total population of 1031 families or 4310 inhabitants.

Potential benefits of the target area and the beneficiaries

Schools are the most important places for children to play, learn, and grow, acquiring essential skills, and positive behaviours / habits for their lives. Promoting healthy habits in schools with a good learning environment allows children to make the most out of their education through better health. Teachers benefiting from a good learning environment with associated facilities are happier to teach and have less chance to ask for a new assignment, insuring a low turn-over. Children and young girls benefit from school health facilities regardless of their background, so that existing disadvantages and inequalities are reduced and all have better chances for attaining healthy and productive lives. Children and young people are generally more concerned and receptive to learning and promoting behaviour changes and hygiene practises that influence the whole family. Accessibility, hygiene and education for the young people at schools, and particularly young girls, are the basics needs for them to survive and thrive even in difficult situations of living.

Project Goal, Purposes, Objectives and Results

The project aims to provide and improve basic learning facilities (class rooms and corresponding furniture, fix broken items…) and hygiene infrastructures (incinerator…) in five of the Phnom Kulen primary schools. An incentive salary was given so the teachers who speak English can teach it at selected school. The project combined upgraded hygiene and learning infrastructures to ensure schools are becoming a pleasant place to learn. It also encourages teachers to stay in these remote villages.

The project purposes are to build and expand on the previous project done by ADF with the support of the South-East Asia Foundation in Khlah Khmum and Sangke Lak primary schools, from September 2028 to November 2019, to provide a healthy, hygienic and friendly environment for primary school children to excel, to reply to the needs of the children and their teachers in these primary schools. All activities and items are the result of an explicit demand from each principal, after several meeting between them and ADF team.

The project global objective is to reach higher education standards by offering basic hygiene and learning facilities in primary schools, located in Phnom Kulen National Park (PKNP). The project is tailored-made to each school and implemented by ADF team in coordination with the principals, teachers, school committee and parents. Parents are involved in proving food and material, or labour help. No remuneration was allocated to parents.

The project results should attain minimum education standards with the basic facilities for the overcrowded targeted schools and class rooms, provide basic hygiene, water, and sanitation facilities in the targeted primary schools, participatory cleaning of the school area by systematically deposing of the rubbish in the incinerator, students from Ta Penh, Khlah Khmum, Anlong Thom and Sangke Lak are taught the basis of English in their primary schools.

Project Inception:

A meeting was organized by ADF in march 2021 to inform all stakeholders (Health center staff, teachers, principals) of the project implantation plan and of their roles and responsibilities.

Constructions and Rehabilitations in schools:

Ta Penh primary school:

ADF organized the rehabilitation of the school's roof (5 class rooms) by replacing the old leaking tin sheet one by new ones. The wooden framework was in good condition and kept. On the 2nd of

March 2021, a meeting with the parents, teachers and school committee was organized to mobilize a financial participation (except for poor families with ID card and widows) so they can get ownership. There were 71 families (337 family members) who gave for a total of 1,269,000 riels (317.25 US$), from 5,000 to 20,000 riels per family. The replacement of the tin sheet was done started in April and concluded in May 2021.

ADF organized the construction of an incinerator with a storage area (2 small separated cement slabs), to the northeast corner of the school compound, far from the school and households. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of this school and bring them to the incinerator at Preah Ang Thom village. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are tearing the waste bags.

The replacement of the broken playgrounds item was not done as a swing was installed by another donor in this school. The budget allocated for this was added to the equivalent ones for Khlah Khmum school to upgrade the existing playground. However, ADF purchased 10 new swings in February 2023. Two were installed on the existing swing structure on the 8th of March 2023.

1 UV light purification system was purchased from WFC. However, this has been under estimated in the budget for the 4 schools as our estimation did not include the solar panel equipment, but only the UV purification system. ADF waits the setting up of the governmental electricity system to connect the school and this item, rather than using a solar system. It is planned to be done in 2024 with governmental school money or in 2023, with the sale of the trees from the tree nursery.

In June 2021, ADF organized the setting up of a library in the western room of the building (7x8 m=56m2), using the remaining funds from the furniture in Sangke Lak (see below). The old cement slab was broken, resealed on the top of a good foundation and large tiles were installed. This class room was painted. All wood shutters from each class were fixed and repainted. Metallic frames on each window were paid by the tree sales from 2020.

In March 2023, ADF team organized the building of a cement slab next to the water reservoir and kitchen in Ta Penh school, to facilitate its use and improve hygiene.

<u>Khlah Khmum primary school:</u>
Football cages: this item was built from the 15th of March 2023 by a local builder, with material brought by ADF.

The replacement of the broken playground items was done in March 2023, benefitting from the budget allocated for this expenditure, as well as the equivalent for other schools, to ensure a good quality construction by a local builder, based on the model of the Popel playground (see below).
ADF purchased 10 new swings in February 2023 to install on the existing swing structure. Two were installed on the new swing structure on the 23rd of March 2023.

The metallic school gate was built by a local builder, with material brought by ADF, on the 15th and 16th of March 2023. This will allow a better control of the school access and prevent roaming animals to get in.

1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).

A small cement slab (with 2 smaller separated parts) was built next to the existing incinerator, to the northwest corner of the school compound. Due to the road condition, the Ministry of Environment garbage truck does not collect the wastes in Khlah Khmum village during the rainy season.

Popel primary school:
The existing school reservoir (6 ring wells, funded by the school itself and later raised by ADF within the WISH 2 project) was connected to reservoir opposite the school (built by ADF with UNDP funds in 2019-2020) with a pipe below the road. From April to May 2022 and within the new tree nursery project in Popel primary school (funded by HUMY), 6 x 0,5 additional ring wells were set up on a strong cement slab, forming a second row, insuring a sufficient volume of water for both hygiene and tree nursery activities.

1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).

ADF organized the construction of an incinerator with a storage area (2 small, separated cement slabs), to the southeast corner of the school compound, far from the school and households. Due to the road condition, the Ministry of Environment garbage truck cannot collect the wastes in Popel village.

Learning materials for library were purchased such as notebooks for teachers and cleaning materials for libraries. This component was upgraded from January 2022 with the SEAF 3 project, focusing on setting up a library in Popel primary school and providing books to other schools' libraries (see SEAF 3 below).

ADF organized the construction of playgrounds items with a local builder (1 swing with 6 sitting places and 2 bouncing items) in August 2021.

Sangke Lak village primary school:
ADF organized the construction of the extension of the tin sheet roof for 2 classrooms building (to the south only), to avoid rain during the rainy season in the building. The corresponding slab below was also built. It was done in March 2021. From the 29th to 31st of March 2023, an equivalent roof extension and slab were built to the north side of the classrooms.

A small cement slab (with 2 smaller separated parts) was built next to the existing incinerator, to the northwest corner of the school compound. Due to the road condition, the Ministry of Environment garbage truck does not collect the wastes in Popel village during the rainy season. In March 2023, ADF had the incinerator fixed by replacing the metallic iron grid.

The budget originally allocated for the furniture (tables for students, blackboard…) was not spent as originally planned, as the teachers changed their mind since the project's inception. It was used to complete the costs of the roof extension in Sangke Lak, as well as the floor (cement and tiles and painting for the Ta Penh library (see above)). That budget line also included over spent of Anlong Thom school for upgrade infrastructure like doors, frames and windows (see below).

1 UV light purification system was planned to be installed at this school. However, due to the high maintenance of this system and this school conditions, ADF preferred to upgrade the water quality with cement and sand filters from Water for Cambodia and will add additional ceramic filters in each classroom (funded by the WISH 2 project).

The metallic school gate was built by a local builder, with material brought by ADF, in April 2021. This will allow a better control of the school access and prevent roaming animals to get in.

Anlong Thom primary school:
ADF organized the rehabilitation of the school's roof (building of 3 class rooms, funded and built by ADF in 2010) by replacing the old leaking tin sheet by new ones. On the 9th of March 2021, a meeting with the parents, teachers and school committee was organized to mobilize a financial participation (except for poor families with ID card and widows), so they can get ownership. There

were 96 families (457 family members) who gave for a total of 1,895,000 riels (473,75 US$), from 5,000 to 50,000 riels per family. It was replaced in April 2021.

In July 2021, ADF organized the rehabilitation of the school's ADF wooden walls and window frames, damaged by termites, by a local carpenter.

ADF organized the construction of an incinerator with a storage area (2 small, separated cement slabs), to the northeast corner of the school compound, far from the school and households. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of this school and bring them to the incinerator at Preah Ang Thom village. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are tearing the waste bags.

The replacement of the broken playgrounds item was not done. The budget allocated for this was added to the equivalent ones for Khlah Khmum school, to upgrade the existing playground. However, ADF purchased 10 new swings in February 2023 to install on the existing swing structure. Two were installed on the existing swing structure on the 08th of March 2023.

Phum Thmey and Preah Ang Thom primary schools:
ADF organized the construction of two incinerators with a storage area (2 small, separated cement slabs), to the southeast corner of the school compound at Phum Thmey and to the southwest at Preah Ang Thom. Since August 2021, the Ministry of Environment garbage truck collects every Thursday the wastes of Preah Ang Thom school and bring them to the incinerator at Preah Ang Thom village. The ones from Phum Thmey will be collected from April 2023. Waste burnt in the school incinerator are the ones that cannot wait for this day, as in some cases, dogs are opening the waste bags.

Maintenance of the WASH Facilities in 4 primary schools:
This activity was not possible due to the school closure, from March to November 2021. However, in order to disseminate hygiene practices to the students during the C-19 pandemic, ADF decided to distributed soaps (from March to June 2021), to provide buckets (with taps and covers) for hygiene at a household level to the population of 2 villages. This material was purchased and prepared in July 2021 and distributed (a bucket per family + tap) on the 22nd of July in Popel and on the 4th of August 2021 in Ta Penh. This activity was resumed in December 2021 and organized on a needed basis.

For Ta Penh and Khlah Khmum schools, PVC pipes were purchased to replace broken ones. For Khlah Khmum and Popel schools, cleaning equipment were purchased. In January 2023, this budget was also used for hiring labor to fix the road, to set up a new reservoir at the Popel source, providing water to the villagers and the school.

Participatory cleaning of the school area:
This activity was not possible due to the school closure, from March to November 2021. It was resumed in December 2021 and is happening every week, particularly on Thursdays, day dedicated for community work in schools.

Kids are collecting garbage, transport them into the incinerator, sweeping the tree leaves and make their school into a clean and healthy environment, transmitting his behaviour to their household. The burning of the waste in the incinerators is done by the teachers.

Daily English classes given to children in 4 primary schools:
In March 2021, a first assessment by ADF team and teachers from the 4 primary schools (Ta Penh, Khlah Khmum, Sangke Lak and Anlong Thom) registered 142 who were interested in attending the English classes.

Unfortunately, the C-19 pandemic forced to a general school closure in March 2021. In 2021, it only possible for 2 weeks in Ta Penh school and 1 week in Sangke Lak school. The two other schools (Anlong Thom and Khlah Khmum) planned to start this activity the day of the school closing. Schools reopened in November 2021 but needed time to reorganize after many months closed.

After the reopening of schools in Dec. 2021 and a meeting to organized this activity, English classes started from January, with salaries (50 US$ per month) provided to 1 teacher in Anlong Thom, Ta Penh and Khlah Khmum.

Unfortunately, English classes were not provided in Sangke Lak in 2022 as the teacher was not available anymore, and the ones in this school did not know enough to teach English. This situation changed from February 2023 as a new teacher was appointed to this school. Each teacher has an attendance list to register children attending the classes.

An average of 20 students attended the English classes at each school, for the year 2022. From July 2022, the Anlong Thom primary school teacher stopped giving classes because a new teacher from the Anlong Thom secondary school provided English classes to secondary school students and the primary school students joined. There were no English classes given in January 2023 because the assignation of the teachers was not clearly defined yet. As from July 2022, there were no more support for the English classes in Anlong Thom, for the same reasons. However, the English classes started in February in Sangke Lak, as a new teacher speaking English was appointed.

Monthly hygiene lessons by health centre and ADF staff in 4 primary schools:
At the start of the SEAF 2 project (March 2021), the Anlong Thom Health Centre staff was busy with Covid 19 vaccination and prevention. The objective was to financially support and provide awareness health prevention and menstrual hygiene lessons to the students of the 4 primary schools (Ta Penh, Khlah Khmum, Sangke Lak and Popel), reinforcing ADF's Hygiene and Sanitation project (WISH 2, funded by Almayuda Fundacion).

These prevention disease lessons were provided by the Anlong Thom health centre nurses, and were divided into 12 sessions corresponding to 12 disease prevention. It also gave the nurses the opportunity to check student's health. This activity occurs 1 time per month. Presentations for disease prevention were designed by ADF team and presented during these classes and banner were printed.

From December 2021 to December 2022, there were 13 sessions (13 months) in 4 schools, reaching 1,444 participants (including 850 female). The topics addressed are: influenza, intestinal worms, malaria, dengue, diarrhea, cold, dental caries, pneumonia, infected wounds, typhoid fever. All these diseases are the most common in Phnom Kulen, according to the hygiene and sanitation project's assessment done by ADF in December 2019. One session is focusing in one issue.

The girl's menstruation training happened 1 time per year in every primary schools. Each of the training is divided is 4 sessions, with a female nurse, assisted by the ADF women's school team. These 4 sessions run from the 23rd of August to the 15th of September 2022 in the 4 primary schools.

The first session (the first steps of menstruation) reached 76 female participants, the second session (the first days of menstruation) reached 74 female participants with 26 mothers to share their experience, the third session (menstruation health) reached 75 female participants and the fourth one reached 63 female participants (exchanging with young boys). Additionally, ADF facilitated the visit of Build Your Future Today Center (BFT Center, a member of the CLLC) on the 4th of March 2022 to provide a training on menstruation and personal care to 112 female students from the Anlong Thom secondary school in Phnom Kulen, with projections, learning material and banners.
Presentations for girl's menstruation training were provided by BFT, including a video.

All these activities were implemented in close collaboration with the Khnong Phnom Health Centre, the only public health facility for the population of this commune (4,926 inhabitants in Dec. 2022). Additionally, the WISH 2 team accompany the nurses in their vaccination campaigns in each village. ADF team attend the monthly meetings at the Heath center to coordinate every activity.

Project Management, oversight and accountability
ADF secured conducive meetings to agree on materials and resources required. All project assets, materials and resources were transparently and professionally managed. ADF coordinated efficiently human resources, provided technical assistance as required, managed all resources in an effective, accountable and transparent manner. ADF welcomed SEAF team on the 23rd of April 2022. Schools in Popel, Khlah Khmum, Anlong Thom, Sangke Lak, Ta Penh were visited. The visit finished with the Spices Drying facility at Anlong Thom. A follow up one day visit was done by SEAF in 22nd of October 2022, focusing mostly on the alternative livelihood component and on the future toilet project. This project, with an objective of building more than 70 toilets in 2 villages, was drafted by ADF in August 2022 and could be submitted to SEAF in the 2023 or 2024.

The SEAF 3L project

Later in 2021, the SEA Foundation had the opportunity to fund a small project proposed by ADF: "Quick Impact Library Project, Phnom Kulen Primary Schools" or SEAF 3L. Building on the existing infrastructures supported by SEAF previous project, this project aims to quickly improve the existing libraries in Phnom Kulen schools (at Ta Penh, Khlah Khmum and Sangke Lak) and to set up one in Popel primary school. It corresponds to a demand from the principals of the targeted schools, and it is building upon the activities started by ADF and funded by SEAF: providing basic hygiene and learning infrastructures for the primary schools (Popel, Sangke Lak, Khlah Khmum and Ta Penh), located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia. For this project, ADF received from SEAF 2,249 US$ on the 10th of December 2021 but activities started in January 2022 and the project was closed in December 2022.

The pupils and teachers were the direct beneficiaries of the project. At the inception of the project, this represented 85 children (including 35 girls) and 4 teachers at Popel primary school, 68 children (including 34 girls) and 4 teachers at Khlah Khmum primary school, 94 children (including 46 girls) and 3 teachers at Sangke Lak primary school, 116 children (including 61 girls) and 5 teachers at Ta Penh primary school. The Total number of beneficiaries was 363 children (including 176 girls) and 17 teachers (including 8 female) (data: Khnong Phnom Commune, 2021).
At the end of the project (Dec 2022-March2023), the number of beneficiaries were 99 children (including 41 girls) and 4 teachers at Popel primary school, 55 children (including 28 girls) and 3 teachers at Khlah Khmum primary school, 102 children (including 37 girls) and 4 teachers at Sangke Lak primary school, 135 children (including 71 girls) and 6 teachers at Ta Penh primary school. The Total number of beneficiaries was 391children (including 177 girls) and 17 teachers (including 7 female) (data: Khnong Phnom Commune, 2023). However, the Popel primary school was the main target of this project.

Project Inception:
A meeting was organized by ADF in January 2022 to inform all stakeholders (teachers, principals) of their roles and responsibilities and of the project implantation plan.

Popel Primary School Library Rehabilitation
In January 2022, the old wooden classroom located to the east of the main Popel classrooms was dismantled. All the boards and beams were polished on site by the carpenters. The new construction (with 3 windows) reused to wood (with additional wood purchased for walls and doors) and the cement base pillars, and new tin sheets were purchased to replace to old ones. Students and teachers were involved for the land fill of the foundation of the library. A cement slab was done to cover the entire room, surrounded by a 0.4 cm high brick wall. A roof extension and a corresponding cement slab were added to the north of the building, including 3 areas to plant flowers.
The local carpenters also built 2 wooden shelves (1 single and 1 double) to store and display the books. A garbage disposal device divided in 3 requested by the principal was built to store the

recycling waste (aluminium, plastic bottle…).

Books provided by ADF to the existing school's libraries
Old books from Popel schools were placed in the new library. 141 additional books were bought on 28th of March 2022 for Popel library. 148 books, 16 small stools and 4 small tables were provided on the 11th of October 2022 at Popel Library. The budget for the construction of the Popel library was underestimated and books could not be bought for the other libraries.

Monitoring of the project
A meeting was organized by ADF on the 26th of January 2023 during the SIPAR NGO evaluation. Every principal provided a weekly agenda with a time dedicated to book reading in the libraries (SL, PP, KK) for each class. The teachers are sending pictures every week to the ADF school telegram group. ADF school team encourage and motivate children during these dedicated hours, if they are in these schools at this time. A new project will be proposed in the coming weeks to better follow the needs of these schools and libraries. It will integrate a more important library component, in partnership with SIPAR, and based on their evaluation from the 26th of January 2023.

Complementary projects for the Educational support

ADF - AGRISUD International project
Since 2019, the joint project with AGRISUD International (see above, AGRISUD and ADF joint-project in Khnong Phnom Commune) has been encouraging primary schools to grow vegetable gardens. In the schools of Ta Penh and Sangke Lak, this involvement was higher with distribution of equipment, seeds and a technical training. In 2 others schools (Khlah Khmum and Popel), only seeds were given. These vegetables are associated to the morning breakfast distributed by the World Food Program in rural areas, and in the case of Khnong Phnom Commune (except Khlah Khmum village), with the help of the Cambodian government, and previously Plan NGO. The school also purchase vegetables from local producers trained by AGRISUD-ADF team. These activities were very disturbed by the long school closure in 2021 and resumed from January 2022 onwards.

ADF tree nurseries: Tree 2 and HUMY 3 projects
Three primary schools are the beneficiaries of the parallel project funded by Kulara Water factory (producing Eau Kulen): Anlong Thom, Ta Penh and Sangke Lak primary schools. Implemented by ADF since 2018 (Tree 1 project) and from September 2020 to October 2022 (Tree 2 project), these projects provided thousands of forest saplings every year for reforestation operations in Phnom Kulen National Park. The water system set up by ADF in these schools are providing water to both tree nurseries and hygiene facilities.

These tree nurseries also act as environmental educational tool, as they are managed by the teachers and students. They are complementary of the WISH 2 project as they built awareness about environmental protection and regeneration. Additionally, they provide incomes to the schools. Please refer below for this project.

In the same spirit and with the similar objectives, ADF has secured funds from HUMY NGO to set up and run a tree nursery at Popel village primary school. This project, HUMY 3, was started in April 2022 until March 2024, for a 2-year period (see below, HUMY 3 project).

f. ENVIRONMENTAL PROGRAM

Environmental and social studies

During the year 2022, there was no collaboration with the School of Fields Studies (SFS) for defining and facilitating studies, as the SFS study areas were not focusing in the Phnom Kulen National Park. The research collaboration program is focusing on natural resource governance and management; livelihoods; and the environment interface. No students came to PKNP and no studies were implemented.

ADF was involved in the environmental protection of Phnom Kulen National Park by combining data to the geo-database about the environmental threats, and by disseminating them to the relevant authorities (Ministry of Environment, APSARA Authority, District and commune authorities…). ADF continued in 2022 to integrate in our GIS system all illegal-logging points and recently burned plots of forest for cultivation purposes within the Phnom Kulen National Park and has reported them to the Ministry of Environment (MoE) and APSARA.

ADF continued to support the Provincial Department of Environment (PDoE) with mapping for specific projects, or the PKNP general zoning. ADF team has continued to be one of the main actors to provide information from the field for the implementation of the Phnom Kulen Management Plan, and the Phnom Kulen action plan both under the supervision of the MoE.

Meetings, workshops and events

In 2022, ADF management team met representatives from the Ministry in Phnom Penh and □iem Reap, and attended to various meetings at national level, organised by the PDoE or the MoE.
- On the 8th of February 2022, ADF director attended in Phnom Penh to the consultation workshop on the preparation of ecotourism designation vision and investment plan, for the Cambodia Sustainable Landscape and Ecotourism Project (CSLEP), funded by the World Bank and UNDP.
- On the 28th of June 2022, ADF team made a presentation entitled "Conservation, tourism and community development" for the Cambodia Sustainable Landscape and Ecotourism Project (CSLEP) visit in Phnom Kulen, at Preah Ang Thom ranger station.
- On the 31st October and 1st of November 2022, ADF Director participated to the meeting organise in Phnom Penh for the review of the Ministry of Environment activities, over the year 2022.
- On the 21st and 22nd of November 2022, ADF Director and Ms Chhun Phirom participated to the 3rd National Ecotourism Forum together with members of the Anlong Thom CBTC. Products from Kulen Crafts were also shown for sale.

TREE 1 project

Reminder: From June 2018 to August 2020 (27 months), ADF implemented the TREE 1 environmental project, supported by Kulara Water company producing the only mineral water in Cambodia (Eau Kulen), based at the bottom Phnom Kulen. The project's goal was to provide young indigenous trees from tree nurseries to the Kulara Water company facilities, and for other areas within the Phnom Kulen National Park (PKNP) selected for reforestation by the Ministry of Environment, the Provincial Department of Environment and the PKNP management team.
The project's other goal was to implement a practical environment awareness program for the students and the teachers of Sangke Lak, Anlong Thom and Ta Penh, village primary schools (584 children and 20 teachers), where the tree nurseries are located. This participatory tree-growing project allowed the involvement of the teachers and students from each school including regular maintenance, manual weeding, transplanting of very small saplings to plastic bags, mixing components for the plastic bags and planting activities on the plateau. The tree nurseries acted as educational tools to promote environmental awareness and conservation. Trainings about tree growing and tree nursery maintenance were given by forestry expert to all the teachers of the 3 schools. Each tree nurseries were built and upgraded on a needed basis with proper tools, equipment and gravity-fed water systems (also used for water and sanitation facilities in schools), tree seeds were purchased or collected regularly in forested areas of the park, according to the bio-diversity assessment of PKNP (2013, Hayes and al.), allowing to grow up to 22 different indigenous

tree species. ADF team set up a table to follow up the quantity of trees species grown up in each tree nursery over the project length.
During this project, more than 45,700 saplings were grown in the 3 tree nurseries (about 9,000 tree saplings were grown in 2018, 13,036 in 2019 and 23,666 in 2020). It has contributed to reforest 63.3 hectares in PKNP. This equates to 2.3 hectares per every month of the project. In most occasions, the trees produced by ADF tree nurseries were added to additional saplings from other tree nurseries, brought to Kulen, for the reforestation projects sponsored by MoE/PDoE, UNEP or UNDP. Other smaller reforestations operations were also organized by ADF (archaeological sites, sources, watershed…). In some cases, other saplings were sold to other beneficiaries (1,800 trees were provided and planted in the grounds of the Kulen water factory).

Trees were sold by the schools to the reforestation project and the incomes is given back by ADF to each school principal and is divided as following: 20% for the maintenance costs of the tree nurseries, 40% for the maintenance and upgrading of the school facilities and material, 40 % shared by the teachers as personal income and incentive). In 2019 and 2020, a total of 5,660 US$ was earned by these 3 schools.

It was a participatory project, including stakeholders from the private sector (Kulara Water company), through governmental institutions (Ministry of Environment), implemented by ADF, a non-profit and non-governmental organization with the pupils and teachers of the three public schools. During the reforestation process, every rainy season, a broader array of partners was associated.

The TREE 1 project was the first long term project addressing environmental awareness and reforestation in PKNP. It has created a strong dynamic, reinforced by stronger law enforcement from the MoE and the PDoE, in charge of the park. The availability of trees has pushed the authorities to take actions and to take over illegally burned plots for reforestation.

With these numerous successes, an extension of the TREE project was submitted to the Kulara Water company at the end of August 2020. The company agreed to support the TREE 2, a two-year project, to consolidate the successes of the first TREE project.

TREE 2 Project

The fundamentals of this TREE 2 project, implemented from September 2020 to October 2022, were very similar to the initial TREE 1 project and therefore, the goal, objectives and activities matrix were similar. However, it includes the main constraints encountered during the implementation of the TREE 1 project and the recommendations stated in the final report:

- To introduce a field maintenance component employing members of the community to cut the weeds around the tree saplings planted enabling them to grow and thrive. This activity can also be done in the previously planted areas. It will help defining the loss rate for each reforested plots and replanting, if necessary.
- To maintain and upgrade (where necessary) the water systems to the three tree nurseries.
- To continue the environmental education and awareness of stakeholders, especially pupils and teachers, building upon the education component of the TREE 1 project.
- To better monitor the revenue of each school, to insure their proper maintenance.
- To introduce a better monitoring system where trees from ADF tree nurseries can be counted and localized within each reforestation activity, to monitor the survival rate of the trees and replace the dead ones in reforested area.
- To diversify as much as possible the tree species but only with trees represented and identified within the 2013 PKNP bio-diversity survey.
- To increase as much as possible, depending on the number of saplings produced, the number of reforested areas within PKNP, focusing on the water catchment areas within PKNP. This depends on the PDoE capacity of re-taking illegally deforested plots for reforestation. Additional saplings will also be allocated on demand and according to their species to Kulara company compound.

The objectives of the TREE 2 project remained the same:

- To grow and nurture indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP).
- To promote the regeneration of the natural forest with indigenous trees of PKNP, restoring the environment and the resources that a thriving environment provides, increasing the amount of surface water.
- To increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools (Anlong Thom, Ta Penh and □angke Lak). The pupils and teachers will be the direct beneficiaries. The pupil's families and the village communities and the MoE Park Rangers will be the successive beneficiaries.

The TREE 2 project started on the 1st of September 2020, for a two-years duration.

Activities and results:

1) Orientate the village school teachers in all aspects of the project outlining roles and responsibilities and purchase project resources (tree seeds and other tree nursery tools).

The accounting system for the project was set up by ADF accounting officer and expenses were updated on a weekly basis for a better financial monitoring of the project. An introduction meeting was hold between all teachers involved and ADF team at Anlong Thom school on the 4th of November 2020 to introduce the TREE 2 project to all stakeholders. Teachers active during the previous project shared their experiences and talked about the benefits of having tree nurseries with the new ones and ADF team, exchanging about water issues, benefits, prices. A new system of percentage for the benefits of the tree sales was established: 20% for the tree nursery maintenance, 40% for the school maintenance, 40 % for the teachers as an incentive. Previously the system was divided as such: 30 % of the income was devoted to the tree nursery maintenance, 30% for the school's general maintenance, and 40% is an incentive for the teachers. The sale of sapling represents a substantial income for each school. For example, Ta Penh primary school was able to build in the school compound a meeting shelter. It was also decided that the cash generated by the sales of saplings and destinated to the tree nursery maintenance would be managed by ADF (third recommendations from the TREE 1 final report).

From July 2021 to October 2022, 794.99 US$ of income was given back to the maintenance of the tree nurseries and related costs. This corresponds to 20 % of the total sales of trees. This is including Popel new tree nursery (see below).

ADF team has set up a planning over the calendar year, from January to December, to visualize and monitor the main tasks to be implemented by all stakeholders. All project resources were purchased and tree nurseries are now part of the daily life of the 3 schools.

In 2022, a new tree nursery project, reinforcing the TREE 2 project's dynamic, was funded by HUMY French NGO through ADF (see below, HUMY 3 project). This school was selected as the teachers were interested of having this infrastructure as an educational tool and a source of income. ADF is also working intensively since 2018 in this village, with the enlargement and demarcation of the Community Protected Area (CPA, from 188 to 798 ha), the setting up of a water system for the village and the primary school, the construction of a Community-based Tourism Centre with a tourism offer, the hygiene and sanitation project in the primary school, and the construction of other infrastructure in the school (library, playground, incinerator…).

2) Continue collecting indigenous tree seeds; Upgrade the tree nurseries at □angke Lak, Ta Penh and Anlong Thom primary schools, ensuring they are efficiently and effectively producing strong healthy saplings; plant the tree seeds and nurture the tree saplings until they are ready to be planted into designated areas.

The tree nurseries were upgraded on a needed basis with proper tools, equipment and gravity-fed water systems. The previous signboards at each tree nursery were changed in 2020, during the first

TREE project, with Eau Kulen and ADF logos. Anlong Thom, Ta Penh and Sangke Lak water system were designed and set up during the first TREE project, requiring several hundred-meter-long buried and connected PVC pipes; collecting, intermediary and storage reservoirs, providing water all year long for these tree nurseries. Students and teachers were strongly involved in their constructions, so they can take ownership of these water systems.

These water systems also serve the hygiene facilities (toilets, wash bays) built or renovated by ADF in these 3 schools and allow the implementation of a complementary Hygiene project (WISH 2 project, funded by Almayuda Fundaciòn) in 4 primary schools (Sangke Lak, Ta Penh, Khlah Khmum and Popel).

Ta Penh water system from the source to the school was originally included in the first TREE project proposal. However, the WISH project was able to fund it, and it was decided that funds from Kulara Cie for this water system would be used for the setting up of the Anlong Thom tree nursery water system.

From September 2020 and during the year 2021, only minor fixings were done to these water systems and more generally, to the tree nurseries: fixing broken pipes for the Sangke Lak Water system; arranging the 3 collecting pipes at the Ta Penh source, so they are all at the same level.

ADF team paid a particular attention, so each tree nursery and school could have a permanent access to water. During the dry season, this becomes more and more critical due to climate change and deforestation. However, the tree nursery water systems are conceived so they can capture and hold just enough water reserve until the end of the hottest season. Future upgrades could enlarge the storage capacities as this situation becomes harder to sustain every year, particularly in Ta Penh and Anlong Thom.

Other upgrades were the replacement of a wooden door by a metallic one at Sangke Lak tree nursery, on the 4th of April 2021, the covering of the vertical upper part of the 3 tree nurseries with green shade nets, allowing a better protection from the sun and from football games, often played closed to the tree nurseries.

From April to June 2021, a complementary UNDP funding (UNDP-BESD-PES, see below) allowed ADF to upgrade the tree nurseries:
1) low brick enclosures sealed with cement to place the saplings. This facilitate the counting of the trees per species as they are in rows and lines, maintaining them in a vertical position. Species can now be easily separated and identified.
2) Smaller similar spaces were reserved for seeds to be planted in the ground before their transplant to the bags.
3) additional equipment purchased: wooden posts (8 per tree nursery), green-shade material (1 roll per tree nursery), metallic fence (30 Kg per tree nursery), water pipes (5 per tree nursery), irrigation tank (2 per tree nursery), black plastic bag for young trees (10 Kg per tree nursery), and tree seeds.

Later in 2021, other upgrades were implemented. The sprinklers were lowered to facilitate the water distribution at Anlong Thom tree nursery. The Sangke Lak tree nursery was slightly extended to the west until the school fence. This tree nursery is the smallest and an additional space was needed to store trees once they are big enough to be planted, before the rainy season. The leaking water reservoir at Ta Penh was fixed in October 2021. White reusable bags given by Fauna in Focus NGO, as well as about 500 saplings, were introduced in each tree nursery (November 2020) as an alternative to the black plastic bags. The larger bags were cut and sewed to obtain several bags out of them.

In February 2022, ADF team and teachers organized the fixing of the broken pipes for the Sangke Lak Water system, involving 12 villagers with 8 pipes and other materials.

In June 2022, Sangke Lak water system was checked and particularly the ring wells between the sources and the school were cleaned from grass roots. Ta Penh water system was checked, and no problems were observed. Ring wells at the source were cleaned in November 2022.

The water system for the Anlong Thom tree nursery was fixed in October 2022: pipes were broken due to water pressure and broken fallen trees. They were replaced in October 2022. In October 2022, the green shade nets used to cover Anlong Thom tree nursery was replaced. A metallic door was set up at Anlong Thom tree nursery in October 2022 to replace the broken wooden one. ADF also used the TREE 2 budget to replace the 6 old signboards of the Archaeological Protected Areas (APA), dating from 2014, and located at Anlong Thom pagoda's entrance in May 2022.

From April to June 2022, a new tree nursery was built in Popel primary school. It was funded by HUMY French NGO (see Humy 3 project below), on the model of the successful tree nurseries developed by ADF and funded by Kulara Water Cie in Ta Penh, Sangke Lak and Anlong Thom schools. An additional water reservoir was also built in the school.

3) Village schoolteachers and children are taught in fundamental aspects of tree planting and tree growing, nurturing and raising trees.

The trainings organized by ADF and provided by a forestry expert from the Ministry of Forest and Fisheries in Along Thom (January 2019) and Ta Penh (January 2020) were designed for all the teachers of the 3 schools, with a technical then a practical session where kids participated. The seed preparation and the composition of the soil for the plastic bags were greatly improved thanks to this training. These recent trainings did not need to be repeated in 2021. Only advices were asked by phone to this trainer on a needed-basis.

ADF has set up two Community-based tourism centres (CBTC) in Anlong Thom and Popel villages. They are managed by the Community Protected areas (CPA) members and offer tourism products (daily trips with local tour guide and food). The Anlong Thom CBTC members have requested to ADF to set up a forest tree nursery and a vegetable garden. The forest trees can be sold to Cambodian visitors and allow the centre to increase its income (1 US$ per tree). The CBTC team received training from the ADF team on seed collection, pre-treatment, bag preparation for seedlings and nursery maintenance (October 1st, 2020). In addition, the ADF has made its tree species registration system available to the centre.

In 2022, the regular involvement of children and teachers for the tree nurseries in primary schools continued as in 2021 for this activity. There was no training provided by the forestry expert from the Ministry of Forest and Fisheries as in January 2019 and 2020 as he was not available. ADF team (Mr. Seng Samry and Mr. Yon Sokchea) trained again the teachers on the 25th of May 2022 in Popel primary school about the general tree growing and tree nursery maintenance. All teachers from the 4 schools joined (Ta Penh, Anlong Thom, Sangke Lak and Popel). With the help of Agrisud International team member (Mr. Keo Sopheak), partnering with ADF for agriculture alternatives in Phnom Kulen National Park to more than 250 families, an additional topic was introduced: the use of water compost for tree nurseries.

4) Village school children have practical lessons in tree cultivation, incorporating it as part of their regular school activities.

The 3 targeted schools have operational tree nurseries growing trees and all children from grade 1 to 6 are participating to the activities: planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary, planting activities on the plateau. In 2021, the project was raising environmental awareness for 516 children and 18 teachers from the 3 primary schools (2021 Commune data), divided as follows: 107 children and 5 teachers in Ta Penh, 98 children and 3 teachers in Sangke Lak and 311 children and 10 teachers in Anlong Thom.

In 2022, the project was raising environmental awareness for 558 children (incl. 289 girls) and 18 teachers from the 3 primary schools (2022 Commune data), divided as follows: 138 children and 5 teachers in Ta Penh, 102 children and 4 teachers in Sangke Lak and 318 children and 9 teachers in Anlong Thom. Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project (Mr. Yon Sokchea).

However, 2020 and 2021 were particularly difficult as the C-19 pandemic imposed the closure of all schools in Cambodia. ADF staff were more solicited for this task, as teachers and students were less present at schools during these long closing periods (see dates below). However, some motivated school teachers and students kept coming for the regular work to do in the tree nurseries, demonstrating their involvement in the process of growing trees for reforestation.

The closure of schools in Phnom Kuken happened during the following periods: in 2020, from 16th of March to 7th of September 2020, then from 30th of November 2020 to 11th of January 2021; and from 20th of March to 1st November 2021.

To follow up the quantity of trees grown up in each tree nursery over the project, the ADF team continued to use the table summarizing important information used during the first TREE project. This table includes the number of saplings per tree nursery, per species, the English name, the Khmer name and the scientific name (in Latin) for each species, the seedling period for each species, the average price of seeds per Kg per species, the processing time for each tree seeds species, the average number of seeds per Kg. Thanks to this project, the villagers were aware of the existence of the tree nurseries and a network of seed collectors was developed.

This activity was visited by several partners in numerous occasions during recent years; 2 noticeable examples are the visit of Mr Chheng Nimith in December 2021 and the School of Field Studies (SFS) visit on the 17th of September 2022.

5) Indigenous tree saplings are transported to designated target areas: Kulara Water company land, PKNP protected areas (APA's, CPA's) or other designated areas of PKNP and trees are planted appropriately, reforesting the target areas.

Tree seeds were purchased or collected in 2020 to 2022 and grown in the 3 tree nurseries. In 2020, 23,660 trees were grown from January to June. An additional 16,175 were grown after the planting season. They correspond to seeds that are only available later during the year. From June to October 2020, 5 institutions/clients/projects bought almost 13,300 trees from the 3 tree nurseries. The Kulara Water company required 200 trees (Sental wood/Chan Crassna) in 2020, to be planted on the factory land. 1020 saplings were sold to 2 clients in Siem Reap and Svay Leu.

For the 2020 rainy season, the trees produced by ADF-Eau Kulen tree nurseries were planted, jointly with other trees bought outside PKNP in 24 locations within PKNP corresponding to a total of 32.47 ha reforested with 33.100 trees. Among these reforestations, the PDoE bought 10,100 trees to reforest 4 areas: to the south of Ta Penh village (2 areas in July), near the Preah Ang Thom ranger station and inside Anlong Thom CPA. Mrs. NGUON Rothsophal from Panasatra University and friends bought 1,260 trees to be planted to the west of Spien Halo, on the 26th of September 2020.

By the end of 2020, the trees produced by ADF-Eau Kulen tree nurseries were still too young and could not be planted within the UNDP/C-19 project (see below), implemented by ADF. This large reforestation project started in October 2020, allowing tree plantation on a much larger scale than the average per year: 54,43 ha with 36,000 trees planted. Numerous operations of reforestation and maintenance took place from October to November 2020 then again in May 2021, benefitting 1899 persons with "cash for work". Cumulated to the other reforestation activities in 2020, the total reforested areas for this year was 90.86 ha (with 87,100 trees) within PKNP and Chankran Roy Community Forestry.

In 2021, 13,221 trees were grown from January to June. An additional 18,360 were grown after the planting season. They correspond to seeds that are only available later during the year. From June to August 2021, 3 institutions/clients/projects bought 11,100 trees from the 3 tree nurseries. The Kulara Water company did not require any trees in 2021.

For the year 2021, the trees produced by ADF-Eau Kulen tree nurseries were mostly planted, jointly with other trees bought outside PKNP within the UNDP-BESD-PES project, implemented by ADF, with a total of 20.9 ha (13,525 trees) planted. The tree plantations at Spien Pring were done from the 5th to the 7th of June and from the 8th to 10th of June 2021 (6 days) and the tree plantations at O'Srae was done from the 5th to the 7th of June, 8th to 10th of June and on the 11th of June 2021 (6 days) at O'Srae, involving 322 villagers from both villages. Trees were purchased from the ADF/Eau Kulen Sangke Lak tree nursery and from the UNEP/CPA Chup Ta Sok tree nursery in Khlah Khmum for the reforestation of O'Srea areas. For the reforestation of Spien Pring areas, trees were purchased from the Ta Penh and the Anlong Thom ADF/Eau Kulen Sangke Lak tree nurseries (with additional trees bought in Siem Reap).

Details of the total number of trees, species and hectares reforested are the following: 13,525 trees were planted in the 2 areas (6575 for Spien Pring and 6950 for O Srae). Summing the 2 areas, the total of the tree planted per species are the following: 6735 *Beng*, 45 *Kronhoung*, 43 *Thnong*, 2548 *Koki*, 354 *Yeang*, 1807 *Kulen*, 777 *Kor Koh*, 171 *Pring*, 774 *Phnav*, 135 *Neang Nuon*, 45 *Chres* and 100 *Khnol Prey*.

The objective of this pilot project was to secure consent from villagers to change their behaviour and depart from their traditional old cashew nut plantation. 13 families accepted to give their land located in 2 sensitive watershed areas back for reforestation (O'Srea area north of Khlah Khmum village and Spien Pring, south of Anlong Thom village), as long as they can harvest the existing crops (almost exclusively young cashew nut farms). It was signed between each family and the commune chief. As these 13 families (7 from Khlah Khmum villahe and 6 from Anlong Thom village) give their lands back for reforestation, they have benefited from alternative livelihood options proposed and implemented by ADF. They all selected pig raising. Two other locations within PKNP were planted with trees brought from outside the ADF-Eau Kulen tree nurseries: behind the Orchid Ranger station (3,2 ha; 1500 trees) and O Pring Soutnikom (1,1 ha; 1100 trees).

AGRISUD International and CIRD NGO, both partners of ADF for their project in PKNP, bought trees from the ADF-Eau Kulen tree nurseries. They respectively bought 1600 trees (*Beng,Yeng, Koki, Kulen, Kronhoung, Neang Nuon, Chan Crassna, Phneav*) and 3000 trees (*Beng, Koki, Kulen, Kor Koh, Kronhoung, Trobek Prey, Chres*). Agrisud distributed them to families who received fruit trees from the joint project AGRISUD-ADF in Khnong Phnom commune and CIRD trees were planted inside Popel CPA on 2.5ha (see below CIRD Trees project).

The total of reforested areas within PKNP for 2021 is 27.70 ha with 20,725 trees (19,125 planted during reforestation activities + 1,600 distributed).

From September to December 2021, 21,109 trees were grown. An additional 23,044 trees were grown from March to October 2022. This second figure includes the trees from the Popel tree nursery, accounted from June 2022. The total from September 2021 to October 2022 is therefore 44,153 trees.

The total number of trees grown since the beginning of the TREE 1 project in 2018 is therefore 121,430.

From February to September 2022, several institutions/clients/projects bought 7,523 trees from the 3 tree nurseries: 2,405 sold from AT; 1,833 sold from TP 3,285 sold from SL. The Kulara Cie did not required any trees in 2022.

The sales of trees were used to plant trees within Phnom Kulen National Park: 3,320 trees. However, in order to respond to some demand and to promote ADF/Eau Kulen tree nurseries, some trees were sold to clients for plantation outside PKNP: 4,203 trees.

The following details indicate the location of the tree planted:
INSIDE PKNP: a total area of 15.4 ha.

Agrisud International bought 520 trees on the 11th of February 2022, to plant opposite the Orchid garden (1 ha); ADF / TREE 2 Sangke Lak bought 880 trees on the 7th of July (4,2ha); ADF / TREE 2 Anlong Thom bought 810 trees on the 13th of July (3,8ha); ADF / TREE 2 Spien Halo bought 100 trees on the 29th of July (1,3ha); ADF / TREE 2 Spien Pring bought 500 trees on the 8th of September (2,3 ha); ADF/TREE 2 Antenna bought 210 trees on the 4th of Nov 2022 (1,3 ha); HUMY for O Ta Chork CBTC bought 100 trees on the 8th of September (0,2 ha); ADF / TREE 2 Spien Halo bought 200 trees on the 8th of September 2022 (1,3 ha), same location as above.

OUTSIDE PKNP
Miss Chhun Phirom bought 106 trees on the 8th of April 2022; Aquation / Tree Lion park in Phnom Penh bought 534 trees on the 5th of May; Miss Chhun Phirom bought 150 trees on the 29th of July; Mr JB Chevance bought 200 trees on the 30th of July; Mr Sakhoeun Sakada and friend bought 3000 trees on the 8th of September; Mr JB Chevance bought 200 trees on the 8th of September; Ms Fabienne Luco bought 13 trees on the 4th of Nov 2022.

The general system to monitor the number of trees grown, the sales and incomes and the hectares reforested/maintained was improved with 3 documents used regularly by ADF's team and shared with PDoE: 1 Xcel document to monitor every 2 months the number of trees per species in each of the 4 tree nurseries, including the sales and the available stock (16,262 on 26th Aug 22), a total spreadsheet is summarizing the trees grown; 1 Xcel document to monitor each buyer and the number of trees bought per species and per tree nurseries, a total spreadsheet is summarizing this data; 1 Xcel document to monitor each area reforested within PKNP with the date, the location, surface, number of trees per species, and the total of trees per area. This document can include area(s) reforested with tree coming from other tree nurseries.

General incomes for the schools:
2020: 12.094.400 riels=3,023.6 US$ (941.2 US$ for Anlong Thom school, 1,021.2 US$ for Ta Penh, 1,061.2 US$ for Sangke Lak).

2021: 8.877.600 riels=2,219.4 US$ (531.4 US$ for Anlong Thom school, 1021.2 US$ for Ta Penh, 1061.2 US$ for Sangke Lak) (these 2 last figures were updated from last report).

2022: 7.768.800 riels=1,942.2 US$ (621 US$ for Anlong Thom school, 520 US$ for Ta Penh, 801 US$ for Sangke Lak, 0$ for Popel school, trees not sold yet).

6) Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture and sunlight they need to grow and thrive.

As recommended in the final report of the TREE 1 project (recommendations n.5), the maintenance of the reforested areas was introduced during this second project. This requires the employment of local villagers as day labour, to cut the weeds around the small tree saplings planted in the target areas. This allows the trees the light and moisture they need, giving them a "fighting" chance to grow and develop into mature forest. It also allows for better monitoring of the reforested areas, assessing the survival rate of the trees, and eventually to replace the dead ones.

In October 2021, 3.3 ha were maintained (2 sites) by 30 workers for 5 days of work. These areas were planted to the south of Ta Penh village in July 2020. The maintenance has shown that the tree

survival rate is very good, and some trees are now between 1,5 to 2 meters high. Other recently reforested areas will be maintained in 2022.

On the 22nd of December 2021, ADF toured a visit from the Kulara Water company team in the three tree nurseries as well as on reforested areas for a promotion video and pictures.

In 2022, other recently reforested areas were maintained and plantation of trees completed:

In October 2021, the 1.3 ha area reforested at Spien Halo were maintained and 300 trees were planted in July and September 2022. Additional visits on previously reforested areas were done by ADF and PKNP rangers in April and May 2022. In July 2022, the previously reforested area of 4.2ha (Sangke Lak Road) was maintained and 880 trees were planted. In July 2022, the previously reforested area of Anlong Thom road to Sangke Lak (3.8 ha) was maintained and 810 trees were planted within the existing cashew nut farm (UNDP-BESD-PES project 2021). In July and August 2022, the previously reforested area of Spien Pring (2.3 ha) was maintained and 500 trees were planted within the existing cashew nut farm (UNDP-BESD-PES project 2021). In November 2022, the previously reforested area of Antenna (1.3 ha) was maintained, and 210 trees were planted. In October 2022 ADF and PKNP rangers visited the previously reforested area to the south of the Preah Ang Thom ranger station (in 2019; 3.5 ha) but lack of funds prevented to maintain it. Trees see in the shrubs are now more than 2 meter high.

A large majority of the funds for these operations (maintenance and planting) was taken from the TREE 2 budget and additional smaller funds were taken by ADF from its own resources to complete them.

Recommendations of the TREE 2 project
ADF would like to submit a third project proposal to Kulara Water, for the year 2023 and 2024 (TREE 3 project). Learning for the previous years, this project should include the following points:

Tree growing:
The collect of seeds and growing of sapling should continue in every tree nursery during the coming months, so saplings can be ready to plant for the next rainy season (June-October 2023).

According to the seeds available and their confirmed presence in PKNP, ADF should look to diversify the saplings if possible, according to the recommendations n.8 of the final TREE report. New species, recorded in PKNP, were being introduced in the tree nurseries in 2021 such as Tro Yeng, Pring Phneav, Krolanh.

ADF will endeavour to use fewer plastic bags for the sapling growing as well as for the transport of saplings to the reforestation areas. The white bags provided by Fauna in Focus NGO are a solution to extend for the sapling production (the provider in Phnom Penh was contacted) and the rattan baskets for the sapling transportation.

ADF will install small durable (metallic) signboards to identify saplings in the 3 tree nurseries (with Khmer, English and Latin names).

The monitoring of each tree nursery will continue to ensure a good production and diversification.
The ADF team, in collaboration with the teachers at the schools, will make sure the water systems are viable and that incomes from the sales of trees are properly used for their maintenance when needed. Some of the water system (buried pipes) tends to be broken by animals (pig, cows) during the dry season. ADF will take preventative measures to avoid this.

Reforestation
ADF will continue to better monitor the number of hectares reforested exclusively with the saplings produced by the ADF-Eau Kulen tree nurseries. The PKNP reforestation operations sometimes

include trees that are purchased from other tree nurseries. This corresponds to the recommendation n.4 of the final TREE report.

Additional areas will be reforested during the 2023-2024 rainy seasons within PKNP involving teachers, pupils and local stakeholders and authorities, in collaboration with PDoE. This will depend, as stated in the recommendation n.9 of the final TREE report, 1) on the number of saplings produced, 2) on the available reforested areas within PKNP and 3) on the PDoE capacity of re-taking illegally deforested plots for reforestation.

Since 2018, this has never been an issue. Moreover, the UNDP-BESD-PES project has introduced a new type of reforestation providing more options for reforested areas: tree planting within existing cashew nut farms (with a lower density per hectare), with an agreement from the farmer to take care of the growing trees and to give back on a long term, the land to the State (20.9 ha in 2021). This could be an option in the future project.

ADF will monitor the forest cover of the park with satellites images to identify the deforested location, so new reforestation activities could take place in rainy season. If needed, additional trees will be sold to Kulara Cie compound, to continue the reforestation of the new factory land (Preah Vihear province).

Systematic maintenance activities after reforestation should be done once every 6 months for 2 years (e.i. 4 times), on each reforested area.

Costs for reforestation activities and maintenance activities should be included in the next project.

Environmental education

ADF will organize in 2023-2024 visits of the involved teachers at Kulara Water Cie factory and tree nursery. Depending on the budget, some students could be involved.

ADF could organise environmental education sessions in schools to stress the importance of the PKNP Bio-diversity and the natural environment in general. Educational material will be sourced and disseminated with videos at each primary school. The data from the ADF/HUMY ongoing biodiversity survey could also be used to reinforce the message.

HUMY 3 - Popel Tree Nursery Project (PTNP)

As for the TREE 2 project, the core of the HUMY 3-PTNP project is to grow and plant indigenous trees from PKNP that will regenerate its natural environment. The project will provide young saplings to reforest targeted areas within PKNP by building and running a tree nursery in Popel primary school (98 children, including 42 girls and 4 teachers, including 1 woman). The practical participatory education (learning by doing) of the young generation, the pupils of this school, will further contribute to the sustainability of the project.

The project plans to deploy the activities in Popel schools during the first year of the project and increase the number of saplings grown during the second year. This will also bestow a sustainable project outcome. Based upon lessons learnt in the first year, the project can be adjusted in the second year.

Teachers will encourage the children to participate in all operations and the overall project will be supervised by ADF team. The trees will be regularly counted, with the existing monitoring system. The project will make sure there is enough water at the Popel Tree nursery, primary school, and village by building additional reservoirs. The project will also make sure that the trees are growing well after being planted, as it includes a maintenance component.

This project is based on the successes of the TREE 1 and 2 projects, supporting 3 tree nurseries in the primary schools of Sangke Lak, Ta Penh and Anlong Thom villages, and implemented by ADF for the last 4 years. This project also reinforces the dynamic to support the Popel Community-based

Tourism Center (CBTC), set up by ADF and now funded by HUMY. This centers' objective is to generate incomes for villagers by promoting tourism in the Popel recently enlarged Community Protected Are (CPA). Finally, the project come to reinforce the reforestation of the PKNP, initiated by ADF since 2015.

A two-year project duration is necessary to ensure that the tree saplings are resilient enough to be transported to the target areas. This duration is also necessary to transfer skills to teachers and to reinforce the promotion of tree growing and the benefits of a healthy natural environment.

Inception of the project:
Village school teachers and all stakeholders were oriented in the project with a participatory meeting (project cycle, project objectives and project goal). The tree nursery materials were procured. The accounting system for the project set up by ADF accounting person to update expenses on a weekly basis for a better financial monitoring of the project.

Construction of the tree nurseries at Popel primary school:
The tree nursery and its water system were built from April to June and inaugurated on the 14th of June 2022, in the presence of the students and teachers, representatives from local authorities and Mr. Jérôme L'Hour, Humy's representative in Cambodia.

The project also implies the installation of 2 additional reservoirs. Popel village is located on a higher location compared to the nearby water sources. From 2019 to 2021, ADF set up a water system using a solar pump and distributing water to the school and 40 families (UNDP-BESD project): 30 connected to a buried pipe, with a water meter + 10 additional families living higher than this reservoir and collecting water at the reservoir, under the authority of a local water committee. To provide water to Popel school and in the framework of the Hygiene and sanitation program (WISH 2) implemented in several schools in PKNP, ADF connected this main reservoir, located in front of Popel school, to the ones in the school, which were rehabilitated.

Due to the specific topographical situation of Popel school and water sources, the project had to build an extension of the main reservoir to ensure that there will be enough water storage capacities for the school the villagers and the new tree nursery.

Tree seeds were secured ready for planting and it was operational in year 1 and will be further enhanced in the year 2.

Participation of the children and teachers
Schoolteachers (4) and children (98) have a good understanding of tree planting, growing and raising saplings at Popel primary school. With the help of Humy country representative, Mr. Jérôme L'Hour, an updated monitoring system with the number of saplings was created, useful for all 4 tree nurseries. The regular counting of the sapling per species is done by ADF team.

Village school children from Popel had practical lessons in saplings cultivation and it became part of their school activities with planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary.

From June 2022, Popel primary school had an operational tree nursery growing saplings, educating the young generation about the importance of a preserved natural environment, bio-diversity and generating incomes for the school, the teachers and its tree nursery. However, for the year 2022, the saplings from Popel were too small to be ready on time for the rainy season and the reforestation period.

HUMY 5 PKNP biodiversity assessment

HUMY support to ADF started in 2021 (Humy 1 and 2 projects). It was reinforced in 2022 with the continuation of the Humy 2 project (with the Humy 2 bis) and the Humy 3 project (see above). This

involvement in the preservation of PKNP biodiversity was also illustrated in 2022 by the study of the park's bio-diversity, a project funded entirely by HUMY but with the strong involvement of ADF.
In September 2022, Mr. Vincent Romera came to Cambodia for an 11 month mission, with the objective of updating the last PKNP biodiversity assessment, dating from 2013, and propose recommendations for a better conservation of key species and species in danger (IUCN classification, international and national).

ADF has assisted HUMY with its official administrative request to the MoE and has assisted Mr. Romera with all questions concerning existing data, literature, supplies and logistics for field surveys. He was assisted by Ms. Claire Zagala. On some occasions, PKNP rangers or ADF director JB Chevance joined the field surveys. The field studies will continue in 2023 and a final report will be presented to the MoE.

Reforestation activities

Reminder: Since 2015, ADF participated and facilitated several activities related to tree planting activities in PKNP: selection of the area to be planted, organisation and logistic on the field, design of signboards, plantation, mobilisation of person to plant. As an example, 23 hectares were planted with 31,200 saplings in 2019 within PKNP. ADF also combined the list of all replanted area from 2015 to 2019 in PKNP. The total of saplings planted reaches 241,500 for 97.5 hectares during this 5-year period.

In 2020, this total figure was largely expended due to the UNDP-C.19 project (see above). The total number of reforested hectares, including the ones from the UNDP-C.19 project, reached almost 90 hectares. 87,100 trees were planted in 32 different locations.

In 2021, within the UNDP-BESD, 20,9 hectares were planted within cashew nut farms (see above, UNDP-BESD project). 6,8 additional hectares were planted in 3 different locations with a total of 5,600 trees (including 3000 trees on 2,5 hectares within the Popel CPA thanks to the CIRD project). Apart from the UNDP-C-19 project (2020-2021), 27,7 hectares were therefore planted in 2021 in PKNP.

In 2022, the total amount of reforested areas in PKNP reached 14.1 hectares (see TREE 2 project above).

These combined figures include projects in which ADF was the main actor, and projects were PDoE was the main implementing partner.

Patrols by PKNP Rangers and Community Protected Areas members

At the end of the year 2021 and within the HUMY 2 project were organised trainings for PKNP rangers as well as CPA members. From January 2022, the patrols started in collaboration with PKNP rangers and the CPA members of Popel and Anlong Thom CPA, within the HUMY 2 project. Please refer to the chapter "Eco-tourism alternative livelihood, patrol support and handicrafts support and promotion (HUMY 2 and 2 bis projects)".

Road construction project across PKNP

As per the previous years, ADF has participated and advised PDoE and APSARA about the road construction project across the national park. In particular, ADF advised the APSARA Authority and the UNESCO-ICC sustainable development experts on the 13th of December 2022, during a field visit to assess the boulders located on the section of the road which has not been rehabilitated yet. The following recommendations (n. 21.3) was issued at the 36th technical session and 29th plenary session on the 15th and 16th of December 2022: "Construction on the old road between Preah Ang Thom and the entrance to the PKNP (Phnom Kulen National Park): Rather than destroying these remarkable boulders, the ad hoc experts propose to set up three alternating one-way sections over a few hundred meters on the 11 km of this stretch of road: about 500 m around point PK9+000, about 300 m between points PK1+100 to PK1+400, about 400 m from point PK0+700, i.e. the entire

climb after the first bend, which in any case cannot be widened due to topographical conditions and will have continue to be used for alternate traffic".

g. ADMINISTRATION

On the 29th of March 2022, ADF Director signed a MoU with the École Française d'Extrême-Orient (EFEO) to stimulate academic exchange and cooperation in the field of South-East Asian studies.

On the 25th of May 2022, ADF Director signed a Memorandum of Understanding (MoU) with the Ministry of Environment, government of Cambodia, for a 3-years period, from May 2022 to April 2025. In the continuation of the previous one, it formalizes all responsibilities of the two parties to continue their partnership for "the implementation of the joint activities in the field of protection and conservation of natural resources, research, eco-tourism development, financing sustainability and activities related to the management of Phnom Kulen National Park in Siem Reap province".

On the 15th of July 2022, ADF Director signed a MoU with AGRISUD International NGO for a 3-years period, from May 2022 to April 2025. It formalizes all responsibilities of the two parties to continue their partnership for the implementation of development actions in PKNP area as part of phase 3 of the project "Agro-ecological intensification and diversification of peri-urban family farming in Siem Reap, Cambodia - IADA 3".

In preparing this report, the trustees have taken advantage of the small company exemptions provided by section 415A of the Companies Act 2006

This report was approved by the Trustees and signed on their behalf by:

Vincent Chevance
Trustee

Date: 29 September 2023

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

INDEPENDENT EXAMINER'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2022

Independent Examiner's Report to the Trustee of Archaeology and Development Foundation ('the Charity')

I report to the charity Trustee on my examination of the accounts of the Charity for the year ended 31 December 2022.

Responsibilities and Basis of Report

As the Trustee of the Charity (and its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the Charity are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of the Charity's accounts carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Charity as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair' view which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities [applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102)].

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

This report is made solely to the Charity's Trustee in accordance with Part 4 of the Charities (Accounts and Reports) Regulations 2008. My work has been undertaken so that I might state to the Charity's Trustee those matters I am required to state to them in an Independent Examiner's Report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustee for my work or for this report.

Signed: Hazra Patel Dated: 29 September 2023

Hazra Patel ACA

Lubbock Fine LLP
Chartered Accountants & Statutory Auditors
Paternoster House
65 St Paul's Churchyard
London
EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2022

	Note	Unrestricted funds 2022 $	Restricted funds 2022 $	Total funds 2022 $	Total funds 2021 $
Income from:					
Donations	3	45,737	64,601	110,339	144,118
Investments	4	-	96	96	77
Total income		45,737	64,697	110,434	144,195
Expenditure on:					
Charitable activities	5	46,815	93,303	140,118	171,542
Total expenditure		46,815	93,303	140,118	171,542
Net movement in funds		(1,078)	(28,606)	(29,684)	(27,347)
Reconciliation of funds:					
Total funds brought forward		(28,813)	70,574	41,761	69,108
Net movement in funds		(1,078)	(28,606)	(29,684)	(27,347)
Total funds carried forward		(29,891)	41,968	12,077	41,761

The Statement of Financial Activities includes all gains and losses recognised in the year.

The notes on pages 84 to 94 form part of these financial statements.

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee) **REGISTERED NUMBER: 06429421**

BALANCE SHEET

AS AT 31 DECEMBER 2022

	Note	2022 $	2022 $	2021 $	2021 $
Fixed assets					
Tangible assets	10		3,231		5,667
Current assets					
Cash at bank and in hand		16,485		42,655	
		16,485		42,655	
Creditors: amounts falling due within one year	11	(7,639)		(6,561)	
Net current assets			8,846		36,094
Total net assets			12,077		41,761
Charity funds					
Restricted funds	12		41,968		70,574
Unrestricted funds	12		(29,891)		(28,813)
Total funds			12,077		41,761

The Charity was entitled to exemption from audit under section 477 of the Companies Act 2006.

The members have not required the company to obtain an audit for the year in question in accordance with section 476 of Companies Act 2006.

The Trustee acknowledge their responsibilities for complying with the requirements of the Act with respect to accounting records and preparation of financial statements.

The financial statements have been prepared in accordance with the provisions applicable to entities subject to the small companies regime.

The financial statements were approved and authorised for issue by the Trustee and signed by:

Vincent Chevance
Trustee
Date: 29 September 2023

The notes on pages 84 to 94 form part of these financial statements.

1. General information

Archaeology and Development Foundation is a charitable company limited by guarantee incorporated in England and Wales. Its registered office address and place of business is 25 Brooks Mews, London, W1K 4DZ.

2. Accounting policies

2.1 Basis of preparation of financial statements

The financial statements have been prepared in accordance with the Charities SORP (FRS 102) - Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

Archaeology and Development Foundation meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy.

2.2 Going concern

The Charity is in the main reliant on donations and the support of related parties to meet its running costs. Due to the nature of its activities, the majority of the Charity's expenditure is incurred directly on charitable projects and so the Charity is able to control its direct charitable expenditure based upon the level of donation income that it has received and the anticipated ongoing support of related parties.

The Trustee considers it appropriate to prepare the financial statements on a going concern basis on the assumption that sufficient incoming resources will be generated to meet the Charity's running costs. The financial statements do not include any adjustment which would result if there were insufficient funds available in respect of the Charity's operations.

2.3 Donations and gifts

All income is recognised once the Charity has entitlement to the income, it is probable that the income will be received and the amount of income receivable can be measured reliably.

Donations and gifts are included in full in the Statement of Financial Activities when receivable.

2.4 Expenditure

Expenditure is recognised once there is a legal or constructive obligation to transfer economic benefit to a third party, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is classified by activity. The costs of each activity are made up of the total of direct costs and shared costs, including support costs involved in undertaking each activity. Direct costs attributable to a single activity are allocated directly to that activity. Shared costs which contribute to more than one activity and support costs which are not attributable to a single activity are apportioned between those activities on a basis consistent with the use of resources. Central staff costs are allocated on the basis of time spent, and depreciation charges allocated on the portion of the asset’s use.

Expenditure on charitable activities is incurred on directly undertaking the activities which further the Charity's objectives, as well as any associated support costs.

2. Accounting policies (continued)

2.4 Expenditure (continued)

All expenditure is inclusive of irrecoverable VAT.

2.5 Interest receivable

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the Charity; this is normally upon notification of the interest paid or payable by the institution with whom the funds are deposited.

2.6 Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into US dollars at rates of exchange ruling at the reporting date.

Transactions in foreign currencies are translated into US dollars at the rate ruling on the date of the transaction.

Exchange gains and losses are recognised in the Statement of Financial Activities.

2.7 Tangible fixed assets and depreciation

Tangible fixed assets costing $200 or more are capitalised and recognised when future economic benefits are probable and the cost or value of the asset can be measured reliably.

Tangible fixed assets are initially recognised at cost. After recognition, under the cost model, tangible fixed assets are measured at cost less accumulated depreciation and any accumulated impairment losses. All costs incurred to bring a tangible fixed asset into its intended working condition should be included in the measurement of cost.

Depreciation is charged so as to allocate the cost of tangible fixed assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following bases:

Freehold property	- over 10 years straight line
Motor vehicles	- 25% straight line
Office equipment	- 33.33% straight line

2.8 Debtors

Trade and other debtors are recognised at the settlement amount after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

2.9 Cash at bank and in hand

Cash at bank and in hand includes cash and short-term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

2. Accounting policies (continued)

2.10 Liabilities and provisions

Liabilities are recognised when there is an obligation at the Balance Sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably.

Liabilities are recognised at the amount that the Charity anticipates it will pay to settle the debt or the amount it has received as advanced payments for the goods or services it must provide.

2.11 Financial instruments

The Charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

2.12 Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the Trustee in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The costs of raising and administering such funds are charged against the specific fund. The aim and use of each restricted fund is set out in the notes to the financial statements.

Investment income, gains and losses are allocated to the appropriate fund.

3. Income from donations

	Unrestricted funds 2022 $	Restricted funds 2022 $	Total funds 2022 $
Donations	45,737	64,601	110,338

	Unrestricted funds 2021 $	Restricted funds 2021 $	Total funds 2021 $
Donations	34,035	110,083	144,118

4. Investment income

	Restricted funds 2022 $	Total funds 2022 $
Bank interest	96	96

	Restricted funds 2021 $	Total funds 2021 $
Bank interest	77	77

5. Analysis of expenditure on charitable activities

Summary by fund type

	Unrestricted funds 2022 $	Restricted funds 2022 $	Total 2022 $
Charitable costs	46,815	93,303	140,118

	Unrestricted funds 2021 $	Restricted funds 2021 $	Total 2021 $
Charitable costs	43,080	128,462	171,542

6. Analysis of expenditure by activities

	Activities undertaken directly 2022 $	Support costs 2022 $	Total funds 2022 $
Charitable costs	134,759	5,359	140,118

6. Analysis of expenditure by activities (continued)

	Activities undertaken directly 2021 $	Support costs 2021 $	Total funds 2021 $
Charitable costs	166,632	4,910	171,542

Analysis of support costs

	Charitable costs 2022 $	Total funds 2022 $
Accountancy fees	2,105	2,105
Independent examination fees (governance)	2,250	2,250
Foreign currency loss	119	119
Bank charges and interest	885	885
	5,359	5,359

	Charitable costs 2021 $	Total funds 2021 $
Accountancy fees	1,784	1,784
Independent examination fees (governance)	1,500	1,500
Foreign currency gain	144	144
Bank charges and interest	1,482	1,482
	4,910	4,910

7. Staff costs

	2022 $	2021 $
Wages and salaries	52,182	49,570
	52,182	49,570

The average number of persons employed by the Charity during the year was as follows:

	2022 No.	2021 No.
Average number of employees	11	11

No employee received remuneration amounting to more than $60,000 in either year.

8. Trustee's remuneration and expenses

During the year, no Trustees received any remuneration or other benefits (2021 - $NIL).

During the year ended 31 December 2022, no Trustee expenses have been incurred (2021 - $NIL).

9. Taxation

The company is a registered charity with the Charity Comissioners for England and Wales. It is not liable to corporation tax on any surplus arising from its charitable activites.

10. Tangible fixed assets

	Freehold property $	Motor vehicles $	Office equipment $	Total $
Cost				
At 1 January 2022	28,288	17,090	22,490	67,868
Additions	-	1,160	1,428	2,588
Disposals	-	(500)	-	(500)
At 31 December 2022	28,288	17,750	23,918	69,956
Depreciation				
At 1 January 2022	25,242	16,020	20,939	62,201
Charge for the year	2,829	819	1,359	5,007
On disposals	-	(483)	-	(483)
At 31 December 2022	28,071	16,356	22,298	66,725
Net book value				
At 31 December 2022	217	1,394	1,620	3,231
At 31 December 2021	3,046	1,070	1,551	5,667

Motor vehicles sold in the year resulted in a profit on disposal of $100 which was been included in direct costs of charitable activity.

11. Creditors: Amounts falling due within one year

	2022 $	2021 $
Accruals and deferred income	7,639	6,561

12. Statement of funds

Statement of funds - current year

	Balance at 1 January 2022 $	Income $	Expenditure $	Transfers in/out $	Balance at 31 December 2022 $
Unrestricted funds					
General Funds	(28,813)	45,737	(46,815)	-	(29,891)
Restricted funds					
Education project	35,555	514	(29,579)	-	6,490
Income Generation project	17,483	39,504	(31,957)	-	25,030
Environment project	10,980	24,679	(31,767)	6,556	10,448
UNDP	6,556	-	-	(6,556)	-
	70,574	64,697	(93,303)	-	41,968
Total of funds	41,761	110,434	(140,118)	-	12,077

12. Statement of funds (continued)

Statement of funds - prior year

	Balance at 1 January 2021 $	Income $	Expenditure $	Balance at 31 December 2021 $
Unrestricted funds				
General Funds	(19,768)	34,035	(43,080)	(28,813)
Restricted funds				
Education project	2,616	73,932	(40,993)	35,555
Income Generation project	26,663	2,535	(11,715)	17,483
Environment project	20,345	7,963	(17,328)	10,980
UNDP	39,252	25,730	(58,426)	6,556
	88,876	110,160	(128,462)	70,574
Total of funds	69,108	144,195	(171,542)	41,761

Statement of funds (continued)

Education project - this fund contains the following projects:

- WISH 2 - Hygiene and sanitation programme in 4 primary schools. The project was set to run from January 2021 to December 2022 however has been extended into 2023 and 2024.

- Emergency relief - Funds used for emergency relief/complementary support.

- SEAF 2 - Infrastructure project in primary schools, implemented from March 2021 to Dec 2022 and was extended to March 2023.

- SEAF 3L - This is for the construction and equipment of a library at Popel village primary school.

Income generation project - this fund contains the following projects:

- Income generation - This relates to the provision of technical and other assistance to farmers to replace destructive farming practices in PKNP, the IG project, which includes the rice bank project.

- ALIVE - This is for implementing alternatives in agriculture and animal raising. The project is running from May 2022 to April 2025 with donations from SEAF.

Environment project - this fund contains the following projects:

- Tree 2 - This relates to a participatory tree growing project to be implemented in three village schools on the plateau of Phnom Kulen National Park. This project has been renewed for 2 more years from September 2020 to October 2022, and a third tree project is set to start from February 2023.

- HUMY 2 and HUMY 2 bis - This project started from Oct 2021 to March 2022 (HUMY 2) providing training for CPA members of Popel and Anlong Community-based Tourism Centers (CBTCs) and Community Protected Area (CPAs) and promoting local handicrafts. The project continued from April 2022 to December 2022 (HUMY 2bis).

- HUMY 3 - This project is the Popel tree nursery project and began in April 2022 set to run for 2 years.

- UNDP - This relates to a project to implement a project in 2 villages with forest protection (demarcation and expansion of a CPA and alternative livelihoods), from May 2019 to June 2021.

Transfers
During the current year a transfer was made from the restricted UNDP fund to the Environment project fund totalling $6,556 to represent the amalgamation of projects with concurrent aims.

13. Analysis of net assets between funds

Analysis of net assets between funds - current year

	Unrestricted funds 2022 $	Restricted funds 2022 $	Total funds 2022 $
Tangible fixed assets	3,231	-	3,231
Current assets	(25,483)	41,968	16,485
Creditors due within one year	(7,639)	-	(7,639)
Total	(29,891)	41,968	12,077

Analysis of net assets between funds - prior year

	Unrestricted funds 2021 $	Restricted funds 2021 $	Total funds 2021 $
Tangible fixed assets	5,667	-	5,667
Current assets	(27,919)	70,574	42,655
Creditors due within one year	(6,561)	-	(6,561)
Total	(28,813)	70,574	41,761

14. Members' liability

Each member of the charitable company undertakes to contribute to the assets of the company in the event of it being wound up while he/she is a member, or within one year after he/she ceases to be a member, such amount as may be required, not exceeding £10 for the debts and liabilities contracted before he/she ceases to be a member.

15. Related party transactions

Included within incoming resources is an amount of $41,334 (2021 - $9,993) which was donated by the trustee / close family member of the trustee.

ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales - Charity number 1122750

Accounts

Registered number: 06429421
Charity number: 1122750

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2021

LUBBOCK FINE LLP
Chartered Accountants
Paternoster House
65 St Paul's Churchyard
London EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

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ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

(A Company Limited by Guarantee)

REFERENCE AND ADMINISTRATIVE DETAILS OF THE CHARITY, ITS TRUSTEES AND ADVISERS

FOR THE YEAR ENDED 31 DECEMBER 2021

Trustees	Vincent Chevance
Company registered number	06429421
Charity registered number	1122750
Registered office	25 Brooks Mews London W1K 4DZ
Company secretary	Jean-Baptise Chevance
Accountants	Lubbock Fine LLP Chartered Accountants & Statutory Auditors Paternoster House 65 St Paul's Churchyard London EC4M 8AB

TRUSTEE'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2021

The Trustee presents the annual report, which includes the directors report, together with the financial statements of the Archaeology and Development Foundation for the period from 1 January 2021 to 31 December 2021. The Trustee confirms that the Annual Report and financial statements of the Charity comply with the current statutory requirements, the requirements of the Charity's governing document and the provisions of the Statement of Recommended Practice (SORP), applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

Since the company qualifies as small under section 383, the strategic report required of medium and large companies under The Companies Act 2006 (Strategic Report and Director's Report) Regulations 2013 is not required.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Archaeology and Development Foundation is a company, incorporated on 16 November 2007, governed by its Memorandum and Articles of Association. It registered as a charity with the Charity Commission for England & Wales on 12 February 2008.

New Trustees are appointed by the members. The Trustees may appoint a person who is willing to act to be a Trustee, either to fill a vacancy or as an additional trustee.

New Trustees are briefed on their legal obligation under charity and company law, the content of the Memorandum and Articles of Association, the committee and decision making processes, the business plan and recent financial performance of the charity.

In setting the objectives and planning the activity of the charity, the Trustees have given careful consideration to the Charity Commission's general guidance on public benefit.

OBJECTIVES AND ACTIVITIES

The objectives of the charitable company as set out in the governing document are:

The Archaeology and Development Foundation has been undertaking archaeological research in Phnom Kulen since 2008. One of the objectives is to understand the extent of this first capital as well as to define the various settlements during the period of time, from pre angkorian period to the post angkorian period. Working in close collaboration with the APSARA National Authority (National Authority in charge of Angkor region), the Ministry of Environment and other institutional partners, ADF is the main institution working on both development and archaeology in Phnom Kulen.

ADF is also disseminating the archaeological knowledge of the findings. Reports and conferences are regularly given and specific publications on archaeological research are also published in specialised review.

Historically, geographically and from a hydrologic point of view, Phnom Kulen is very closely linked with Angkor World heritage site. The Royal Government of Cambodia has registered Phnom Kulen on the indicative list of the world heritage site, and ADF is working closely with UNESCO and APSARA to move toward the recognition of this site and to meet the standards of a world heritage site.

Additionally, ADF is strongly collaborating with the Ministry of Environment, in charge of the Phnom Kulen National Park, for the management of the protected areas. Others activities in the environmental protection field are implemented such as reforestation, environmental awareness campaigns, demarcation of protected areas, training and supporting to ranger patrols in the National Park, mapping etc.

Conservation and protection of the sites

In the post war years (1990's) Cambodia suffered from endless looting. It is well known that archaeological site protection goes hand in hand with an increased local awareness that arises as a result of research and conservation programmes.

The Phnom Kulen programme is providing APSARA Authority a better knowledge of the archaeological value of the plateau, in order to extend its activities on the Phnom Kulen. ADF is also helping the Ministry of Environment by providing information relative to protected area, forest cover, and illegal activities (encroaching, illegal logging etc).

The programme is also helping to define demining areas and specific archaeological protected areas. The regular cleaning of vegetation and the maintenance of the monuments can then occur. Curators and guards/workers have been appointed by APSARA in order to follow up this initiative. The Archaeology and Development Foundation is providing APSARA advice and expertise to improve the management of the sites in terms of conservation and tourism management. ADF has regularly asked APSARA to increase the human and technical resources, to fulfil these missions. For the last years, the Archaeology and Development Foundation is also sponsoring the activities from the APSARA Stone Conservation Unit (transports, salaries, materials) to restore the sandstone artefacts and bas reliefs discovered during the excavations.

Training of Khmer specialists

One of the long term outcomes of this project is the training of Cambodian specialists, in providing them with knowledge, expertise and know how to preserve these sites.

This project provides an opportunity to train the young Khmer specialists on specific search processes. All stages of the archaeological research process, beginning at the preparation phases then field work phases (prospecting to diagnostic trenches or open area excavations, conservation of monuments, inventories) all the way through to annual and final report and publication, is done working closely with ADF and APSARA archaeologists. The project also provides young students graduated from the Royal University of Fine Arts, faculty of archaeology, with their first fieldwork experience.

ADF also provide regular trading to the Provincial Department of Environment of Siem Reap staff and the rangers in charge of the Phnom Kulen National Park.

Economic and social impact on local populations

Cambodia has been devastated by civil wars which were fought from 1970 through to the 1990's; this period saw one of the largest genocides in the world which killed between 1.7 to 2 million people. Fighting, aerial bombardments and minefields had a significant impact on the lives of three generations.

Phnom Kulen region was the scene of violent fighting between Khmer Rouge and government troops; the consequences are still evident today. It was one of the last Khmer Rouge strongholds to surrender in 1996.

This project is providing jobs to seasonal workers and, consecutively, full time activity to guards and specialised workers. In providing the villagers with heritage and conservation knowledge it is helping to prevent further looting and is creating a safe archaeological zone by initiating a land mine removal programme and archaeological protected areas.

An important effort is also done towards the villagers from the Phnom Kulen region for food security/nutritional health, medical and health support, hygiene and sanitation (particularly in primary schools), alternative livelihood generating incomes, as well as environmental education and protection.

These initiatives have an important impact on the social and economic development of Phnom Kulen and especially improve the level of education and health care of the inhabitants.

FINANCIAL REVIEW

Income for the year ended 31 December 2021 was $144,195 with expenditure totalling $171,542. At the year end, the charity was holding restricted reserves of $70,574 and the unrestricted reserves were in a deficit position of £28,813.

As the Charitable company has minimal fixed costs its policy is to hold approximately $5,000 in reserves in order to use as much of the funds received each year for charitable purposes. The Trustee will continue to work to bring reserves to this the target level.

PLANS FOR FUTURE PERIODS

For the archaeological activities (maintenance and conservation program), there is no plan to coordinate demining operations in 2022 by CMAC teams. However, and if the budget and work plan allow it, ADF will decide if excavations are possible in 2021. If possible, it would most probably take place on a site already secured over the previous years.

ADF will continue to maintain a regular coordination with APSARA National Authority and provide assistance and advices for a better heritage management of the archaeological sites in Phnom Kulen. This involves advices for the general maintenance of the sites and the control of the Archaeological Protected Areas. ADF will continue to encourage APSARA to increase the material resources for these tasks. ADF will provide any recent and old documentation on archaeological sites to be restored by APSARA in 2022.

For the Kbal Spean and 1000 linga sites, the ADF team will intend to finalize the signboards and with their text and submit them to APSARA, so information panels can be edited and set up by ADF & APSARA, providing APSARA a better tool to manage this area and a better knowledge of the site for the public. The maps and their study will also be published in a specialised review in 2022 or 2023.

In the restoration field, only small sandstone fragments from previous archaeological campaigns will require complementary restoration in 2019. As our requests from 2018 to 2019 were left unanswered, ADF will have to ask again if this small operation can be done.

ADF will continue to encourage the Cambodian authorities (APSARA National Authority, Ministry of Environment, Provincial Authorities) to officially recognise the Archaeological Protected Areas and to allocate more resources for their effective protection.

The archaeological research, diffusion, communication and training will continue. ADF team will also participate in two publications in the volume dedicated to the Angkorian World, published by Routledge. ADF will also intend to finalise the publication about the 1000 linga and Kbal Spean sites with the most recent maps of these two sites, on Prasat Rong Chen mountain-temple and on the earth mounds fields, discovered thanks to the Lidar and excavated by ADF and APSARA in 2013.

Further studies and analysis from previous excavations archaeological samples and artefacts could also be undertaken such as ceramic or roof tiles studies, charcoal analysis for radiocarbon dating and tree identification, or phytolyth analysis.

The continuation of our collaboration with EFEO/Dharma project and APSARA will allow additional surveys for the recording, rubbing and studies of unregistered ancient inscriptions in Phnom Kulen. Additional surveys to check specific archaeological features will also be undertaken and a possible excavation campaign in an angkorian hermit rock shelter will be implemented in partnership with EFEO. A Memorandum of Understanding will be signed by EFEO and ADF, to stimulate academic exchange and cooperation in the field of South-East Asian studies.

In 2022, ADF could also continue various photogrammetric acquisitions in Phnom Kulen, in collaboration with APSARA National Authority. Previous excavations at Poeng Tbal (2009 and 2012) and Poeng Eisei (2020) allowed a publication about the rock shelters sites in Phnom Kulen. ADF will continue to complete the surveys of a maximum of these sites over the years, to complete their documentation and the general archaeological map of Phnom Kulen. A particular attention will be given to Kbal Spean where a survey should be implemented to locate precisely the previously and recently discovered inscriptions on ADF's maps, prior to the publication.

ADF will also start working with the Ministry of Fine Arts and Culture of Cambodia to gather previous documentation and submit reports on artefacts that appeared to be left on site before the Cambodian civil war and reappeared in private or public collections later on. It will allow the Cambodian government to claim the repatriation of these artefacts, strengthening the dynamic started a few years ago. ADF aims to write one report per artefact coming from Phnom Kulen and reappearing in these collections.

In term of communication and collaboration with APSARA, UNESCO, UNDP and MoE, ADF will continue to participate to the ICC meetings (in January, June and December 2021), APSARA meetings, MoE and UNDP meetings and all events related to the Action Plan and the Phnom Kulen Management Program, and any other project related to PKNP.

The ADF Facebook page as well as ADF website will continue to be regularly updated with pictures from our various operations, to share our actions and inform our donors and partners.

Regarding the development activities, the main components will continue to be reinforced and adapted, according to their results.

In ADF's operational year 2022, ADF Income Generation (IG) team will continue to monitor and support (financially and technically) every small farming production unit: chicken and pig breeders. ADF will strongly encouraging them to re-invest their profit into their micro-enterprise, in order to create sustainable models, and applying a 50% reimbursement rate to ADF.

ADF IG team will continue to develop the IG-agriculture activities in Khnong Phnom commune villages, with the AGRISUD project, proposing alternative livelihoods to more than 200 families. All IG beneficiaries will be registered and will continue to be monitored. ADF will also encourage its IG staff to attend technical training and will encourage exposure visit for the beneficiaries. Additional beneficiaries from Khlah Khnum village interested in pig and chicken raising will be included, within the UNDP-BESD project. Families from other villages could also be involved, if additional funding is provided by other donors.

ADF will seek a new donor to support this component, as Terre Cambodge and Frangipani Spa stopped its regular funding in March 2020, due to the C-19 crisis. If this is successful, ADF will continue its partnership with AGRISUD International for a 3-year period, from May 2022 to Avril 2025.

The Rice bank sub-component in Thma Chruogn village will continue to be monitored, encouraging the local population and authorities to take their ownership.

Regarding the alternative livelihoods related to tourism, ADF will continue to support and the Anlong Thom and Popel CBTC by advising and training his team, with possible funding from HUMY NGO, interested to support this initiative. The objectives remain to offer tours with stronger sustainable and local impacts. The collaboration with our partner from the private sector Terre Cambodge will continue and Ms. Chhun Phirom will continue to be employed for these activities.

The hygiene project (WISH 2) has started in January 2021, for a 2-year period, targeting 4 primary schools (Popel, Khlah Khmum, Sangke Lak and Ta Penh), continuing to address environmental, hygiene and health issues. It has encompassed the recommendations from the WISH 1 evaluation report finalised in February 2020 and is flexible enough to be implemented within the C-19 pandemic.

ADF will implement, thanks to the South-East Asian Foundation (SEAF), another project (SEAF 3) to support libraries in the primary schools of four villages (Popel, Khlah Khmum, Sangke Lak and Ta Penh). The infrastructure support to the primary school (SEAF 2) will continue with the remaining funds (SEAF 2).

ADF team will continue to work closely with the local Health Centre (Anlong Thom) to assist poor people, facing emergency situation. As per the previous years, an Emergency Relief Fund will be reserved within the ADF budget, in case of major emergency for the poorest of the people (domestic fire or accident, illness, natural disaster…).

Finally, ADF Environmental Support will continue, as ADF is strongly committed to the environmental protection of the Phnom Kulen National Park, and as the MoE is seeking support from our organisation.

ADF will continue to contribute to the Phnom Kulen Management Plan and the Action Plan, in the framework of the Phnom Kulen working group. With the assistance of UNDP, ADF will assist the MoE for the completion of these documents and studies. ADF will continue to recommend the official recognition of the archaeological protected areas (APA). ADF will seek for donors to implement activities corresponding to the Action Plan. ADF will continue to participate to the PES studies for the PKNP, if required.

ADF will continue the dynamic initiated with BESD project, funded by UNDP and SIDA, regarding the Popel CBTC and the training of its members, with the funding from HUMY (HUMY 2 and its continuation in 2022, HUMY 2 bis). Anlong Thom CBTC, Anlong Thom CPA and Popel CPA will also be involved in this project to improve the management of the CBTCs, their related CPAs and the regular patrols in these 2 Community Protected Areas, as well as a support to the Phnom Kulen handicrafts producers.

ADF will make sure that a maximum of households is connected to the water system in Popel and that the water committee is properly functioning.

The TREE project focusing on growing saplings in tree nurseries located in three primary schools should be continued in 2021, until august 2022. A continuation of this project will be proposed to its donor, and an additional tree nursery should be funded by HUMY in Popel primary school (HUMY 3).

ADF will continue to advise and assist the APSARA Authority and the MoE on large project such as the waterfall area ("Green zone project") and the road project crossing the PKNP.

ADF will assist tree-planting project with APSARA and MoE. The continuation of the Income Generation activities and the systematic report to the relevant authority of illegal activities (ex. logging, construction, land speculation) will also contributing to assist the MoE for the protection of the National Park.

ADF will continue to stress Phnom Kulen National Park threat's on at every level (local, national, international) and, if funded, to implement the demarcation of additional protected areas, within the park.

ADF will be associated to the project entitled "Integrated Natural Resource Management (INRM) in the productive, natural and forested landscape of the Northern Region of Cambodia".

ADF will be associated to the project entitled "Cambodia Sustainable Landscape and Ecotourism Project (CSLEP)" a partnership project between the Ministry of Environment (MoE) and World Bank Group (WBG), working to improve protected areas management and promote ecotourism in the Cardamom Mountains-Tonle Sap landscape.

Every ADF activities will be implemented in accordance with the Khnong Phnom Commune development Plan. To do so, ADF will continue to attend the regular meeting with the local authorities.

Every MoU ending in 2022 will be with the relevant authorities renewed (MoE, Ministry of Foreign Affairs and International Cooperation).

ACHIEVEMENTS & PERFORMANCE

1. INTRODUCTION

This report presents the ADF activities in Phnom Kulen during the year 2021. They are implemented by ADF within the framework of the MoUs signed between the APSARA National Authority and the Ministry of Environment, ADF's two principal governmental partners. Other governmental bodies are also involved on a local scale such as the Health Department (Sotr Nikum), the Educational Department, the commune Council of Khnong Phnom Commune (Svay Leu District, Siem Reap Province).

This report is divided in two main parts, presenting the two axes of ADF's activities: the archaeological component and the development component. The last chapter presents the perspectives and the plans for the future.

ADF/ Phnom Kulen Program team for 2021

Administration, finance and communication officer:
- Ms. Hoeung Hourapich (ADF)

Archaeological and environmental team
- M. Sakhoeun Sakada (Part time consultant, MoE)
- M. Nicolas Josso (archaeologist, consultant for photogrammetry, April to June)
- M. Lounrn Leap (EFEO archaeologist, consultant for photogrammetry, April to June)
- M. Seng Samry (Environmental assistant)
- M. Yon Sokchea (Tree nursery Supervisor)

Development team
- Ms. Mien Mout (Income Generation Supervisor)
- Ms. Bis Chhoeurng (Income Generation field assistant)
- M. Seng Samry (Hygiene and sanitation Supervisor and house manager)
- Ms. Loem Nimul (Hygiene field assistant)
- M. Khen Savann (Hygiene field assistant)
- Ms. Chhun Phirom (CBTC supervisor, part-time)

Logistic team
- Ms. Lay Thol, guard
- Ms. Nuon Srey Nath, cook

The ADF international team in 2021:
- M. Jean-Baptiste Chevance (Archaeologist, Phnom Kulen Program Director)

All fields' activities are implemented with local partners such as the Phnom Kulen National Park Rangers, the APSARA archaeologists and guards, the Community Protected Area members of Popel and Anlong Thom villages, the Community-based Tourism centre teams of Popel and Anlong Thom, the teachers and principals at Sangke Lak, Khlah Khmum, Anlong Thom and Ta Penh primary schools and the Anlong Thom Health Centre staff.

2. ACHIEVEMENTS AND PERFORMANCE

ARCHAEOLOGY: FIELD OPERATIONS

The 2021 archaeological activities are a continuity of the programme launched in 2008 in collaboration with the APSARA National Authority. The 2020 activities can be summarized as below.

a. MAINTENANCE AND CONSERVATION PROGRAM:

Land Mine & UXO removal program

There was no demining campaign in 2021, as no archaeological operation was planned. The annual demining program set up by ADF, in collaboration with CMAC and APSARA, allows the regular clearing and the maintenance of the archaeological sites in Phnom Kulen. As stated in the MoU between ADF and the APSARA National Authority, and as implemented from 2008, the ADF team is selecting the sites, after approval by APSARA, and is coordinating the demining operations with the CMAC teams.

In addition to these demining orations related to archaeological research, ADF team reports and follows up the unexploded ordnances (UXO) founded by villagers to the local authorities.

Assistance to the APSARA National Authority for heritage management in Phnom Kulen

ADF is continuing its assistance to APSARA for the conservation and the maintenance of the Phnom Kulen archaeological sites. This concerns the ongoing maintenance and conservation of the monuments and sites and their respective Archaeological Protected Areas (APA, 800 hectares).

ADF maintains a regular coordination with the APSARA deputy director, heads of departments, archaeologists, workers and guards in charge of Phnom Kulen sites, and provides assistance and advices for a better heritage management of the archaeological sites.

Restoration of sandstone, ceramic and metallic artefacts

No ceramic or metallic artefacts required restoration/conservation in 2021.

Archaeological protected areas (APA)

The main objective of the APA is to protect the immediate environment of the archaeological sites in Phnom Kulen from damaging agriculture practices, including deforestation and uncontrolled fires and erosion. The identification of archaeological sites thanks to the LiDAR was also one of the outcomes, as well as to build awareness towards the population and the local authorities on their cultural heritage and the natural environment.

After the 2017 assessment of each zone, ADF reminded APSARA National Authority to replace the broken posts demarcating the areas and submitted a report in Khmer to APSARA on the 1st of October 2017. It summarises the number of broken (or missing) posts for each zone. A total of 45 should be replaced, as stated in APSARA-ADF MoU, signed at the end of 2017.

After their official recognition by the APSARA, the Ministry of Environment and the provincial authorities of Siem Reap (May and June 2015), these zones still need a jurisdictional framework and a clear definition of the responsible authority. Presently, the APSARA National Authority, in charge of the archaeological sites in Siem Reap Province, manages them. Their exact status should be defined within the framework of the Management Plan of PKNP, implemented with the Action plan since 2018 and onward.

The additional APA (799 hectares demarcated in the Phnom Kulen National Park) was implemented in 2019 within the UNDP-BESD project around the Prasat Krohom 1 and 2 temples, the dike Thnal O' Srae, and a group or earth mounds, north of Khlah Khmum village (see below, Environmental program, UNDP-BESD project). Patrols by MoE rangers are organised since by the Ministry of Environment to control this area.

The Archaeology and Development Foundation has applied on the 30th of November 2021 to the U.S. Ambassadors Fund for Cultural Preservation 2022 Grants Program (Concept Note for Round 1: "Preserving an Angkorian Mountain (PAM): Conservation of Phnom Kulen National Park archaeological sites"). Unfortunately, ADF's project was not selected for this 18-month project (01 September 2022 – 28 February 2023; 96, 000 US$).

b. ARCHAEOLOGICAL RESEARCH, DIFFUSION/COMMUNICATION AND TRAINING:

Archaeological Excavation campaign & topographical survey, archaeological research:

Photogrammetric surveys

In march 2021, ADF requested the official authorisation to undertake various photogrammetric acquisitions in Phnom Kulen, in collaboration with APSARA National Authority.

ADF archaeological research is focusing on the ancient settlements in Phnom Kulen and one of its main's objectives is to better define them, from the early capital of Mahendraparvata (late 8th-early 9th century) to later ones during the angkorian and post- angkorian periods. Among the most important sites of these periods are the rock shelters where hermits settled and sometimes left bas-reliefs, inscriptions and traces of wooden architecture (10th to 12th century). Simultaneously to ADF excavations in Pœng Tbal and Pœng Eisei (2009, 2010 and 2012), two sites corresponding to this important tradition in Phnom Kulen, ADF team surveyed a maximum of these sites over the years, to complete their inventory, documentation and the general archaeological map of Phnom Kulen. Some of these results were published in 2015, in the journal Aséanie, dated from 2013 (« Pœng Tbal et Pœng Eisei, ermitages angkoriens méconnus du Phnom Kulen », Aséanie 32, Décembre 2013, p. 11-76).

From April to June 2021 and to strengthen this dynamic and complete the documentation of these sites by obtaining detailed 3 D models, ADF proceeded to photogrammetric surveys in Srah Damrei, Poeng Eisei and Poeng Tbal. As the nearby temple of Prasat Damrei Krap was cleared in 2020 of vegetation thanks to APSARA's recent restoration, ADF also undertook a photogrammetric documentation of this temple.

The surveys (pictures taken by camera and drones) and the 3 D model were done by Mr. Nicolas Josso, independent archaeologist and regular collaborator of the EFEO-Siem Reap center. He was assisted by Mr. Fréderic Laurent, drone operator and by Mr. Lounrn Leap (EFEO Siem Reap). The ADF team and the APSARA guards of the respective sites were also involved in the organization of the work for the transportation of the equipment and for the clearing of the small vegetation, in some cases necessary for a proper acquisition of the pictures. These clearing were completed in some case by sweeping fallen tree leaves on rocks. The complementary topographical surveys to localize the targets were done by Mr. Leng Sathya (APSARA).

A first set of pictures was taken in early April 2021 at Srah Damrei, to ensure the technical feasibility of the 3 D models. This was a necessary step considering the technical complexity of the project. The team then came back to the field to finalise the geo-localised pictures of the four selected sites. The treatment of these images was done over the summer 2021 in France by Mr. N. Josso.

The various equipment used for the photogrammetry surveys were: a digital camera (Fujifilm XT-4 with a 23 mm lens), a drone (DJI Mavic Air 2) and a laptop computer (MSI 17', Intel i9, RTX 3080, RAM 64Go). A Total Station (Zeiss) with 40 coded targets, generated Agisoft Metashape were used for the topographical surveys. The data obtained (pictures and topographical files) were processed in the Agisoft Metashape 1.7 photogrammetry software.

The final documents produced are with the following formats: .psz, .dae. An overview of these files is available on the Sketchfab website, with several links.

All files and documents, pictures as well as different stages of the 3D model project in Kulen for 2021 represent more than 700 Go. Everything is not directly workable but must be stored to eventual further work in the future. ADF is storing this entire data set on a hard disk and could provide it APSARA if needed.

ADF plans to communicate on this photogrammetry campaign. Some of its results will be shared through a selection of the SketchFab links on ADF Facebook site, mentioning the collaboration with the APSARA National Authority. The results will also be presented at the ICC session in December 2022.

On the 24th of September 2021, ADF team implemented an archaeological survey to the angkorian dike located north of Sangke Lak village, discovered thanks to the LiDAR in 2015.

On the 13th and 14th of December 2021, ADF Director attended to the methodological workshop entitled "Dating in archaeology: questions, data, methods" organised by EFEO CNRS and LAPA at EFEO centre in Siem Reap.

Excavations
No excavations were undertaken in 2021. Previous excavations provided numerous data for future publications. More specialised studies with artefacts excavated from these campaigns will be undertaken in the coming years with ceramics and radiocarbon studies.

Specialised studies
Further specific archaeological studies and publications concerning previous excavations undertook by ADF are ongoing. More publications will reveal particular aspects of the ancient city in Kulen for the coming years (water management, main sites, industries…).

Diffusion of the archaeological research and communication:

Publications
In 2021, ADF director has participated to two other general articles to be published in a large volume on Angkor, by Routledge editor in 2022. For the next publications, ADF team is focusing on the Kbal Spean and the 1000 linga site (with additional survey in rock shelter and hermits' sites from Phnom Kulen), Rong Chen mountain temple and the ancient mound fields.

Following the 15th October 2020 lecture entitled « An overview of ADF activities in Phnom Kulen, Cambodia" within the framework of the webinar series "Indigenous Peoples, Heritage and Landscape in the Asia-Pacific: Knowledge co-production, Policy Change and Empowerment" organised and co-hosted by the University of California (USA) UCLA Department of Anthropology, UCLA Center for Southeast Asian Studies, UCLA Asia Pacific Center, University of Hawai'i-Mānoa Center for Southeast Asian Studies, Save the Ifugao Terraces Movement (SITMo), Ifugao State University, and the Partido State University (visible online on the panel 5 at https://dal.ucla.edu/engagedresearch/video-gallery-2/), an article was published in 2021: "Heritage and History in Cambodia: Localizing and Empowering Communities throughout Archaeology" *in Indigenous Peoples, Heritage and Landscape in the Asia Pacific: Knowledge Co-production and Empowerment*, edited by Stephen Acabado and Da-wei Kuan, New York and Milton Park: Routledge.

Communications
As every year, ADF team presented its activity and perspectives reports for the International Coordinating Committee for the Safeguarding and Development of the historic site of Angkor (ICC-Angkor) at the 34th technical session on the 26th of January 2021, originally planned in December 2020. On the 11th of October 2021, ADF presented online a second activity report to the ICC-Angkor *adhoc* expert committee.

Documentaries
On the 4th of November 2021, ADF Director participated to a documentary called "Lost World of Angkor Wat", produced by Windfall Films / Argonon, a 2 x 60' documentary for Channel 4, Discovery UK, France 5, SBS.

On the 16th of March 2021, ADF Director participated to a 15 minutes documentary called "Angkor, le génie aquatique", produced by ARTE, for the series of documentaries entitled "L'invitation au voyage".

ADF team regularly update our website (www.adfkulen.org) and our Facebook page where the last pictures of our main activities are displayed (www.facebook.com/adfkulen). In 2021, an important page was added to ADF website to highlight the continuous support from Terre Cambodge and Frangipani Spa to ADF with a brief report on 11 years of support for the Phnom Kulen Program (2010-2021): https://www.adfkulen.org/adf--phnom-kulen-and-terre-cambodge.html

An additional page was also added to define ADF's general strategy: https://www.adfkulen.org/our-strategy.html

Training of Cambodian archaeologists
There is a close collaboration between the APSARA Authority and ADF archaeologists. This is providing a platform for field training to the APSARA local staff (archaeologist and local workers) during all activities (excavations, surveys, APA surveys and management, site management…). The 2021 field activities associated the APSARA archaeologists and workers to the photogrammetric surveys in Phnom Kulen (see above).

DEVELOPMENT: FIELD OPERATIONS

Overview:
Since its conception, the Archaeology & Development Foundation has closely linked the two axes of its action on the field. The beneficiaries of the development activities, the population of Phnom Kulen, have suffered from a dark chapter in Cambodia history and civil war. The side effects are still very tangible today: lack of trust, lack of public infrastructures, lack of access to healthcare, food, nutrition and sanitation, lack of education and awareness, difficulties to bring products to market, low resources from the governmental bodies (Health dpt, Education dpt, Police, Ministry of Environment…).

Some of the schools are facing an important turn over as qualified teachers are reluctant to work in Khnong Phnom commune, and facilities are poor as compared to other communes in Siem Reap province. This results in inadequate education for the children rendering yet another generation that is very likely to fall into the poverty. There is only one secondary school and one health centre for nine villages of the commune (Khnong Phnom, 4750 inhabitants in 2021).

For a significant percentage of this population, peace and stability is enough and they don't see the need for further change and development. Breaking the poverty cycle in any context is challenging. For this population located on a remote plateau with a difficult access, it is even more problematic. An important proportion of the population in Khnong Phnom commune live in extreme poverty or poverty, surviving on 'day to day' bases. Others are now wealthier thanks to the illegal cultivation of cashew nuts.

Seasonal food shortages continually affect some of the population of Phnom Kulen. The ramifications of food shortages are numerous, the most notable are family health and wellbeing. Sickness exacerbates the multitude of issues that poor families have to endure, further interning them into the poverty cycle. A large proportion of the poor people are suffering from the lack of liquid assets. They are subsistent farmers and have little to no money to buy the basic necessities to attain the very basics of life: soap for personal and family hygiene, fundamental household materials, cooking pots and/or basic repairs to their dwellings and/or basic farming tools.

However, the new road being built from Svay Leu to the checkpoint on the west side of Kulen is now changing this general dynamic. The southern villages of Anlong Thom, Thma Chruogn and Ta Penh are now accessible by car. Tourist (national or foreigners) can now visit these villages and the archaeological sites nearby. The C-19 pandemic has stopped all international tourism in Cambodia but many Cambodians are now able to travel to national parks and sites in their country. As in December 2021, the section of this new road, from Svay Leu to Preah Ang Thom, was requiring a few more months to be finalised. The second section, from Preah Ang Thom to the western checkpoint of the park will start in a second phase. The northern villages (Popel, Khlah Khmum and Sangke Lak) remain isolated with very difficult access road.

Other government bodies, for example the Ministry of Environment (MoE) and the police, have limited resource. The result of this is a lack of law enforcement, illegal logging, poaching, illegal building and house construction, a general depletion of the environmental natural recourses; which are having serious consequences for the water of Angkor Park and Siem Reap town, as Phnom Kulen is the natural water tank of the region.

For the last 30 years, Phnom Kulen National Park faced a very important deforestation mostly due to the slash and burnt practice, combined with the illegal cultivation of cashew nut. Illegal logging of large trees and hunting are still observed. However, and for the last few years, ranger patrols have been more active and these practices have reduced, at least in the southern part of the plateau, where the population is concentrated.

Under the development program, ADF has set up four main components to address these issues: 1) Income Generation/alternative livelihoods, 2) Hygiene and sanitation/Emergency Relief, 3) Educational support, and 4) Environmental component.
They are all tailored-made to the Kulen problematic and are implemented in coordination with the Khnong Phnom Commune Development plan, the Ministry of Environment and the APSARA Authority.
The 2021 activities are presented below.

c. INCOME GENERATION (IG)/ALTERNATIVE LIVELIHOOD PROGRAM

Agriculture alternative livelihood

The objective remains the same as the previous years: to enhance and develop alternative income generation activities, with the purpose of encouraging the Phnom Kulen population to move away from their current unsustainable, illegal and destructive practices (mono-culture of cashew nuts and slash-and-burn) to sustainable and environmentally friendly income generation activities. As behaviour change is a process taking time, this component has to aim towards positive examples and repetition. It is therefore the most challenging component of ADF within the development component.

- ADF agriculture alternative livelihood

Reminder: As for the previous 11 years (since 2010), ADF continued in 2021 the support to local communities and villagers from Khnong Phnom commune. ADF propose technical assistance and materials for the families to undertake animal raising (chicken, pig). In 2021, the direct beneficiaries of ADF IG component were the same as in 2020: 9 families raising chicken (1 in Ta Penh, 5 in Anlong Thom, 3 in Phum Thmey), 4 families raising pigs (1 in Ta Penh, 1 in Sangke Lak and 2 in

Phum Thmey). This was completed by numerous families reached by the two other related projects, both started in 2019 (ADF/ AGRISUD project and UNDP-BESD project; see 2020 report and below).

ADF IG team continued to monitor these animal raisers and provided material if needed. ADF also invited veterinarian (From the Agriculture Dpt, Svay Leu District) to monitor pig farmers and to vaccinate the animals 3 times for each farmer. He specifically came to check animal with issues on the 8th of March 2021.
With the objective to transform these producers into independent local entrepreneurs, ADF encouraged them to contribute with their incomes to the costs. This allows taking ownership for their business, ensuring sustainable alternative incomes. Beneficiaries were previously asked to repay back to ADF's IG accounts 50% of the amount spent for the materials and equipment they received from ADF. From January 2019 to December 2020, ADF applied the 75% rate for the reimbursements, to encourage the beneficiaries to be responsible. From January 2021, ADF collected these reimbursements on a 50% rate again as most of farmers had difficulties to pay back a higher rate. They were collected from pig farmers, rice bank and mushroom producers (even though this last activity was stopped being supported by ADF in 2018, but some of the previous beneficiaries still had to reimburse ADF), and they were reused for the IG program.

- UNDP-Funded ADF agriculture alternative livelihood

Reminder: Since 2019 and over the year 2020, ADF received funds from UNDP Cambodia and SIDA within the BESD project to provide alternative livelihoods to Khlah Khmum villagers in Kulen, in relation with the creation of a protected area to the north of the village (see below, Environmental component).
In 2020, ADF team has proposed alternative livelihood activities to the villagers of Khlah Khmum. They selected chicken and pig raising. At the end of the year 2020, 2 families were raising chicken and 11 families were raising pigs in Khlah Khmum village. ADF provided technical advices and material (piglets and chicks, nets, nails, cement, bricks, water tanks and feeding tanks), with funds from the BESD project. In 2021, ADF team continued to follow up these families and extended the animal raising activities with the BESD-PES project to a total of 31 families: 2 families for chicken raising in Khlah Khmum and 29 families for pig raising (24 in Khlah Khmum and 7 in Anlong Thom). See below the UNDP-BESD-PES project (Environmental component).

- AGRISUD and ADF joint-project in Khnong Phnom Commune (IADA-2)

Reminder: The partnership between ADF and AGRISUD International started in may 2019 with a signature of a Memorandum of Understanding and the beginning of the field activities. AGRISUD International is active in Cambodia since 1995 on supporting family farms to improve their activities for a better and sustainable livelihood. The project "Agroecological and diversification family farming in peri-urban of Siem Reap Province" (IADA-2) is ongoing since May 2016 supporting 820 small agricultural family enterprises to help them increase their income and living conditions.
The concept developed with ADF and AGRISUD is to expend this project to more beneficiaries offering various alternatives to the population, adapting it to the commune of Khnong Phnom specificities, and including ADF existing direct beneficiaries.
The partnership of both organizations commenced in June 2019 with a joint rapid assessment, closely followed by an introduction and dissemination meeting in the 5 legal villages of Anlong Thom, Thma Chrougn, Ta Penh, Sangke Lak and Khlah Khmum. The main purpose of the village meetings was to explain to the existing beneficiaries and the potential new beneficiaries the partnership of ADF and AGRISUD, the benefit of the new synergy of the combined experience of both organizations, and finally the strategy for new agriculture / IG activities. The agreement between ADF and AGRISUD consists in a partnership where both organisations join their funds in the same project. ADF continues to pay for the costs of ADF IG component (salaries of both Ms. Mien Mout and Ms. Bis Cheung, their operational cost: transportation costs, monitoring / reporting costs, stationery, material for ADF beneficiaries, etc…). AGRISUD covers their staff operational costs, all material for the new 120 families, and AGRISUD staff salaries. AGRISUD benefits from ADF's extensive knowledge of Phnom Kulen National Park (PKNP), its population and their local agricultural habits, the local network of influential people and local authorities (village chief, Commune chief), the provincial authorities and the national authorities (Ministry of Environment,

Provincial Department of Environment and APSARA National Authority). ADF staff gains in professionalism, learning from AGRISUD long experience in this field of agro-ecology, from the producers, to the group then to the market linkage. The beneficiaries will benefit with AGRISUD approach of organizing the farm families into groups / cooperatives, with prospective new products: black ginger, premium fruit trees and pepper. These new products have a higher value per kilogram, and markets in Siem Reap and Phnom Penh are willing to purchase them. The project aims to set up a marketing chain, from the family to the market.

From June 2019, 120 families started activities within this project: 70 for the black ginger growing (27 in Anlong Thom, 16 in Khlah Khmum, 8 in Sangke Lak, 9 in Ta Penh, 10 in Thma Chruogn) and 50 for fruit tree growing (16 types, about 1450 trees distributed, 13 families in Anlong Thom, 3 in Khlah Khmum, 16 in Sangke Lak, 8 in Ta Penh and 10 in Thma Chruogn), bringing the total of families benefiting from this project to a total of 150.
In 2020, the number of families benefiting from the project was extended to 28 additional families (5 families in Sangke Lak, 3 in Ta Penh and 20 in Anlong Thom) for the black ginger growing, and to 6 families for fruit tree growing. Later in the year 2020, a black ginger producer also agreed to grow long pepper (Anlong Thom village) and 3 new farmers accepted to enrol the project: 1 family in Anlong village (black ginger) and 2 families in Thma Chruogn village (pepper, long pepper and black ginger).

The 2 demonstration farmers who started in 2019 (1 in Sangke Lak and 1 in Anlong Thom and included in the figures above) continued their production in 2021 of vegetables, fruit trees and black ginger. In February 2021, Mr. Sros Saru (Sangke Lak village) was cultivating sugar-apple, papaya, compost (solid and liquid), bio-pesticide, banana, coconut, round eggplant, sililabuyo, bunching onion and eggfruit. Mrs. Peat Saloeum (Anlong Thom village) was cultivating papaya, sugar-apple, compost (solid and liquid), Chilli, passion, chinese water cress, pumpkin, round eggplant, long eggplant, bunching onion, sililabuyo, and red onion. In September Mr. Sros Saru (Sangke Lak village) added custard apple and black ginger and Mrs. Peat Saloeum (Anlong Thom village) added coconut, lime, pumelo, orange, custard apple, chilli and black ginger.
In October 2021, Mr. Sros Saru (Sangke Lak village) was cultivating custard apple, papaya, compost (solid and liquid), bio-pesticide, banana, coconut, round eggplant, sililabuyo, bunching onion and black ginger. Mrs. Peat Saloeum (Anlong Thom village) was cultivating coconut, lime, papaya, pumelo, orange, custard apple, compost (solid and liquid), chilli, passion, round eggplant, long eggplant, bunching onion, sililabuyo, and black ginger.

At the end of the year 2021, the joint project AGRISUD-ADF was totalising 158 families: 102 black ginger producers and 56 tree fruit farmers, 3 doing pepper or long pepper (one already doing black ginger). Combined with the UNDP-BESD / PES project beneficiaries (31 families for pig and chicken raising) and the ADF beneficiaries (13 families for pig and chicken raising), it brings the total number of ADF beneficiaries in Phnom Kulen to 202 families. Per activity and village, they are distributed as below:

- Black ginger farmers: 102 families: 49 in Anlong Thom village, 12 in Thma Chrougn village, 12 in Ta Penh village, 13 in Sangke Lak village, 16 in Khla Khmum village.
- Chicken raising families: 11 families: 5 in Anlong Thom village, 1 in Ta Penh village, 3 in Thmey village and 2 in Khla Khmum village.
- Pig raising families: 33 families: 6 in Anlong Thom village, 1 in Ta Penh village, 1 in Sangke Lak village, 2 in Thmey village and 23 in Khla Khmum village.
- Fruit trees growers: 56 families: 17 in Anlong Thom village, 10 in Thma Chroungn village, 10 in Ta Penh village, 16 in Sangke Lak village and 3 in Khla Khmum village.
- The 2 demonstration farmers from Anlong Thom and Sangke Lak villages also growing vegetables are included in the totals above. The pepper growers are also included in the list above.

In 2020, more than 4 tonnes of black ginger were distributed to start their production as well as 2000 fruit trees. ADF and AGRISUD team continued to monitor all beneficiaries to ensure the quality of the practices and collect data about their incomes. The black ginger value is 14,000 riels (3.5

us$)/Kg. A group of 3 farmers per village was formed to buy the production from all producers. During the planting season, it was then redistributed to the producers for the equivalent of the borrowed amount. The surplus of production is bought by the AGRISUD project.
In 2021, 4,756.5 Kg of black ginger were bought from producers in Phnom Kulen (1,646.5 Kg bought by AGRISUD and 3,110 Kg bought by Templation company). The total production of black ginger for the year 2021 was 5,483 Kg, from the Phnom Kulen farmers. 2,146.5 Kg of this total was bought by Templation company and 3,336.5 Kg was bought by the farmers committee.

The same local donor identified by AGRISUD (Templation Hotel) funded a drying unit facility. It was built in Anlong Thom village (at Mr. Ann Ravuth's house) from February to April 2021 for collecting and processing all the black ginger production, roselle and other spices. This facility is divided into different spaces: storing, processing and packaging and drying buildings.

In July 2021, AGRISUD and ADF teams finalised the construction of a water reservoir (AGRISUD-funded) in Sangke Lak village (12 ring wells surrounded by fence, 8400 litres), capturing water at a source at 1.5 Km to the north of Ta Penh CPA village ("Teuk Tao" source), providing water to about 60 families.

For each beneficiary of the project, contracts were signed between ADF-AGRISUD and each farmer. They present the roles and responsibilities of each parties (ADF/AGRISUD and the beneficiary), in order to engage the beneficiary to take responsibilities. The organisations commit to provide trainings on strengthening agricultural techniques (production of vegetable crops and fruit trees) and marketing to farmers; to facilitate planning, implementation, revenue recording, production costs, and marketing; to provide assistance, technical advices and regular monitoring; to provide materials to farmers according to the project possibilities and upon request. The beneficiaries must comply with the status of the organization and group of farmers, must collaborate with agri-businesses and agricultural extension officers, have to participate in training programs and follow the instructions from the NGO technicians on agriculture, must follow the best instructions from the technicians and share good techniques with other farmers, must commit to grow crops and fruit trees on their farms regularly and until the end of the project, must record their amount of products borrowed and produced and must allow the visit of international and national guests and provide brief explanations. It is agreed that if a beneficiary does not comply with this agreement, he should pay back the cash equivalents of the investment with equipment.

One trainer per village was assigned (or master farmer/MF) for each group of producers (fruit trees and black ginger). Distribution of material (watering can, shovels, hoes, green shade nets…) was also organised for each farmer. T-shirts of the project were also distributed to the farmers to promote it.

Despite all the efforts, the 2020 rainy season affected the black ginger production. The September survey indicated that 60% of the black ginger production was damaged and that 36% of the fruit trees were lost, because of the lack of water in dry season, and the roaming animal eating them.

Production
The Dry Spice Producer group of Khnong Phnom was set up on the 23rd of September 2020 with 15 members (including 12 women). Its objectives are to create additional incomes for villagers, to guarantee quality and high value products all year long, and to raise capacities and skills of local producers. Their first market is the Siem Reap Green Farmers Association. The production is following the good hygiene practices, the 5S system (see below) and is monitored.

The dry house facility has produced from February to November 2021 398 Kg of dried roselle, 560 Kg of fresh black ginger, 57 Kg of Black ginger tea. In December 2021, the group produced 121 Kg of dried roselle from 1,987 Kg of fresh roselle. 53.5 Kg of Black ginger tea were sold to the Green Farmer association, as well as 58.8 Kg of dried roselle. In December, there was 91.6 Kg of dried roselle (from the previous stock) and 121 Kg of dried roselle (from the new stock). The main problem

was the lack of capital for the new production in 2022 and the reinforcement of the marketing with packaging and label.

Follow up of producers in Khnong Phnom:
The follow up of the results as well as technical advises and progresses made by every farmer is summarised by AGRISUD and ADF teams, using the KoBo data collection tool. It is done 2 times per month by the Master Farmers of each village, on a sample of families. The details of the frequencies of these follow up are available in AGRISUD monthly reports.

AGRISUD and the Green Farmers Siem Reap association is planning to set up a sale point in Phnom Kulen for the locally produced items. It would be managed by this association and would be built in Phnom Kulen. AGRISUD asked an architect to design the project for further request to the Ministry of the Environment.

Meetings and trainings
On the 11th of February, 2021, AGRISUD and ADF teams provided a training to grade the 5 and 6th grade students from Sangke Lak primary (31 students including 17 females), and Ta Penh primary school (25 students including 16 females) about agricultural life skill and school gardening, under the coordination of the school principle. On the 13th of February, school animations were organised about nutrition at Sangke Lak and Ta Penh primary schools gathering 62 students (including female 35 students).
On the 26th of February, AGRISUD and ADF teams participated to the Khnong Phnom Commune authorities meeting, organized to monitor and evaluate the activities of relevant partners implementing projects in Khnong Phnom commune. There was 17 participants from ADF, AGRISUD, commune council, villages chef, APSARA Authority, district agriculture staff and representatives from Khnong Phnom community
On the 12th of March 2021 was organised a meeting with the black ginger farmer group to prepare for the next planting season. AGRISUD also organized a refresh training about black ginger growing on the 12th and 13th of May 2021, for 35 participants from 3 villages (Thma Chrougn, Sangke Lak and Anglong Thum).
The construction of the Dry Spices Production Facility in Anlong Thom village begun in February and was achieved in April 2021. From the 18th to 21st of May 2021, Ms. Chey Narun and Ms. Tann Dinary, agro-processing and business officers from AGRISUD began the training for 15 team members (including 12 women) of the black ginger processing group about food safety, good hygiene practices (GHP), "5S" principles system (sort, set in order, shine, standardize and sustain) and how to use solar dryers in order to boost production. This was repeated from June 8th to 10th 2021. The GHP rules are the following: before production 1) leave personal items in the changing room, 2) clean hands, 3) wear production coat, hair net, gloves, mask and shoes; during production 4) clean material and equipment and 5) clean production.
On the 9th of July 2021, AGRISUD and ADF teams to train the Master Farmers in the method of grafting citrus plants. On the 21st of July 2021, Chef Eric Berrigaud from Sofitel Hotel went to visit producers on the Phnom Kulen National Park to discover local products.
To diversify the range of products, AGRISUD initiated tests on vanilla growing in Kulen from the 4th of August in a beneficiary farm in Anlong Thom village. The same day was carried out a training for 6 Master Farmers (including 4 females from 5 villages) on how to control diseases via biological controlled agents (Trichoderma) for the black ginger production.
On the 5th of November 2021, following the motivation of some farmers from Phnom Kulen about pepper cultivation with ancestral and endemic pepper varieties, AGRISUD and ADF organized a training session (12 participants, including 6 women).

Fruit trees
Within the AGRISUD funded project ("A tree for you") project, AGRISUD and ADF teams distributed in May 2021, 5568 fruit and forest trees (bought from ADF tree nurseries) to 85 families from Khnong Phnom commune. There was 15 species distributed (Burmese grape=477, Lychee=559, Jambulan plum=449, Jack fruit=352, Coconut=1183, Mulberry=15, Pumelo=301, Lime=258, Orange=207, Citrus rootstock=180, Yeang=419, Kranhong=547, Beng=286, Koki=235 and Chan Kresna=100)

divided between Anlong Thom beneficiaries (2800 trees), Sangke Lak beneficiaries (1021 trees), Ta Penh beneficiaries (568 trees), Khlar Khmom beneficiaries (310 trees) and Thma Chrounh beneficiaries (869 trees).
In July 2021, 780 Neem trees were distributed to the same villagers and this was repeated in October 2021 with 512 neem trees provided to 11 farmers from Anlong Thom village (180 trees), 10 farmers from Ta Penh village (154 trees), 4 farmers from Sangke Lak village (60 trees) and 3 farmers from Thma Chruogn village (118 trees).
In November 2021, 265 papaya trees were distributed in Anlong Thom village (Mrs. Phann Lon: 48 trees, Mrs. Lay Thol: 40 trees, Mrs. Heng Channak: 32 trees, Mrs.Peat Loeum: 35 trees), in Ta Penh village (Mr. Khen Savann: 10 trees, Mr. Tol Kreum: 20 trees) and in Sangke Lak village (Mr. Sombo Vanna: 80 trees).
The same month, AGRISUD and ADF teams distributed 150 passion fruit plants in Anlong Thom village (Mrs. Phann Lon: 20 plants, Mrs. Heng Channak: 10 plants, Mrs. Peat Loeum: 20 plants) and in Sangke Lak village (Mr. Sombo Vanna: 100 plants).

- ADF- AGRISUD collaboration project with CIRD

In 2020, ADF was approached by the Cambodia Institute for Research and Rural Development (CIRD). After several exchanges, preliminary meetings were hold between CIRD, ADF and AGRISUD (28th of September 2020), then ADF and CIRD (20th of November 2020), it was decided to coordinate the respective activities of each NGO in Phnom Kulen National Park (PKNP), in order to avoid overlapping and to complement each other, for the benefit of the local population.
CIRD is implementing alternative livelihood in PKNP villages such as Ta Penh, Thma Chruogn and Sangke Lak (vegetable farmers and chicken raisers). CIRD had secured an agreement with AGRISUD (partner of ADF for the implementation of alternative livelihood activities) to implement these activities in PKNP. CIRD provide seeds and small fruit trees as well chicks and ADF and AGRISUD provide additional training to the beneficiaries.
In partnership with CIRD, the ADF-AGRISUD team led the Phnom Kulen village trainers to train the farmers of CIRD beneficiaries in 3 villages (9 demonstration farmers and 105 regular farmers in Thma Chruogn, Ta Penh, and at the bottom of the Phnom Kulen, Bit Phka). These villagers also benefiting from this organisation with chicken raising, fruit tree and vegetable growing activities.
In 2021, CIRD was also interested in buying trees from ADF tree nurseries (see Environmental component below).

In 2021, ADF continued to be part of the "ALiSEA", the Agroecology Learning alliance in South East Asia, a network of Agroecology practitioners and supporters (sharing and supporting common goals on agroecology) that actively engages its members into information/knowledge sharing and vibrant collective actions promoting an agroecological transition, and providing meaningful benefit for all participants.

Eco-tourism alternative livelihood

Community-based tourism centre (CBTC) in Anlong Thom (CAR project 2018-2020),

Reminder: A new road crossing Phnom Kulen National Park now reaches Anlong Thom, Thma Chruogn and Ta Penh villages and allows car access to these previously remote villages. The archaeological sites close to Anlong Thom are now easier to access.
The objective of the CAR project, designed by ADF team (submitted to the donor ECM travel agency in May 2018 and accepted in August 2018) is to create a CBTC and to ensure that the centre will be used by and for the benefit of the Anlong Thom CPA members, as a tool to create alternative incomes from tourism. ADF and Terre Cambodge (travel company, ADF partner and donor) were closely associated to train the Community Protected area (CPA) members, and to design and set up tourism products. The community-based tourism centre (CBTC) in Anlong Thom was built from June until November 2019. Funds from TDS travel agency were added in December 2019 to this project, as both travel agencies are working with ADF private partner, Terre Cambodge. This centre is designed to allow additional incomes to villagers from the local tourism and a shared knowledge and increased protection of the Phnom Kulen historical sites and its natural environment. The final report was sent to the donors in January 2021.

2020 Anlong Thom CBTC activities:

From January to October 2020, the Anlong Thom CBTC was finalised and opened. Roles and responsibilities of the CBTC members were defined together with the CPA members, TC and ADF. The CPA is the villager's organisation in charge of the preservation of 365 ha of preserved forest by Anlong Thom village. Because of the long-lasting history of this structure, ADF was inclined to use it for the management of the CBTC. It was also recommended by the MoE. However, the CBTC was requiring more and various positions (moto drivers, cook, guide…) than the CPA and therefore the 2 structures are closely linked but their organisation charts slightly different. Anlong Thom CPA is hosting the CBTC and the CBTC team manages the centre. TC was providing technical help to define the CBTC touristic offers, the training of the CBTC members and ensured the promotion of the centre. ADF was proving the general follow-up of the project and technical assistance and specific trainings.

The organisation of this structure was done progressively during the year 2020, together between CBTC, TC et ADF members. ADF has hired on a part-time basis from April to December 2020 Ms. Chhun Phirom, TC staff, as a manager for this project. She was in charge of setting up the centre and its organisation. This includes the trainings of the CBTC members and the definition of the good practices and security measures for visitors and staff, the hygiene and environmental rules for visitors and staff, check-up lists and security regulation for moto-drivers, hygiene rules and menu lists with environmentally-friendly packaging and internal rules of the CBTC.

Several documents were designed such as the visitor recording system, receipts and invoices from CBTC and parking, motorbike check-list for moto drivers, emergency contact list, contract for cooks, drivers and local guides.

ADF has also hired a person on a part-time basis contract to run the centre from October to December 2020 and continued over a few months in 2021 (see below). Others CBTC members would be paid on a task-basis, according to their responsibilities: 2 local guides, 3 cooks, 14 moto drivers. Other responsibilities were defined such as CBTC fund manager, secretary, maintenance, tree nursery and vegetable garden, camping manager, tools and equipment manager, for a total of 17 persons.

Activities such as tree nursery and vegetable garden were requested by the CBTC team to provide additional incomes. They benefitted from ADF experience and training in vegetable farming and tree nursery to start these activities.

The centre also displays local handicrafts products (mats, baskets, knives…). These traditional objects are crafted by elders in villages. This know-how is threatened to disappear if it is not transmitted and supported by a larger market. The centre aims to encourage their production and sales, bringing additional incomes to this vulnerable population. The CBTC will provide direct income to the associated team and handicrafts producers but also indirect incomes to the animal raisers and vegetable farmers providing food for the lunch packages, and others such as gasoline and mechanic shops.

From April to June 2020, Ms. Chhun Phirom and the CBTC staff undertook surveys to define the tours that could be offered to the visitors, particularly to the south and east of Anlong Thom village where there are more archaeological remains. Three tours were defined and include ancient sites, preserved forested areas, and cultivated areas. Services are offered on a daily basis as visitors come for a day from Siem Reap. Walking tours were preferred to tours with mototaxis; others are combining both. Drivers take turn so every one of them can get incomes.

The prices for each of these tours have been calculated by Terre Cambodge and include the local guide, the price of mototaxis, meals, water and a snack. They range from 17.5 US $ to 58 US$ per person, according to number of guests. These prices are calculated based on costs and include a margin for the CBTC.

A Facebook page has been created (https://www.facebook.com/PhnomKulenCommunity) to promote the CBTC. The rules for "post" have also been defined jointly between the CBTC and TC, in order to avoid selfies, ensure consistency and a quality of service. This page is managed by Ms. Chhun Phirom (ADF/TC-CBTCs supervisor), Mr. Heng Puthea (Anlong Thom CBTC manager), M.

Laurent Holdener (Terre Cambodge Director) and Mr. Rath Roeuy (CPA manager in PKNP). It promotes the centre via Facebook, a very popular social network in Cambodia. A welcome booklet has also been designed to be presented to visitors upon arrival at the CBTC. It presents the predefined maps and routes. These routes have not been indicated on the general map so they can not to be photographed or copied, and thus avoid going through the services of the CBTC.
Following the start of Covid-19 crisis in March and April 2020, and the reactions to it, some Cambodians camped near the river passing just north of the Anlong Thom CPA, at three distinct points (Peam Kre, O'Ta Chok, O'Chup Thnal). The Anlong Thom CPA members therefore tried to organize these areas to take advantage of the economic benefits of these campsites. They invested in buying tents, building toilets and doing some clearing by the river to set up the tents. It was not the intention of TC or ADF to encourage the practice of camping in these conditions, but with no choice regarding this situation, ADF and TC provided their advice to improve these camping conditions. On a fourth location, the Angkorian dyke of Thnal Dac, members of the CPA had previously built picnic kiosks. ATC and ADF helped define the prices for the rental of kiosks, equipment, security and parking, and finally the prices of the meals offered.

The training of the CBTC team has been continuous since May 2020. It is provided by Ms. Chhun Phirom and has been focused on the reception and management of groups of visitors, training in hygiene rules for cooks and rules safety for mototaxis, and finally the preservation of the environment and waste management. A water filter was purchased by ADF out of the project budget. It allows CBTC members to fill their aluminium gourds. These, as well as a garbage bag, were provided free of charge by Terre Cambodge for each member of the CBTC. Mr. JB Chevance also provided two introductory sessions to the archaeology and history of Phnom Kulen to members of the CPA and the CBTC (June 3rd and November 18th, 2020). The training and support to CBTC members of Anlong Thom by Ms. Chhun Phirom continued over 2021, thanks to another similar and simultaneous project in the village of Popel (CBTC of Popel), funded by the UNDP (United Nations Development Program, see ADF environmental component below) and to HUMY's support (see below). ADF also provided training for CBTC members for the nursery and vegetable garden.

The CBTC also aims to increase awareness of the natural and archaeological sites of the Anlong Thom region to visitors and local population. This included designing the information panels and maps presented in the centre. The centre and its interior volumes were designed in part taking into account the existence of information panels. Several were designed, printed and installed. All of these panels were designed by Mr. JB Chevance and Ms. Chhum Pirom. The English texts were translated into Khmer by Mr. Sakhoeun Sakada and Ms. Hoeung Hourapich (ADF). Once the texts and design were validated by ADF and TC, they were printed in Siem Reap then transported and installed in the building the days before the official opening of the centre. A volunteer photographer (Mr. Keo Kosal) was kind enough to take several photo shoots to illustrate some of the information boards (agricultural activities, livestock and local crafts, identity photos of the CBTC members).

The centre was officially opened on the 11th of November 2020, in presence of Mr SUN Kong, Provincial Director of the Environment (Ministry of the Environment), of the team of CBTC and CPA of Anlong Thom, of the team of ADF and Terre Cambodge (Mr. Laurent Holdener), representatives of local authorities and villagers. In total, about a hundred people were present. This ceremony included the prayers and blessings of the bonzes of Anlong Thom Pagoda, a series of speeches (Mr. SUN Kong, Mr. PHANN Phin, Mr. JB Chevance) followed by the official opening, the visit from the centre and a meal. These speeches gave the occasion to present the objectives of the centre to a greater number of villagers. Two sets of T-shirts / polo shirts were designed and distributed to each of the CBTC members.

On November 4th 2020, H.E. SAY Samal, Minister of Environment of Cambodia, presented the third prize for the best CPA in the country to the Anlong Thom CPA. This was an encouraging sign. However, the success of the CBTC depends on its good management and on maintaining the quality of the tourist offer.

In December 2020, a report was submitted to ECM, TDS and TC (in French) to detail all activities and expenses of the CAR project. The remaining funds (1,312 US$) were requested to be used for the follow up of the Anlong Thom CBTC over the following year.

The Along Thom CBTC was operational in 2021. It was nevertheless necessary to continue training his team, and to continue to ensure his promotion. The Covid-19 crisis allows this centre to run it with local or expatriate visitors but they were still improvement to do, including:

- Improve the centre's accounts with its income (in particular the number of people for each of the tours, the selling prices, the costs and profits per month) and its expenses, with a monthly return to ADF and TC.
- Present the tours in Khmer on the FB page with descriptions, photos, prices, etc.
- Promote the centre to local travel agencies.
- Ensure good camping conditions, while respecting the quality of service and the environment.

Community-based tourism centres (CBTC) in Anlong Thom and Popel in 2021: CAR project, UNDP-BESD project, HUMY 1 and HUMY 2 projects.

The activities form the AT-CBTC were strongly impacted by the C-19 pandemic, as very few visitors came and booked tours from the centre. ADF and TC took this opportunity to reinforce the CBTC members capacities and to better organise the centre management.

During the year 2021, ADF reinforced the capacities of the AT CBTC with different projects. From January to June 2021 and thanks to the UNDP-BESD project and the Popel CBTC support, ADF supported the 2 centres with the salary of Ms. Chhun Phirom, two salaries of the CBTC leaders and the training of their teams by TC and ADF. The remaining funds of the CAR project (1,312 US$, see ADF 2020 report) were used for the payment of ADF/TC CBTC supervisors (Ms. Chhun Phirom, from July to September 2021) as well as 2 CBTC managers (from January to June 2021). Later in 2021, ADF secured some funds with HUMY French NGO to support Anlong Thom and Popel CBTCs from October 2021 to March 2022 (HUMY 2 project). These funds ensured numerous trainings, forest patrols and payments to ADF/TC CBTC supervisors (Ms. Chhun Phirom) as well as 2 CBTC managers (see below for more details on each projects).

Over the year 2021, several documents and guidelines were designed to facilitate and better organised the AT-CBTC: the receipts note books, the safety check list for moto driver before taking visitors, the emergency contact numbers, the rules for CPA/CBTC members, ID Cards for each CBTC members, a signboard outside indicating the location of the centre from the main road, the CBTC accounting system, a general guideline for the local guide for Anlong Thom and Popel CBTC, an archaeological summary guide for Anlong Thom CBTC and the prices of the tours offered by both CBTCs. Numerous meeting between ADF and the two CBTC teams were organised over the year 2021 to coordinate and agree on these documents.

- **UNDP-BESD-PES project for Popel CBTC**

Please refer to the UNDP-BESD-PES projects below (environmental component).

- **HUMY 1 project**

From May to June 2021, HUMY NGO supported a project exclusively dedicated to Popel CBTC (1,170 US $ received on the 22nd of April 2021). This project comes as complementary project to the UNDP-BESD-PES one.
The main objective of this project was to provide the last infrastructures and material necessary for the community-based tourism centre (CBTC) related to the Popel Community Protected Area (CPA). ADF and its private partner Terre Cambodge set up a CBTC managed by the Popel CPA members. The centre objective's is to offer general information and tours to local and international tourists, and to bring economic benefit for the villagers. It also allows a shared knowledge and an increased protection of the Phnom Kulen bio-diversity. The Popel CBTC was set up by ADF with

the support of the UNDP-BESD project. It was meant to open in April 2021. However, the Covid 19 pandemic has delayed the opening and additional light infrastructures and materials were necessary to have a fully operational centre. It was finally open in December 2021 (see UND-BESD-PES project).
The project supported by HUMY 1 provided:

- The construction of a kitchen for Popel CBTC, used by Popel CBTC trained cooks, in order to provide lunch for visitors. It was built by a local builder and has a cement slab, brick wall up to 1,2m, metallic structure and a teen sheet roof. It is large enough to provide space and hygienic conditions to cook meals for the tours.
- 2 checkpoint booths: The first one was built by a local builder at the entrance of the CPA on the Preah Ang Thom/Popel main road with a cement slab, a metallic structure, wooden wall and a tin sheet roof. The second one at Veal Ta Lo was built buy the CPA members with concrete basis for the 4 pillars, wood from the CPA (under the approval of the PKNP rangers, dead tree cut on site in pillars, boards and beams) and a locally-made thatch roof. The objective of these 2 checkpoints is to control the access of the CPA and to facilitate the sale of the CBTC tours.
- The costs for one short video (3'), shoot by a young team of Cambodians, promoting the PP CBTC. The Covid-19 pandemic has prevented ADF to open the Popel CBTC in April 2021 and to promote it by posting this video on the Facebook page of the Popel CBTC (https://www.facebook.com/PopelCommunityProtectedArea). The Popel CBTC was finally open officially on the 12th of December 2021 and the video was posted on the 22nd of December 2021.

  - **HUMY 2**

The main objective of this project, implemented from October 2021 to March 2022 (6,771.2 US$ on the 16th of Sept 2021), was to provide the necessary training for the two Community-based Tourism Centres (Popel and Anlong Thom CBTCs) members and their related Community Protected Area (CPA) members in Phnom Kulen National Park (PKNP). The project aimed to develop the capacities of these villagers by providing training sessions regarding tourism management, environmental education; protection, law enforcement and patrolling.
The training of the CPA members was divided between thematic provided by various partners: a Terre Cambodge Cambodian guide, familiar with PKNP for tourism and hospitality training, PKNP rangers and PDoE staff for forest patrolling, and long-experienced and successful community-based centres in other provinces, for management of CBTC and patrolling.
For both CBTCs, a first training was given by Mr. Ratana from the 2nd to the 4th of November 2021 about tourism and hospitality.
A second training was given by the Provincial Dpt of Environment (PKNP Director) and Park rangers about patrolling and law enforcement (theoretical and practical), on the 10th and 11th of November (for Anlong Thom CPA members) and 24th and 25th of November 2021 (for Popel CPA members). The 2 CPA members were trained to develop local patrols to better protect their CPA from the identified threats: illegal logging, poaching and hunting, encroachment and deforestation for farming. Trainings focused on use of the applications for patrolling (Timestamp, Avanza maps, GPS test, Google map, Google earth), a simplified knowledge of the Protected Area laws and CPA rules, the law enforcement with the recording of illegal activities and procedures for reporting to MoE (form to fill, phone call, Telegram group…). Field sessions were organised to practice the use of the applications and the reporting system.
For both CBTC and CPA members, a two-day exposure visit was organised by ADF on the 7th and 8th of December 2021 to the Be Treed Eco-tourism centre in Phnom Thnaot / Phnom Pok Wildlife Sanctuary, Preah Vihear province, run by Mr. Ben Davis and his wife Sharyn. The program of the visit and training entitled "Patrolling in Protected areas by local communities" was divided between theoretical and practical parts. The first part allowed the presentation of the respective projects and teams and their conservation issues, the main fauna/flora species in each area, the different methods of surveillance (camera traps for wildlife, drones and satellite imagery…), the patrolling and law enforcement (basic rules of patrolling, use of applications (Timestamp, Avanza maps, GPS test, google map, google earth, sentinel-hub), communications (Icom…), simplified knowledge of the Protected Area laws and CPA rules, protected area zoning and demarcation, the recording of illegal activities and procedures for reporting to MoE (form to fill, phone call, Telegram group…). Discussions also involved the community involvement, environmental awareness/Education,

community-based tourism centres, tourism revenues, CPA members Training, NGO and Gvt support. The practical training (day 2) focused on patrolling (divided in 2 groups) with discussions about field problematics.
These patrolling training sessions were organised from October to December 2021 and field patrols in PKNP only started in January 2022. Regular funded patrolling allows CPA members from Popel and Anlong Thom and a PKNP rangers from the MoE to visit their respective protected area on a weekly basis, to prevent illegal activities. The reporting system was organised with patrol and attendance forms, pictures, recording treks on Avenza software with smartphones. This trekking application was chosen rather than GPS, requiring a computer. It can be completed by other application georeferencing pictures, in case of illegal activities. Since January 2022, patrols are organised randomly (not the same day every week and not the same area within each CPA) one to twice a week and monitored by ADF-PDoE teams, with a systematic report for each patrol (track location, time of departure and arrival, form to complete with participants, reporting form, pictures…) sent to two specially created Telegram groups (one for each CPA) and addressed to all partners involved (MoE, PDoE, Park direction, CPA and CBTC Members, ADF, TC, HUMY…).
As for the HUMY 1 project, ADF worked in close collaboration with local authorities and the Ministry of Environment (in charge of Phnom Kulen National Park) and particularly with the Phnom Kulen National Park rangers and the Provincial Department of Environment (PDoE).
A promotion video (3') was also ordered to promote the Anlong Thom CBTC. However, it was not posted before the end of 2021, as the C-19 pandemic restrain to promote the centre. Six walkie-talkies were bought for Popel CPA and CBTC teams.

A second component within the HUMY 2 project aimed to support and promote the PKNP handicrafts producers. Traditional objects (mostly mats, baskets, cutlasses and knives) are crafted by vulnerable elders in Phnom Kulen villages and this know-how is threatened to disappear, if it is not transmitted and supported by a larger market. The project aims to transmit this knowledge of making these environmentally friendly products to younger generation and to promote them at the CBTCs and other selling points in Siem Reap of Phnom Penh, offering additional incomes to the artisans. A video, a banner, a leaflet and a catalogue were produced, distributed and promoted on social media. A distribution name was created with its logo (*Kulen Crafts* with a Facebook page: https://www.facebook.com/Kulencrafts). The item list was defined, with their corresponding prices.
A traditional mat weaver from Sangke Lak village was identified for her advanced skills (Ms. Chheun Tev) and selected as a trainer for other women willing to join the training sessions. From October to November 2021, and over 6 days (20th, 21st, 27th and 28th of October; 3rd and 4th of November 2021), 8 women from Sangke Lak village (from 33 to 68 years old) joined a first training, producing 42 mats. The trainings sessions were organised as follow: a general discussion about the experiences of weaving mats, learning techniques to mix the pigments with pandan leaves and to mix the pigment to get different colour, learn weaving with different patterns, and finally, exchanging on each trainee final product. Every trainee expressed the desire to continue to produce mats and to be helped to sell their products.
The training of the mat weaver from Anlong Thom village was organised for January and February 2022. The training of the basket weaver and blacksmiths could not happen due to the difficulty of finding trainees willing to learn these ancestral techniques. This will be attempted again in 2022.

Development of eco-tourism and ADF presentations to visitors from Terre Cambodge travel agency

Reminder: In order to create another source of income for the villagers, ADF previously helped Terre Cambodge to select families who are willing to develop home stays in Anlong Thom and Sangke Lak villages. Terre Cambodge built toilets for the beneficiaries and they received cooking and hygiene training. The tour organiser can also buy the products farmed by the villagers (vegetable, mushrooms, fish, chicken). ADF has also advised Terre Cambodge to select motivated villagers to join the group of visitors, as a local guide. Having westerners' visitors in their households, or being a local guide, also provide an opportunity for a unique cultural exchange, for both visitors and villagers.

From January to March 2020, this Income generation/agriculture project (IG) component was still

supported by Terre Cambodge travel Agency and Frangipani Spa. Due to the C-19 pandemic, international tourism has completely stopped in Cambodia in March 2020 and these donors were no longer able to support any longer ADF. From March 2020 onward, it was no longer funded by these two donors but financial reserve of funds was made over these years of regular funding, and ADF was able to go through the years 2020 and 2021 by using them. ADF continued to receive the financial support another associated tour operator (Chamäeleon Stiftung, November 2020 and April 2021), to sustain the Income generation (IG)/alternative livelihood program. The regular donation from a faithful private donor (Mr. Eric Bettens and his friends) was also fully allocated to the Income Generation Component.

In return, ADF provides presentations to the visitors from these tour operators about the ADF activities. Visitors are encouraged to give private donations in cash to ADF, which are dedicated to the IG budget. In some cases, if the tours are long enough, visitors can also participate in the IG activities with the beneficiaries (ex: help the farmer to maintain his vegetable farm). There were only a few presentations done from February to March 2020 as no more visitors came later on.

This situation remained the same over the year 2021 with the exception of one group which came in February 2021 (a private visit of the French Ambassador in Cambodia and her friends). It was guided by ADF director using Terre Cambodge and the Anlong Thom CBTC services in Phnom Kulen.

Rice Bank in Thma Chruogn village

Reminder: The ADF input and support for the Rice Bank, set up in 2013 in Thma Chruogn village, is now mainly of a technical nature, guidance, monitoring and recording. The objective of this project is to alleviate food insecurity amongst the target population. The concept is similar to a bank: beneficiaries can borrow rice when they have a shortage of supplies and have to give it back with a low interest, after the harvesting season (usually in November each year).
The beneficiaries are divided into 8 groups of household members, an equivalent to 34 families. The rice bank committee consists of 4 permanent members who are organizing in-house activities, ranging from administration to the maintenance of the rice bank. They are also responsible for lending to and collecting rice from the household members. 13 families borrowed rice in 2020, 18 families in 2019, 24 families in 2018, 27 families in 2017, 39 families in 2016, 23 families in 2015 and 34 families in 2014. Less families tend to borrow over the years. This shows food security in this village is less a problem than before.

On the 12th of January 2021, the rice bank collected rice from farmers for a total of 4,484 Kg. The number of borrowers in 2021 was 10 families (total of 60 persons, including 27 female). 2,900 Kg of rice were distributed to villagers, and the remaining 1,584 Kg were kept in rice bank. On two occasions during the year 2021, the borrowers who could not reimburse by rice reimbursed the bank with the equivalent of the rice market price (1Kg=0.3 US$) in cash: on the 20th of Jan 2021 (283.5 US$, 1.134.000 Riels/945 Kg) and on the 30th of November 2021 (172 US$, 688.000 Riels/574 Kg). These sums were integrated into the ADF IG component, together with the reimbursement of farmers (ex-mushroom producers and pig raisers). The 65 Kg left correspond to the loss due to the pest infiltration and weather impact on the total rice weight. Hygiene and sanitation program/Emergency Relief

Hygiene and sanitation program: the WISH 2 project

Reminder: The WISH (Water In-environmental Sanitation & Hygiene) 1 project, focusing on Hygiene and sanitation, was designed and proposed to the Almayuda Fundación (Spain) in March 2018 and started in June 2018. The WISH 1 project was based on the Karolinska Institute report from the assessment of the Start Me Up (SMU) project, but also on the activities undertaken by ADF in Sangke Lak primary school, with the KURERE project (KUlen REhabilitation & REgeneration project), from September 2016 to February 2018.
The objective of the project was to promote and disseminate correct personal hygiene behaviour change, building and expanding on the successful KURERE project. The project aimed to promote

and develop Water Sanitation and Hygiene facilities in two primary schools on the plateau of Phnom Kulen National Park (Klah Khmum, Sangke Lak). The project was combining hygiene (multiple daily hand washing and teeth brushing, regular nail-cutting, weekly training sessions) and environmental awareness practices (regular school cleaning). Both interventions will foster preventative healthy behaviour to primary school children, resulting in affirmative life skill behaviours. The third intervention was to rehabilitate or built efficient water systems and hygiene facilities in the primary school of Ta Penh, Sangke Lak and Khlah Khmum.
The project started in June 2018 with an assessment or baseline survey until August 2018 (See ADF 2018 activity report). Almayuda Fundación representatives visited the Phnom Kulen schools with ADF team late February 2019. Two reports were submitted to the donors (in April 2019, covering the period from June 2018 to March 2019 and in June 2019, covering the period from April 2019 to June 2019). These project reports narrate the activities implemented during the first 12 months of the WISH project (June 2018 to June 2019), presenting every activity, challenges met and solutions found, as well as plans for the futures and expenses and were summarised in the 2019 ADF activity report for the Charity Commission.

The **WISH 1** project was originally planned from June 2018 to May 2020 (24 months). Due to the C-19 crisis and the closure of all schools in Cambodia on the 17th of March 2020, it was decided with Almayuda Fundación to shorten it until the end of April 2020, one month prior to the original closing date. The remaining budget was used for an adapted project (C-19 WISH, see below). Before the end of the C19-WISH project, another project (WISH 2) extended to additional schools, was submitted for funding to Almayuda Fundación.

The final report for the WISH 1 project was submitted to Almayuda Fundación in May 2020 and was summarised in the ADF 2020 report. The C19-WISH report was also summarised in this report and submitted to the Almayuda Fundación in January 2021 and is summarised below.

The WISH 1 external and independent evaluation started in November 2019 until February 2020. It assessed how the project performed and provided recommendations for further action. It was done by medical student Mr. Sebastian Von Shreeb and his assistant Ms. Kong Leaksmy (at no cost for the project). A mixed methods approach was applied, including research-administered surveys, semi-structured interviews, site inspection, microbiological testing and analysis of health centre admission data. The result was a high-quality report, evaluating positively the methodology and the results of the WISH 1 project.

The Evaluation report encapsulated some very positive results and findings, alongside with 17 recommendations. They included a filter water campaign, a module on menstrual hygiene, a review of hygiene teaching methods, fact-checked health information for monthly teaching sessions and educational opportunities for staff-training. Some of them were piloted from February 2020 but had to stop from the 17th of March 2020, as all school in Cambodia were closed due to the Covid 19 pandemic.

Others recommendations, such as the expansion of the project in the nearby schools of Ta Penh and Popel (as requested by their teachers and where ADF has an important level of Involvement for the development of the villages: agriculture alternative livelihoods, tree nursery, forest zoning and protection, CBTC, water systems), where water and sanitation facilities were missing and with numerous children registered, required a larger project and were therefore included into the WISH 2 project. Other challenges remained and should also be addressed in a future project: For instance, the evaluation found high levels of faecal contamination in the tap water the children drink from. Also, a large majority still practice open defecation, which contaminates soil and water sources. Project staff lack basic education in the concepts of water, sanitation and hygiene, as well as the principles of health behaviour change. Moreover, girls largely lack access to any information about menstrual hygiene management. Finally, there is a large risk that achieved improvements will be lost if involvement in the schools ends abruptly.

The COVID 19 Water In-emergency Sanitation & Hygiene (**C-19 WISH**) project was adapted from the WISH 1 project, after the C-19 global pandemic struck the world in the first quarter of 2020. It started in May 2020 and lasted until December 2020. The predominate effect on ADF's WISH 1 project was the closing of the Khlah Khmum and Sangke Lak primary schools. Like all schools in Cambodia, they were closed to contain the spread of the C-19, from 16th of March to 7th of September 2020. From 30th of November 2020 to 11th of January 2021, a second closure of all schools in Cambodia was decided by the government.
Due to these extraordinary circumstances and after communications in late April 2020 with the Almayuda Foundation, the donor supportively agreed to change the WISH 1 project into an emergency COVID 19 Awareness & Avoidance Campaign and to support the under-resourced Khnong Phnum Commune / Phnom Kulen's Health Centre. The objective of this project was to help fighting the pandemic in the villages of Phnom Kulen with C19 preventive activities. It was combining C-19 awareness sessions with environmental education, hygiene sessions for hundreds of Khnong Phnom Commune villagers and preventative health care equipment and materials distribution (posters, disinfectant, cleaning materials and soap). Additional donations allowed to distribute more hygiene materials.

From the project inception (in partnership with the Anlong Thom Health Centre staff) to the procurement of all equipment and materials and their transportation to Phnom Kulen, ADF-WISH team has hold 57 C-19 preventative sessions, organized in 9 villages and involving 708 participants. ADF team insisted on getting the right information (from the World Health Organization and from the Cambodia Ministry of Health as opposed to rumours), on being safe by following the basic health precautions (social distancing, repeated hand washing, distribution of 180 sealed water buckets with a tap to every households in Khlah Khmum and Sangke Lak village and numerous hygiene related items, all listed in ADF 2020 report.
Cambodia has been -on a sanitary point of view- very little affected by the virus, compared to other countries in the world. However, the economic consequences are very important, with a total shut down of the international tourism for example. As the general pandemic is evolving, facts and mitigation / prevention measures were also evolving and updating. Consequently, clear communications, flexibility in planning and activity implementation were essential in implementing this emergency projects. The Anlong Thom Health Centre and the Svay Leu district authorities were very supportive in working with the ADF C-19 WISH team, adjusting activities on a need's bases.
If the C-19 pandemic in Cambodia is not as dramatic as in other countries, the C-19 WISH project in Phnom Kulen has given the opportunity to raise awareness towards villagers about the risks of a pandemic and to reinforce messages on general hygiene practices in households. Lessons learned from this project, and particularly the fact that hygiene practices at home are not always respected as in schools, should be associated, as much as ADF can, within the WISH 2 project, starting from January 2021 onward. Overall, the final incomes and expenditures are balanced and all the funds allocated for the C-19 WISH project were spent.

WISH 2, 2021 (=year 1) summary report

Reminder
Proper personal water-based hygiene practices (washing hands and body with soap, tooth brushing) are positive habits vitally important, for both individual's health and for the community in general. It is now even more vital in stopping the development and spread of illnesses, infections or viruses such as the COVID 19 pandemic.

The purpose of the WISH 2 project (2021-2022, with a possible 2-year extension) is the expansion of the Water In-environment Sanitation and Hygiene (WISH 1) project. It was formulated in the WISH 1 project's 16th and 17th recommendations, from the external independent End-Line evaluation. The WISH 1 project addressed basic hygiene practices and infrastructures in Khlah Khmum and Sangke Lak primary schools. The WISH 2 project aims to develop them in Popel and Ta Penh villages and to address issues observed in the WISH 1's external evaluation.

Many schools still do not provide access to toilets with running water, wash bays and waste facilities in Cambodia. Open defecation is still very common in rural areas (Water, sanitation and hygiene UNICEF Country Programme 2019–2023). Providing children with clean drinking water and adequate toilets, and instilling in them the need to wash their hands are the most effective ways of reducing illness, ensuring they develop into healthy adults. Diarrhea, which often results from poor sanitation and hygiene, is a major cause of children's illnesses. Anaemia and worm infections is impeding mental development and lead to a loss of physical and mental energy. Heavily infected children will not grow as expected for their age and in more severe cases, it leads to stunting and impaired brain development.

At the inception of the project, Popel primary school had no piped water, Popel and Ta Penh toilets schools were not functioning and had no rubbish bins and waste disposal. On the other hand, Sangke Lak and Khlah Khmum primary schools where the WISH 1 project was implemented had functioning hygiene equipment and children had very regular hygiene practices.

In light of the Coronavirus and such as in 2020, when the WISH 1 project was modified into a C-19 WISH project, ADF expected particular circumstances challenging the WISH 2 project's implementation. In 2021, the WISH 2 project was very disturbed by the closure of the schools. However, ADF team adapted to the pandemic situation with a clear communication with all project key stakeholders (health centre staff, teachers, parents, local authorities) and the donors, Almayuda Fundaciòn. As the challenges imposed by the pandemic eased in Cambodia and the schools reopened in November 2021, ADF was able to relocate the project as originally conceived in these 4 primary schools of Khnong Phnom Commune.

Activities of the WISH 2 in 2021

1) Arrange & schedule a meeting venue & inform all stakeholders

On the 8th of January 2021, ADF organized the WISH 2 launching meeting at Ta Penh school. Were present the commune chief, the 4 village chiefs, the Department of Education representative (Svay leu district), ADF WISH and management teams, all principals and teachers involved (6 persons). The project was presented followed by exchanges. Teachers from WISH 1 project expressed the benefit and issues. For the 2 new targeted schools, each principal expressed the lack of hygiene infrastructures or water. The contact list of all involved teachers and principals was established. A visit of Ta Penh (missing, failing) infrastructures was done at the break time. All local authorities are aware of the WISH 2 project and can help, in particular during dry season when there are sometimes problems with piped-water systems with families taking advantages of the existing infrastructures.

2) Develop a baseline survey methodology along with questionnaires

The Baseline survey was designed to revisit the accomplishments from WISH-1, to constitute the assessment of new baseline, to lay groundwork for WISH-2 Logical Framework Matrix (LFM), and to track the progress of WISH-2 objectives.

A total of 103 interviews were conducted during the course of this Base-line survey, from November to December 2020. 60 students were interviewed across the 4 villages (Ta Penh, Sangke Lak, Khlah Khmum and Popel), as well as 30 parents at the household level. The baseline survey team also consulted with 10 teachers (3 from Sangke Lak, 2 from Khlah Khmum, 4 from Popel and 1 from Ta Penh primary schools). Three of the ADF/WISH team were consulted on a daily basis. Water samples were collected at water sources and at the wash bays and brought to Siem Reap laboratory for tests.

The baseline stated 7 recommendations on increasing sanitary toilet usage, water quality, hygiene sessions, hygiene related infrastructures or material and C19 knowledge and prevention, detailed below:

- Recommendation # 1

To get a holistic understanding of the evaluation of ADF's WISH projects, this Base-line report should be read in conjunction with the External WISH-1 evaluation report (February 2020) and the WISH 1 Final report (May 2020), the ADF's Water Field Assessment (September 2020), the WISH-2 Project proposal (October 2020) and the WISH-C19 final report (January 2021).

- Recommendation # 2

To reduce the practice of open defecation, the ADF WISH team with the parents, school teachers and key stakeholders should collaborate together and pursue realistic solutions to promote an increase in sanitary toilet usage among the community.

- Recommendation # 3

As proven from the water test results, chlorine is a cost-effective method to eradicate E-Coli and other water pathogens detrimental to human health.
However, if a systematic, safe and controlled method of purifying the water meeting WHO standards on Phnom Kulen can NOT be 100% implemented, aquatic pathogens will inevitably recur. Without an expensive water purification facility, which is outside the resources of the WISH-2 project, harmful pathogens will persistently return.
Therefore, the Base-line survey team proposed the following recommendations:
1. To extend the use of robust water filtration units, used in conjunction with solar – ultraviolet light water filters, that can kill up to 90% viruses and germs. These should be installed in strategic locations.
2. Budget permitting, to test the water quality on regular intervals, preferably every four months. The WISH-2 budget has no budget line for this; thus, this may not be feasible. However, ADF will be seeking additional funds for this.
In the circumstance that, these two recommendations DO NOT attain acceptable drinking water (below WHO's recommended levels of water borne pathogens) the survey team recommends that the WISH -2 project purchase 50- or 100-liter water holding tanks and add Chlorine doses, to reach WHO standards.
"For normal domestic use, residual chlorine levels at the point where the consumer collects water should be between 0.2 and 0.5 mg/l (Milligrams per Litre)" (Source: WHO). Higher level will be close to disinfection levels and can be harmful to human health. The WISH-2 implementation team should verify the proper quantity of chlorine to attain a safe drinking water from the professional team of Water for Cambodia.

- Recommendation # 4

Where practically possible, the WISH-2 project should procure soap and other cleaning materials from Naga earth Company (http://www.nagaearth.org/community-soap-program) or Eco-Soap Bank (https://ecosoapbank.org). They are environmentally friendly cleaning products, appropriate for a National park, and at a reasonable cost or free. However, the C-19 pandemic has affected these potential suppliers and their volume of production is smaller.

- Recommendation # 5

To continue and up scale the menstrual hygiene training to all four targeted primary schools. When possible and to assist ADF's WISH team, the WISH 2 team should include the educational skills of ADF's National consultant Ms. Chhun Phirom, together with the health professionals from the Phnom Kulen health centre.

- Recommendation # 6

To optimize the WISH-2 hygiene and sanitation infrastructure budget, the team should use some of the existing infrastructure to maximize its effectiveness. For example, the currently disused water holding tank at Ta Penh primary school should be included in the future wash bay water system.

- Recommendation # 7

The WISH 2 project should implement a maximum of the 17 recommendations made by the end line survey (February 2020), respecting the overall budget.

This baseline survey was implemented from November 2020 to January 2021 by ADF / WISH team (Mr Dave Sandilands, Mr. Seng Samry (WISH supervisor), Ms. Loem Nimul (WISH officer) and Mr. Khen Savann (WISH officer). The corresponding report (31 pages) was sent to Almayuda Fundaciòn, together with the C19-WISH report on the 20th of January 2021. A rapid water assessment was also sent (6 pages) with the conclusions from a visit from the Water for Cambodia Director of Operations, Mr. Massimo Maio, to springs and primary schools' facilities, on the 16th of September 2020.

3) WISH 2 Project Management, Oversight & Accountability

ADF has several internal meetings in January and February 2021 to establish the list of material

necessary to purchase, material purchased. The action plan was designed with all teachers stating roles and responsibilities of each parties. Each teacher is responsible to implement the hygiene activities for his class, with regular follow up and advices from ADF/WISH team. The coordination of the WISH 2 project is ensured by Mr. Seng Samry assisted by Ms. Loem Nimul and Mr. Khen Savann (Hygiene assistants) and its management by Mr. Seng Samry, Mr. David Sandilands, Mr. JB Chevance and Ms. Hoeung Hourapich (Admin, finance and comm officer). Expenses are recorded on a weekly basis and controlled by the ADF finance and management team on a monthly basis. ADF team exchanges on a daily basis about every important activity of the WISH 2 project, thanks to a Telegram group. There is a very regular coordination of ADF staff with the Health centre staff in Anlong Thom.

The training of all teachers about the hygiene sessions to be implemented and expected results took place at Ta Penh primary school, on the 11th of February 2021. The teachers started the hygiene sessions to the children from the following week in every school and ADF team followed up and advised. A workplan was produced with hygiene training sessions on a daily basis and assets, materials and equipment were purchased at the best quality/price ratio.
Unfortunately, all schools in Cambodia closed from the 20th of March 2021, due to the Covid outbreak. From the end of March, the WISH 2 project was relocated into households of the 4 villages and more than 84 sessions about hygiene and C-19 prevention were organised. This reached 947 participants including 201 women (Ta Penh, Sangke Lak, Khlah Khmum and Popel but also two additional villages: Thma Chruogn and Thmey). This was done in collaboration with Anlong Thom Health Centre governmental staff. These sessions were also done during vaccination campaigns by the Health centre, jointly with ADF. This was not possible from the end of May 2021 and a few weeks in June, due lockdown and travel restrictions in Siem Reap town and Phnom Kulen. Only a few trainings for menstrual hygiene were done in February 2021 in Sangke Lak and Khlah Khmum schools (42 girls attended from grade 4 to 6). Because of the school closure, it was not possible to do more sessions and not possible to start them in Popel and Ta Penh schools.

4) Procurement of WISH 2 supplies, provisions, materials

The materials necessary for the new hygiene related infrastructures was done by ADF team. Depending on the materials, shops are located in Siem Reap (office supply), Banteay Srey or Svay Leu town (pipes, taps, glue, tiles, cement and bricks). Sand is usually collected on Phnom Kulen trails. Suppliers, builders and transporters checked for the best quality/price ratio.
ADF used its own car when possible to transport materials. For heavy ones (bricks and cements), local trucks were hired from the shop (Svay Ley or Banteay Srey) or locally to the schools. ADF advised and followed the construction of the new hygiene related infrastructures at Popel and Ta Penh schools. Every procurement was done by Mr. Seng Samry and controlled by Ms. Rapich (Admin, finance and comm officer).

5) Rehabilitation, construction & maintenance of the WASH facilities in the targeted schools

ADF staff communicated and checked on a daily basis with teachers and builders for the construction of the hygiene infrastructures at Popel and Ta Penh schools.
In Ta Penh primary school, there are listed below:

- Construction of a tin sheet covered wash bay (5 metallic taps, with tiles) with a cement slab, to the west of the main building, using the existing reservoir (funded by Caritas). Connection with the existing water pipe system with pipes, inlet and outlet.
- Rehabilitation of the existing wash bays to the east of the main building and to the north of the existing PLAN toilets (4 metallic taps), covering it with teen sheet and cement path to the main building, and connection to the existing water system, with pipes, inlet and outlet.
- Rehabilitation of the existing old Caritas toilets (new roof, door, tiles, repainted…) and connection to the existing water system with pipes.
- Cleaning of the existing water filter and change the sand and gravels inside.

In Popel primary school, there are listed below:

- Construction of a covered wash bay with 5 metallic taps and tiles, with a cement slap and path to toilets, and connection to the existing water system, with pipes, inlet and outlet.
- Purchasing of 2 water filters from Water for Cambodia NGO and 3 rubbish bins.

- In Sangke Lak and Khlah Khmum primary school primary schools, the existing wash bays were covered with tiles to enhance hygiene. In Sangke Lak school toilets, tiles were added at the base of the walls to improve hygiene.
- Popel, Khlah Khmum, Sangke Lak and Ta Penh, footsteps were painted from toilets to the wash bays in each of the 4 schools and wood frames were set up and decorated to hold to the tooth brushes of the children.

All these interventions took place in January and February 2021. The Popel, Ta Penh, Khlah Khmum and Sangke Lak wash bays and toilets were built or rehabilitated and are now operational and hygienic, with running water. Hygiene infrastructures were used a few weeks only before the closure of the schools on the 20th March 2021, following the outbreak of C-19 in Cambodia. Due to the closure of all schools, activity 8 (environmental education, see below) was not implemented as many times as scheduled: 1 time per month in each of the 4 schools from February to March 2021.

6) Preventative sanitation hygiene (WASH) health care educational training

The objectives of this main activity are to improve the preventative sanitation, hygiene and health care education teaching and training in all of the project targeted schools, to improve the school attendance and to facilitate the hygiene sessions by the teachers in practical hygiene and sanitation practices with Information, Education and Communication materials (IEC). This is expected by the realisation of the following activities: the development of training material & WASH resources, the planning & coordination WASH campaigns, the use of friendly teaching of personal hygiene and health practices, the repetition of practical hygiene session and the girl personal hygiene (including menstruation health training).

Tooth brushes were distributed to every kid in the 4 targeted schools at the inception of the project. Tooth paste were given to teachers and kept in class and shared between students under supervision of a kid as a team leader. Soaps were given to teachers (6 bars at a time) and repeated when necessary. ADF team designed and printed of IEC materials. Among them, posters were set up at strategic location, notably above the wash bays in the 4 schools. The previous ones from the WISH 1 project were replaced in Khlah Khmum and Sangke Lak. A work plan for each school was defined with teachers for each school: brushing teeth sessions (2 per day: 1 after breakfast, 1 after class) and hand washing sessions (3 times per day, before and after breakfast, after class). It is repeated more times, if necessary. The implementation of these training sessions by the teachers of each school and ADF staff (each teacher responsible of his class), using the functioning wash bays and toilets is the core of the project. These training sessions are repeated on a daily basis, 6 days per week.

Due to the closure of the school, they were stopped from March 20th 2021. The female personal hygiene sessions (including menstruation health training) was possible to implement only in Khlah Khmum and Sangke Lak (by the health centre female nurse + Ms Nimol; 42 girls attended from grade 4 to 6) in February 2021. The children of the 2 new schools (Popel and Ta Penh) got a better knowledge and practices of personal hygiene but this dynamic was stopped in March 2021. This period was too short to produce substantial results. However, teachers of each school delivered hygiene sessions for 2 months (February and March) and the hygiene related infrastructures are functional.

From the 20th of April to October, kids were allowed to come at school to get their homework. ADF take this opportunity to train again kids for hygiene sessions. They were provided with toothpaste and were allowed to bring tooth brushes at home. The WISH-2 project was re-orientated from mid-march 2021 with several hygiene and C-19 related activities: regular toothpaste and toothbrush distributions to child (from 31st may to august 2021), unformal hygiene sessions in schools (from 20th of April to October) on a weekly-basis for each class of the 4 schools, soap distribution to school principals on a needed-basis (6 soap at a time). Other activities such as household outdoor sessions on C-19 prevention and soap distribution to villagers (see below) also contributed to these outcomes.

The previously defined work plan with teachers for each school were reactivated in November 2021 when they reopened. A coordination meeting between ADF team and all teachers involved was organised on the 4th of November 2021 to reactivate all Wish 2 activities in the four schools. It was

decided to keep the tooth brushing activities at home because of the numerous holidays during November and December (last 10 days of November for the water festival, and from 19th December 2021 to 11th January 2022). If the toothbrushes would have been kept at school, the children would not have used them. Apart from a specific donation (M. Armelle Darche toothpaste donation distributed to TP and SL children), ADF team pushed the families to purchase toothpaste from their own funds during this period. It was decided that tooth brushing sessions in schools will resume in 2022. During the same period, every school had to count the number of students (as some left for secondary school) and newly appointed teachers joined. These new figures are reflected in the table below.
When all schools reopened in November 2021, ADF continued the soap distribution to teachers of the 4 targeted schools (6 bars at a time) and repeated when necessary. Hand washing sessions (3 times per day, before and after breakfast, after class) were organized from November so teachers can follow up daily activities.
From November to December 2021, the implementation of these sessions was done by the teachers of each school and ADF staff (each teacher responsible of his class), using the functioning wash bays. These training sessions are repeated on a daily basis, 6 days per week. During November and December 2021, presentations were designed by ADF team to facilitate the 12 disease prevention sessions relevant to Phnom Kulen's health context (compiled by the WISH 1 evaluation team: intestinal worms, dengue, pneumonia, diarrhea, infected wounds, dental caries, malaria, typhoid fever, anaemia, mosquito, cold, influenza) and menstrual hygiene sessions. They will be organized in 2022, in coordination with the Health Centre staff.

7) Environment Education in the targeted schools

The objective of this activity is to incorporate environmental education into the primary schools' activities, to enhance their sanitation. Cleaner schools will entice student's attendance and will help the students to understand the values of conserving the environment for the benefits of their health and wellbeing. Due to budget constraints for the implementation of the WISH 2 project, it was not possible to include the construction of the incinerators for the 2 new targeted schools. ADF managed to get funds from the SEA Foundation for this (see below). However, 3 rubbish bins were purchased and installed at Popel primary school.
Due to the closure of all schools, the clean-up days were not implemented as many times as scheduled and was only organized normally in the 4 schools from Jan to March 2021 (ex: 5th of January in Sangke Lak and Ta Penh, 16th march in Khlah Khmum). This event normally occurred once a week where all the students from each school, teachers, the ADF team and some of the parents, worked in groups to collect all the rubbish and burn it in the school incinerators. The regular burning of the garbage in the incinerators of the schools was managed by the teachers. One or two times per month, the clean-up day extended to the villages. The gathering of people was not allowed and it was therefore not possible to organize it again after march until the end of October 2021.
From October 2021, just prior to their opening, this activity started again for each of the four schools. It was then continued on a weekly basis, during "labour day". However, ADF team pushed the teachers to implement it 5 minutes per day, so the cleanliness if the school becomes a norm. Classes are divided in areas within the school and can also take turn. This organisation turns out to be more effective.

WISH 2 beneficiaries Numbers, 2020 and 2021 figures
Direct Beneficiaries

Number of pupils at Klah Khmum school	Number of pupils at Sangke Lak school	Number of pupils at Popel school	Number of pupils at Ta Penh school	Total number of pupils + teachers
2020: 97 students + 3 teachers	2020: 73 students + 5 teachers	2020: 118 students + 4 teachers	2020: 119 students + 4 teachers	2020: 407 pupils and 16 teachers=423
2021: 69 students + 4 teachers	2021: 98 students + 3 teachers	2021: 98 students + 4 teachers	2021: 107 students + 5 teachers	2021: 372 pupils and 16 teachers=388

2022: 61 students + 4 teachers	2022: 92 students + 4 teachers	2022: 94 students + 4 teachers	2022: 127 students + 5 teachers	2022: 374 pupils and 17 teachers=391

Over the years 2020-2021 and 2021-2022, the number of children attending primary schools has dropped in the 4 targeted schools (407-372=35). The last figure (January 2022) show a stagnation in the total number of children (374). After checking with teachers and principals, the two reasons identified are the departure of children to secondary schools (from grade 7) to the Anlong Thom secondary school and the lower number of children in kinder garden.

It is important to note that the third reason for this lower number of children attending school is the closure of schools in 2020 (from 16th of March to 7th of September 2020, then from 30th of November 2020 to 11th of January 2021) and in 2021 (from 20th of March to 1st November). From the year 2020-2021 to the year 2021-2022, 7 children stopped attending school in Ta Penh, 11 in Sangke Lak, and 6 in Popel and none in Khlah Khmum. ADF will do his best for getting these 24 kids back to school, with the help of each principal.
ADF team has encouraged the parents and motivated the teachers to bring these children back to school. They have reintegrated their curriculum and now benefit from the WISH 2 project.

Indirect Beneficiaries – Pupil's parents, relatives and neighbours

Population of Klah Khmum village	Population of Sangke Lak village	Population of Popel village	Population of Ta Penh village	Total beneficiaries
311	431	404	646	1792

Source: Khnong Phnom Commune – 1st of August 2021

COVID 19 PANDEMIC, restrictions for the WISH 2 project

The closure of every school in Cambodia from the 20th of March to the 1st of November 2021 and the general restrictions (forbidding group of people to gather) really disturbed the WISH 2 project's implementation. However, the situation was similar in 2020 with a long period of school closure (from 16th of March to 7th of September 2020, then from 30th of November 2020 to 11th of January 2021).

The ADF WISH 2 team had to adapt to these extraordinary circumstances. The hygiene daily sessions and the monthly cleaning-up day were not possible any more, neither were the complementary monthly Health Centre lessons (SEAF-funded, see below). In order to mitigate the effects of the school closure, the ADF WISH team implemented hygiene related activities taking in consideration this particular context:

- Regular toothpaste and toothbrushes distribution to children on the schools, from the end of April to October 2021, on a weekly-basis.
- Hygiene sessions at school when school were closed (April to October), on a weekly-basis.
- Soap distribution to school principals, on a needed-basis.
- Soap distribution to villagers, when possible.
- 84 Outdoor C19 prevention sessions in households in April and May, on a weekly-basis, reaching in total 947 participants, including 201 women. Due to the gathering restrictions, there was a small number of participants for each session. This was implemented in the villages of Khlah Khmum, Sangke Lak, Popel, Ta Penh, Phum Thma Chruogn and Phum Thmey, in collaboration with Health centre staff.

Due to the important vaccination campaign in Cambodia, the C-19 pandemic slow down and the schools in Phnom Kulen reopened from the 18th to 22nd October 2021, involving children for labour work (clearing grass and cleaning the school facilities). Children from grade 3 to 6 finally went back to school for learning from the 25th of October 2021, and from the 1st of November 2021 for the children in Kinder garden, grade 1 and grade 2.

From November 2021, schools were normally functioning in Cambodia, as children from 6 to 12 were mostly vaccinated against C-19. They had to wear masks and show their certificate of vaccination. Despite a small percentage of contamination with the C-19 Omicron variant (mostly in Phnom Penh), the governmental instructions from this date avoid complete lockdown and closure of schools. The country has to learn with the pandemic. This is good news for the WISH project since its implementation in functioning primary schools is at its base. January 2022 will see more activities back to schools such as the tooth brushing, veggie gardens and complementary hygiene activities and sessions (menstruation hygiene and 12 diseases prevention), and infrastructures (see below).

Emergency Relief support and collaboration with Khnong Phnom Health Centre in Anlong Thom

The Khnong Phnom Health Centre Centre in Anlong Thom is the only public health facility for the population of this commune (4,750 inhabitants in Aug. 2021). ADF hold monthly meetings to coordinate activities. The Wish 2 project is implemented in close collaboration with the centre. As every year, a coordination meeting with the Health centre staff and ADF team was hold (on the 8th of January 2021) to determine the needs of the centre (both material and financial) and to agree on following the Emergency Relief support.
In 2021, ADF continued its support to the centre by allocating the left over from SEAF 1 (from the Educational support, see below) and a part of the TREE 2 project to fund ADF's for the Emergency Relief support.
For the year 2021, the funds allowed to pay the transportation costs of the 18 Village Health Facilitators to meetings in Anlong Thom Health Centre (228 participations), the transportation costs for nurses to the villages for the vaccination campaigns, and the transportation costs for poor people presenting severe health cases to the Health Centre or hospitals (Sotr Nikum or Siem Reap) and back. In most cases, these poor families have no transportation mode to travel this distance, the roads are in bad conditions, and don't have enough financial resources to buy food while in town. In 2021, 8 persons benefited from this emergency fund to reach hospitals. They came from the villages of Thma Chruogn, Anlong Thom, Ta Penh, Khkah Khmum and Popel and were suffering from high blood pressure (x2), childbirth issues (x2), rare skin disease, breast surgery, severe burn and severe chest pain. They were sent to Kantha Bopha Hospital, Angkor Hospital for Children, Damdek Referral hospital or Siem Reap Referral hospital, depending on the cases.
ADF also supported the Health centre staff by supporting the transportation costs of the nurses to the villages during the vaccination campaigns (10 US$ x 9 villages every month). During these monthly campaigns where villagers get injections/vaccinations for family planning, tetanus, and blood tests for malaria and dengue fever, villagers were also given hygiene, C-19 and health prevention lessons by ADF staff. This represents a total of 2,218 persons who participated to these meetings in the 9 villages of Khnong Phnom Commune (231 persons in January, 233 in February, 168 in March, 170 in April, 199 in May, 164 in June, 166 in July, 186 in August, 165 in September, 165 in October, 157 in November and 214 in December 2021). No material support nor equipment to the Anlong Thom Health Centre was purchased in 2021.
Finally, ADF was also given on regular occasions some clothes by friends to distribute to the poorest families identified by the team.

d. EDUCATIONAL SUPPORT

The objective is to enhance local school facilities and resources, to provide a favourable educational environment in Khnong Phnom commune. If appropriate, facilities are built to create a conducive learning environment that entices the children to come to school and learn, as opposed to staying at home and/or working on the subsistence farms. ADF provide infrastructures according the teacher's needs.

Reminder: In February 2018, ADF finalised the "Kurere" (for Kulen Rehabilitation and Regeneration) project, started in late 2016, focusing one sole primary school, corresponding to the needs of the

most neglected primary school of the plateau: Sangke Lak. It allowed to enhanced the school facilities and encouraged good hygiene and environmental practices. The WISH 1 project started in June 2018 and evolved into the C-19 WISH project from May until December 2020). It was a continuation of the hygiene activities in Sangke Lak, with an expansion to Khlah Khmum and Ta Penh primary school (see above: Hygiene and sanitation program). The TREE 1 project from 2018 to 2020 (funded by Kulara Cie/Eau Kulen mineral water, see below: environmental program) was also focusing in Sangke Lak primary school on the field of environmental education with a tree nursery (as well as Ta Penh and Anlong Thom schools).

To reinforce ADF actions and to answer additional and basic needs in these two primary schools (Khlah Khmum and Sangke Lak), ADF approached in August 2018 the South-East Asian Foundation (SEAF), a US charity, to provide basic missing infrastructures to other primary schools. The original project proposal (funding the construction of a single storeroom in September 2018 at Sangke Lak school) was expanded to a much larger project (SEAF 1), benefiting the 2 schools of Sangke Lak (119 students (64 girls), 5 teachers) and Khlah Khmum school (86 students (40 girls), 4 teachers). This project started in September 2018 until November 2019 and had seen numerous buildings, and construction in both school (see ADF report 2020).

On the 5th of December 2019, several meetings were held between ADF team, the principal of Preah Ang Thom school and the principals and teachers of Anlong Thom, Ta Penh, Sangke Lak and Khlah Khmum schools. The objectives of these meetings were to evaluate the existing collaboration (TREE and WISH projects) and to assess the needs for each school in term of infrastructures and materials. A detail list was established for a further project. On the 14th of January 2020, ADF team met the SEAF Director to discuss further project. It was decided to submit a project in February to SEAF, including the school's needs identified in December 2019. This project was unfortunately not funded. It was then decided to propose it to the swiss NGO Don d'un Choeur but the global context of the Pandemic did not allow to fund it.

The SEAF 2 project

This project was reviewed, adapted and submitted in February 2021 to SEAF. SEAF accepted it and proceeded to the transfer (SEAF 2: 21,738 US $ on the of 9th of March 2021). This project aims to build upon the activities started by ADF by providing basic hygiene and learning infrastructures, for three primary schools (Sangke Lak, Anlong Thom and Ta Penh), located in Phnom Kulen National Park. It is targeting 5 primary schools (Popel, Khlah Kmum, Sangke Lak, Anlong Thom, and Ta Penh), with additional minor infrastructures in 2 others (Phum Thmey and Preah Ang Thom). English classes and hygiene sessions are also provided.
As per the SEAF 1 project, a participatory approach was developed; asking to every principal and teachers what missing infrastructures should be built, with a priority list. ADF team, working in close collaboration with these teachers and principals, had to involve, as much as possible and where/when possible, students, teachers, local communities, to participate to these construction activities, so they can take ownership of the new facilities. The secondary objective is to increase the quality of education to the pupils and teachers of the two targeted village primary schools.

The pupils and teachers are the direct beneficiaries of the project. This represents 98 children (including 50 girls) and 3 teachers at Sangke Lak primary school, 107 children (including 56 girls) and 5 teachers at Ta Penh primary school, 69 children (including 31 girls) and 4 teachers at Khlah Khmum primary school, 98 children (including 42 girls) and 4 teachers at Popel primary school, 311 children (including 172 girls) and 10 teachers at Anlong Thom primary school.
Additional smaller infrastructures were built in 2 other primary schools benefiting 47 children (including 23 girls) and 2 teachers at Phum Thmey primary school, and 300 children (including 156 girls) and 10 teachers at Preah Ang Thom primary school.
The Total number of beneficiaries is 719 children (including 358 girls) and 38 teachers (including 16 female) (Source: Preah Ang Thom school, supervisor for primary school for Khnong Phnom Commune, Svay Leu District, 2020-2021). Indirectly, the project had repercussion on basic hygiene habits and learning environment for the children and families of the 9 villages, totalling 4728 persons

(data: Jan 2021, Khnong Phnom commune data). The pupil's families and the village communities are the secondary beneficiaries.
Infrastructures built in 2021:

- Incinerators were built at TP, PP schools but also in Phum Thmey, Anlong Thom and Preah Ang Thom primary schools. All schools in Phnom Kulen have now this facility. For each of them, a slab divided in 2 areas was added. Its purpose is to store the plastic garbage before burning and the remaining waste after burning. These toxic wastes will be collected and brought to the larger incinerator set up in Phnom Kulen by the Ministry of Environment and funded by UNDP. Other similar wastes are stored there.
- The entire roof at Ta Penh school was replaced, cement slab redone and floor tiles placed in the library room, iron bars installed on widows and shutters repaired and repainted.
- The entire roof at Anlong Thom school (ADF building from 2010) was replaced, and the damaged window frames were replaced.
- Popel school: an additional water reservoir was built, doubling the water storage capacities of this school, 2 robust playgrounds were installed.
- Sangke Lak school: a roof extension was built for a 2-classroom building (with a corresponding slab on the ground), floor tiles placed in the library room, metallic gate set up for the school compound.
- Distribution of a bucket per family + tap (preparation in July): distribution in 22th of July in Popel and on the 4th of August 2021 in Ta Penh.

A number of activities planned in TP, KK, PP, SL could not take place during the year 2021 because of C-19 pandemic and the closing of the schools:

- Health Centre staff monthly lessons to students.
- English teaching (in these 4 school as well as in Anlong Thom school).
- Setting up of UV Light purification systems to improve the water quality, with the technical assistance from Water for Cambodia NGO.
- Maintenance of the equipment of the water systems for primary schools, piped, taps…from springs.
- Replacement/ fixing of playgrounds at Ta Penh and Anlong Thom schools.

The implementation of these activities was organized by ADF in December 2021 and will be implemented from January 2022 onwards.

The SEAF 3 project

Late in 2021, the SEA Foundation had the opportunity to fund a small project proposed by ADF: "Quick Impact Library Project, Phnom Kulen Primary Schools" or SEAF 3. Building on the existing infrastructures supported by SEAF previous project, this project aims to quickly improve the existing libraries in Phnom Kulen schools (at Ta Penh, Khlah Khmum and Sangke Lak) and to set up one in Popel primary school. It corresponds to a demand from the principals of the targeted schools and it is building upon the activities started by ADF and funded by SEAF: providing basic hygiene and learning infrastructures for the primary schools (Popel, Sangke Lak, Khlah Khmum and Ta Penh), located in Phnom Kulen National Park (PKNP), Siem Reap Province, Cambodia.
For this project, ADF received from SEAF 2,249 US$ on the 10th of December 2021. The construction of a library in Popel primary school and the other related activities were planned from January 2022.

Bicycle donation

Ms. Nguon Rothsophal, a senior former director and lecturer at the Paññasastra University of Cambodia (Siem Reap branch), also supported with her friends (more than 60 persons) this component in 2020. The objective was to provide bicycles to secondary school students living in the remote villages of Thma Chruogn, Ta Penh, Khlah Khmum and Sangke Lak, so they can go to the secondary school in Anlong Thom, 4 to 5 Km away from their villages. Funds were also allocated for the maintenance of the bicycles and a mechanic was selected. ADF did not received the funds directly as they were purchased by Ms. Nguon Rothsophal but the team participated to the identification of the 25 students in late December 2020. A financial contribution from each parent

was asked (10 US$) so the families take ownership and responsibilities for their maintenance. The bicycles were distributed on the 21st of January 2021.

Complementary projects for the Educational support

ADF - AGRISUD International project

Since 2019, the joint project with AGRISUD International (see above, AGRISUD and ADF joint-project in Khnong Phnom Commune) has been encouraging primary schools to grow vegetable gardens. In the schools of Ta Penh and Sangke Lak, this involvement was higher with distribution of equipment, seeds and a technical training. In 2 others schools (Khlah Khmum and Popel), only seeds were given. These vegetables are associated to the morning breakfast distributed by the World Food Program in rural areas, and in the case of Khnong Phnom Commune (except Khlah Khmum village), with the help of PLAN NGO. The school also purchase vegetables from local producers trained by AGRISUD-ADF team. These activities were very disturbed by the long school closure in 2021. They will resume and will be implemented form January 2022 onwards. In Ta Penh, the land to the back of the schools has already been prepared.

ADF - Eau Kulen tree nurseries:

Three primary schools are the beneficiaries of the parallel project funded by Kulara Water factory (producing Eau Kulen): Anlong Thom, Ta Penh and Sangke Lak primary schools. Implemented by ADF since 2018 (Tree 1 and tree 2 projects), this project provides thousands of forest saplings every year for reforestation operations in Phnom Kulen National Park. The water system set up by ADF in these schools are providing water to both tree nurseries and hygiene facilities.
These tree nurseries also act as environmental educational tool, as they are managed by the teachers and students. They are complementary of the WISH 2 project as they built awareness about environmental protection and regeneration. Additionally, they provide incomes to the schools. Please refer below for this project.

e. ENVIRONMENTAL PROGRAM

Environmental and social studies

During the year 2021 and due to the C-19 pandemic, ADF paused its collaboration with the School of Fields Studies (SFS) for defining and facilitating the studies in the Phnom Kulen National Park. The research collaboration program is focusing on natural resource governance and management; livelihoods; and the environment interface. No students were able to come to Cambodia and no studies were implemented.

ADF kept regular contacts with the Canadian PhD candidates who started their studies related to Phnom Kulen in 2019 and in particular Ms. Leah Marajh from the University of Toronto, Department of Geography & Planning. ADF director was solicited for reviewing parts of this academic work.

ADF was also involved in the environmental protection by combining data to the geo-database about the environmental threats, and by disseminating them to the relevant authorities (Ministry of Environment, APSARA Authority, District and commune authorities…). ADF continued in 2021 to integrate in our GIS system all illegal-logging points and recently burned plots of forest for cultivation purposes within the Phnom Kulen National Park and has reported them to the Ministry of Environment (MoE) and APSARA.
ADF team has continued to be one of the main actors to provide information from the field for the implementation of the Phnom Kulen Management Plan, and the Phnom Kulen action plan both under the supervision of the MoE, with the assistance of UNDP experts.

Meetings, workshops and events

In 2021, ADF management team met representatives from the Ministry in Phnom Penh and Siem Reap, and attended to various meetings at national level, organised by the PDoE, the MoE or the National Council of Sustainable Development (NCSD).
- On the 27th of January 2021, ADF Director participated to the joint ministerial Second National

Ecotourism Forum, in Siem Reap.
- On the 28th and 29th of January 2021, ADF Director participated to the Annual Learning Forum on "Building an Enabling Environment for Sustainable Development" in Cambodia in Siem Reap with a presentation entitled "Sustainable Livelihood Activities and conservation in Phnom Kulen National Park", organised by the National Council of Sustainable Development (NCSD) and the MoE.
- On the 11th of November 2021, ADF Director participated to the online meeting Cambodia Sustainable Landscape & Ecotourism Project (CSLEP).
- On the 21st of December 2021, ADF director got from the Ministry of Environment an honorific distinction ("Certificate of Appreciation of Environmental friendliness") from the Ministry of Environment (signed by H.E. Say Samal, Minister, on the 4th on November 2021) to acknowledge the work done by ADF in PKNP for its Environmental Protection, Natural Resource Management, Biodiversity Conservation and Sustainable Livelihood.
- On the 23rd of December 2021, ADF Director participated to the meeting in Kompong Thom town about the participated Cambodia Sustainable Landscape & Ecotourism Project (CSLEP).

TREE 1 project

Reminder: From June 2018 to August 2020, ADF implemented a 27-month environmental project, supported by Kulara Water company producing the only mineral water in Cambodia (Eau Kulen), based at the bottom Phnom Kulen. The project's goal was to provide young indigenous trees from tree nurseries to the Kulara Water company facilities, and for others areas within the Phnom Kulen National Park (PKNP) selected for reforestation by the Ministry of Environment, the Provincial Department of Environment and the PKNP management team.
The project's other goal was to implement a practical environment awareness program for the students and the teachers of Sangke Lak, Anlong Thom and Ta Penh, village primary schools (584 children and 20 teachers), where the tree nurseries are located. This participatory tree-growing project allowed the involvement of the teachers and students from each school including regular maintenance, manual weeding, transplanting of very small saplings to plastic bags, mixing components for the plastic bags and planting activities on the plateau. The tree nurseries acted as educational tools to promote environmental awareness and conservation. Trainings about tree growing and tree nursery maintenance were given by forestry expert to all the teachers of the 3 schools. Each tree nurseries were built and upgraded on a needed basis with proper tools, equipment and gravity-fed water systems (also used for water and sanitation facilities in schools), tree seeds were purchased or collected regularly in forested areas of the park, according to the bio-diversity assessment of PKNP (2013, Hayes and al.), allowing to grow up to 22 different indigenous tree species. ADF team set up a table to follow up the quantity of trees species grown up in each tree nursery over the project length.
During this project, more than 45,700 saplings were grown in the 3 tree nurseries (about 9,000 tree saplings were grown in 2018, 13,036 in 2019 and 23,666 in 2020). It has contributed to reforest 63.3 hectares in PKNP. This equates to 2.3 hectares per every month of the project. In most occasions, the trees produced by ADF tree nurseries were added to additional saplings from other tree nurseries, brought to Kulen, for the reforestation projects sponsored by MoE/PDoE, UNEP or UNDP. Other smaller reforestations operations were also organized by ADF (archaeological sites, sources, watershed…). In some cases, other saplings were sold to other beneficiaries (1,800 trees were provided and planted in the grounds of the Kulen water factory).
Trees were sold by the schools to the reforestation project and the incomes is given back by ADF to each school principal and is divided as following: 20% for the maintenance costs of the tree nurseries, 40% for the maintenance and upgrading of the school facilities and material, 40 % shared by the teachers as personal income and incentive). In 2019 and 2020, a total of 5,660 US$ was earned by these 3 schools.
It was a participatory project, including stakeholders from the private sector (Kulara Water company), through governmental institutions (Ministry of Environment), implemented by ADF, a non-profit and non-governmental organization with the pupils and teachers of the three public schools. During the reforestation process, every rainy season, a broader array of partners was associated.
The TREE 1 project was the first long term project addressing environmental awareness and reforestation in PKNP. It has created a strong dynamic, reinforced by stronger law enforcement

from the MoE and the PDoE, in charge of the park. The availability of trees has pushed the authorities to take actions and to take over illegally burned plots for reforestation.
With these numerous successes, an extension of the TREE project was submitted to the Kulara Water company at the end of August 2020. The company agreed to support the TREE 2, a two-year project, to consolidate the successes of the first TREE project.

TREE 2 Project

The fundamentals of this TREE 2 project are very similar to the initial TREE 1 project and therefore, the goal, objectives and activities matrix are similar. However, it includes the main constraints encountered during the implementation of the TREE 1 project and the recommendations stated in the final report:

- To introduce a field maintenance component employing members of the community to cut the weeds around the tree saplings planted enabling them to grow and thrive. This activity can also be done in the previously planted areas. It will help defining the loss rate for each reforested plots and replanting, if necessary.
- To maintain and upgrade (where necessary) the water systems to the three tree nurseries.
- To continue the environmental education and awareness of stakeholders, especially pupils and teachers, building upon the education component of the TREE 1 project.
- To better monitor the revenue of each school, to insure their proper maintenance.
- To introduce a better monitoring system where trees from ADF tree nurseries can be counted and localized within each reforestation activity, to monitor the survival rate of the trees and replace the dead ones in reforested area.
- To diversify as much as possible the tree species but only with trees represented and identified within the 2013 PKNP bio-diversity survey.
- To increase as much as possible, depending on the number of saplings produced, the number of reforested areas within PKNP, focusing on the water catchment areas within PKNP. This depends on the PDoE capacity of re-taking illegally deforested plots for reforestation. Additional saplings will also be allocated on demand and according to their species to Kulara company compound.

The objectives of the TREE 2 project remain the same:

- To grow and nurture indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP).
- To promote the regeneration of the natural forest with indigenous trees of PKNP, restoring the environment and the resources that a thriving environment provides, increasing the amount of surface water.
- To increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools (Anlong Thom, Ta Penh and Sangke Lak). The pupils and teachers will be the direct beneficiaries. The pupil's families and the village communities and the MoE Park Rangers will be the successive beneficiaries.

The TREE 2 project started on the 1st of September 2020, for a two-years duration.

Activities and results:

1) Orientate the village school teachers in all aspects of the project outlining roles & responsibilities and purchase project resources (tree seeds and other tree nursery tools).

The accounting system for the project was set up by ADF accounting officer and expenses were updated on a weekly basis for a better financial monitoring of the project. An introduction meeting was hold between all teachers involved and ADF team at Anlong Thom school on the 4th of November 2020 to introduce the TREE 2 project to all stakeholders. Teachers active during the previous project shared their experiences and talked about the benefits of having tree nurseries with the new ones and ADF team, exchanging about water issues, benefits, prices. A new system of percentage for the benefits of the tree sales was established: 20% for the tree nursery

maintenance, 40% for the school maintenance, 40 % for the teachers as an incentive. Previously the system was divided as such: 30 % of the income was devoted to the tree nursery maintenance, 30% for the school's general maintenance, and 40% is an incentive for the teachers. The sale of sapling represents a substantial income for each school. For example, Ta Penh primary school was able to build in the school compound a meeting shelter. It was also decided that the cash generated by the sales of saplings and destinated to the tree nursery maintenance would be managed by ADF (third recommendations from the TREE 1 final report). ADF team has set up a planning over the calendar year, from January to December, to visualize and monitor the main tasks to be implemented by all stakeholders. All project resources were purchased and tree nurseries were included in the daily life of the 3 schools.

2) Continue collecting indigenous tree seeds; Upgrade the tree nurseries at Sangke Lak, Ta Penh and Anlong Thom primary schools, ensuring they are efficiently and effectively producing strong healthy saplings; plant the tree seeds and nurture the tree saplings until they are ready to be planted into designated areas.

The tree nurseries were upgraded on a needed basis with proper tools, equipment and gravity-fed water systems. The previous signboards at each tree nursery were changed in 2020, during the first TREE project, with Eau Kulen and ADF logos. Anlong Thom, Ta Penh and Sangke Lak water system were designed and set up during the first TREE project, requiring several hundred-meter-long buried and connected PVC pipes; collecting, intermediary and storage reservoirs, providing water all year long for these tree nurseries. Students and teachers were strongly involved in their constructions, so they can take ownership of these water systems.

These water systems also serve the hygiene facilities (toilets, wash bays) built or renovated by ADF in these 3 schools, and allow the implementation of a complementary Hygiene project (WISH project, funded by Almayuda Fundaciòn, ongoing since 2018) in 4 primary schools (Sangke Lak, Ta Penh, Khlah Khmum and Popel).

Ta Penh water system from the source to the school was originally included in the first TREE project proposal. However, the WISH project was able to fund it, and it was decided that funds from Kulara Cie for this water system would be used for the setting up of the Anlong Thom tree nursery water system.

From September 2020 and during the year 2021, only minor fixings were done to these water systems and more generally, to the tree nurseries: fixing broken pipes for the Sangke Lak Water system; arranging the 3 collecting pipes at the Ta Penh source, so they are all at the same level.

ADF team paid a particular attention so each tree nursery and school have a permanent access to water. During the dry season, this becomes more and more critical due to climate change and deforestation. However, the tree nursery water systems are conceived so they can capture and hold just enough water reserve until the end of the hottest season. Future upgrades could enlarge the storage capacities as this situation becomes harder to sustain every year, particularly in Ta Penh and Anlong Thom.

Other upgrades were the replacement of a wooden door by a metallic one at Sangke Lak tree nursery, on the 4th of April 2021, the covering of the vertical upper part of the 3 tree nurseries with green shade nets, allowing a better protection from the sun and from the football games, often played closed to the tree nurseries.

From April to June 2021, a complementary UNDP funding (UNDP-BESD-PES, see below) allowed ADF to upgrade the tree nurseries: 1) low bricks enclosures sealed with cement to place the saplings. This facilitate the counting of the trees per species as they are in rows and lines, and maintain them in a vertical position (see pictures). Species can now be easily separated and identified. 2) Smaller similar spaces were reserved for seeds to be planted in the ground before their transplant to the bags (see pictures). 3) additional equipment purchased: wooden posts (8 per tree nursery), green-shade material (1 roll per tree nursery), metallic fence (30 Kg per tree nursery), water pipes (5 per tree nursery), irrigation tank (2 per tree nursery), black plastic bag for young trees (10 Kg per tree nursery), and tree seeds.

Later on, in 2021, other upgrades were implemented. The sprinklers were lowered to facilitate the water distribution at Anlong Thom tree nursery. The Sangke Lak tree nursery was slightly extended

to the west until the school fence. This tree nursery is the smallest and an additional space was needed to store trees once they are big enough to be planted, before the rainy season. The leaking water reservoir at Ta Penh was fixed in October 2021. Whites reusable bags given by Fauna in Focus NGO, as well as about 500 saplings, were introduced in each tree nursery (November 2020) as an alternative to the black plastic bags. The larger ones were cut and sewed to obtain several out of them.

3) Village schoolteachers & children are taught in fundamental aspects of tree planting & tree growing, nurturing & raising trees.

The trainings organized by ADF and provided by a forestry expert from the Ministry of Forest and Fisheries in Along Thom (January 2019) and Ta Penh (January 2020) were designed for all the teachers of the 3 schools, with a technical then a practical session where kids participated. The seed preparation and the composition of the soil for the plastic bags were greatly improved thanks to this training. These recent trainings did not need to be repeated in 2021. Only advices were asked by phone to this trainer on a needed-basis.
ADF has set up two Community-based tourism centres (CBTC) in Anlong Thom and Popel villages. They are managed by the Community Protected areas (CPA) members and offer tourism products (daily trips with local tour guide and food). The Anlong Thom CBTC members have requested to ADF to set up a forest tree nursery and a vegetable garden. The forest trees can be sold to Cambodian visitors and allow the centre to increase its income (1 US$ per tree). The CBTC team received training from the ADF team on seed collection, pre-treatment, bag preparation for seedlings and nursery maintenance (October 1st, 2020). In addition, the ADF has made its tree species registration system available to the centre.

4) Village school children have practical lessons in tree cultivation & it becomes part of their school activities.

The 3 targeted schools have operational tree nurseries growing trees and all children form grade 1 to 6 are participating to the activities: planting seeds in plastic bags and transplanting of very small saplings to bags, mixing components and filling the plastic bags, regular water system maintenance, manual weeding, manual watering with watering can, when necessary, planting activities on the plateau. The project is raising environmental awareness for 516 children and 18 teachers from the 3 primary schools (2021 Commune data), divided as follows: 107 children and 5 teachers in Ta Penh, 98 children and 3 teachers in Sangke Lak and 311 children and 10 teachers in Anlong Thom. Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project (Mr. Yon Sokchea).
However, 2020 and 2021 were particularly difficult as the C-19 pandemic imposed the closure of all schools in Cambodia. ADF staff was also more solicited for this task, as teachers and students were less present at schools during these long closing periods (see dates below). However, some motivated school teachers and students kept coming for the regular work to do in the tree nurseries, demonstrating their involvement in the process of growing trees for reforestation.
The closure of schools in Phnom Kuken happened during the following periods: in 2020, from 16th of March to 7th of September 2020, then from 30th of November 2020 to 11th of January 2020; and in 2021, from 20th of March to 1st November.
To follow up the quantity of trees grown up in each tree nursery over the project, the ADF team continued to use the table summarizing important information used during the first TREE project. This table includes the number of saplings per tree nursery, per species, the English name, the Khmer name and the scientific name (in Latin) for each species, the seedling period for each species, the average price of seeds per Kg per species, the processing time for each tree seeds species, the average number of seeds per Kg. Thanks to this project, the villagers were aware of the existence of the tree nurseries and a network of seed collectors was developed.

5) Indigenous tree saplings are transported to designated target areas: Kulara Water company land, PKNP protected areas (APA's, CPA's) or other designated areas of PKNP and trees are planted appropriately, reforesting the target areas.

Tree seeds were purchased or collected in 2020 and 2021 and grown in the 3 tree nurseries. In 2020, 23,660 trees were grown from January to June. An additional 16,175 were grown after the

planting season. They correspond to seeds that are only available later during the year. From June to October 2020, 5 institutions/clients/projects bought almost 13,300 trees from the 3 tree nurseries. The Kulara Water company required 200 trees (Sental wood/Chan Crassna) in 2020, to be planted on the factory land. 1020 saplings were sold to 2 clients in Siem Reap and Svay Leu.
For the 2020 rainy season, the trees produced by ADF-Eau Kulen tree nurseries were planted, jointly with other trees bought outside PKNP in 24 locations within PKNP corresponding to a total of 32.47 ha reforested with 33.100 trees. Among these reforestations, the PDoE bought 10,100 trees to reforest 4 areas: to the south of Ta Penh village (2 areas in July), near the Preah Ang Thom ranger station and inside Anlong Thom CPA. Mrs. NGUON Rothsophal from Panasatra University and friends bought 1,260 trees to be planted to the west of Spien Halo, on the 26th of September 2020.
For the end of the year 2020, the trees produced by ADF-Eau Kulen tree nurseries, too young, could not be planted within the UNDP/C-19 project (see below), implemented by ADF. This large reforestation project started in October 2020, allowed to plant trees on a much larger scale than the average per year: 54,43 ha with 36,000 trees planted. Numerous operations of reforestation and maintenance took place from October to November 2020 then again in May 2021, benefitting 1899 persons with "cash for work". Cumulated to the other reforestation activities in 2020, the total for this year was 90.86 ha planted (with 87,100 trees) within PKNP and Chankran Roy Community Forestry.

In 2021, 13,221 trees were grown from January to June. An additional 18,360 were grown after the planting season. They correspond to seeds that are only available later during the year. From June to August 2021, 3 institutions/clients/projects bought 11,100 trees from the 3 tree nurseries. The Kulara Water company did not require any trees in 2021.
For the year 2021, the trees produced by ADF-Eau Kulen tree nurseries were mostly planted, jointly with other trees bought outside PKNP within the UNDP-BESD-PES project, implemented by ADF, with a total of 20.9 ha (13,525 trees) planted. The tree plantations at Spien Pring was done from the 5th to the 7th of June and from the 8th to 10th of June 2021 (6 days) and the tree plantations at O'Srae was done from the 5th to the 7th of June, 8th to 10th of June and on the 11th of June 2021 (6 days) at O'Srae, involving 322 villagers from both villages. Trees were purchased from the ADF/Eau Kulen Sangke Lak tree nursery and from the UNEP/CPA Chup Ta Sok tree nursery in Khlah Khmum for the reforestation of O'Srea areas. For the reforestation of Spien Pring areas, trees were purchased from the Ta Penh and the Anlong Thom ADF/Eau Kulen Sangke Lak tree nurseries (with additional trees bought in Siem Reap). Details of the total number of trees, species and hectares reforested are the following: 13,525 trees were planted in the 2 areas (6575 for Spien Pring and 6950 for O Srae). Summing the 2 areas, the total of the tree planted per species are the following: 6735 *Beng*, 45 *Kronhoung*, 43 *Thnong*, 2548 *Koki*, 354 *Yeang*, 1807 *Kulen*, 777 *Kor Koh*, 171 *Pring*, 774 *Phnav*, 135 *Neang Nuon*, 45 *Chres* and 100 *Khnol Prey*.
The objective of this pilot project was to get agreement of behavioural changed with villagers for leaving from old cash nut plantation. 13 families accepted to give their land located in 2 sensitive watershed areas back for reforestation (O'Srea area north of Khlah Khmum village and Spien Pring, south of Anlong Thom village), as long as they can harvest the existing crops (almost exclusively young cashew nut farms). It was signed between each family and the commune chief. As these 13 families (7 from Khlah Khmum villahe and 6 from Anlong Thom village) give their lands back for reforestation, they have benefited from alternative livelihood options proposed and implemented by ADF. They all selected pig raising. Two other locations within PKNP were planted with trees brought form outside the ADF-Eau Kulen tree nurseries: behind the Orchid Ranger station (3,2 ha; 1500 trees) and O Pring Soutnikom (1,1 ha; 1100 trees).
AGRISUD International and CIRD NGO, both partners of ADF for their project in PKNP, bought trees from the ADF-Eau Kulen tree nurseries. They respectively bought 1600 trees (*Beng, Yeng, Koki, Kulen, Kronhoung, Neang Nuon, Chan Crassna, Phneav*) and 3000 trees (*Beng, Koki, Kulen, Kor Koh, Kronhoung, Trobek Prey, Chres*). Agrisud distributed them to families who received fruit trees from the joint project AGRISUD-ADF in Khnong Phnom commune and CIRD trees were planted inside Popel CPA on 2.5ha (see below CIRD Trees project).
The total of reforested areas within PKNP for 2021 is 27.70 ha with 20,725 trees (19,125 planted during reforestation activities + 1,600 distributed).

The general incomes for the schools were in 2020 12.094.400 riels=3,023.6 US$ (941.2 US$ for Anlong Thom school; 1,021.2 US$ for Ta Penh; 1,061.2 US$ for Sangke Lak) and for 2021 8.877.600 riels=2,219.4 US$ (531.4 US$ for Anlong Thom school, 911.4 US$ for Ta Penh, 776.6 US$ for Sangke Lak).

6) Tree site maintenance, employing local villagers to cut the weeds around the newly planted young tree saplings in the degraded areas, enabling them to get the moisture and sunlight they need to grow and thrive.

As recommended in the final report of the TREE 1 project (recommendations n.5), the maintenance of the reforested areas was introduced during this second project. This requires the employment of local villagers as day labour, to cut the weeds around the small tree saplings planted in the target areas. This allows to give trees the light and moisture they need, giving them a "fighting" chance to grow and develop into mature forest. It also allows to better monitoring the reforested areas, the survival rate of the trees, and eventually to replace the dead ones.
In October 2021, 3.3 ha were maintained (2 sites) by 30 workers during 5 days of work. These areas were planted to the south of Ta Penh village in July 2020. The maintenance has shown that the tree survival rate is very good and some trees are now between 1,5 to 2 meters high. Other recently reforested areas will be maintained in 2022.

On the 22nd of December 2021, ADF toured a visit from the Kulara Water company team in the three tree nurseries as well as on reforested areas for a promotion video and pictures.

Popel CPA project

Reminder: There are 5 Community Protected Area (CPA) in Phnom Kulen National Park. Because of the extension of the cashew nut cultivation, there are now the only remaining forested area in the south part of Kulen plateau. They are meant to be preserved for the benefit of the local population where they can collect non-timber forest products. ADF is helping the Ministry of Environment and the committees to protect, maintain and eventually enlarge these CPA.
Since July 2018, ADF worked on the enlargement and the better protection of the Popel CPA, thanks to the financial support of a private donor, Mr. Deroo. The project started in June 2018 with meetings at local level to introduce the project and by December 2018, the survey of the area was done (October 2018), including the complete inventory of the cashew nut farms, which will be integrated in the new zone. All stakeholders were aware of the project: CPA members, local authorities (Commune and District Chief), the Provincial Department of Environment and the Ministry of Environment.
Originally thought to be extended to the south until Siem Reap River, the Popel CPA committee and villagers have asked to extend the protected area to the north, in order to include the O'Thom river and its various waterfalls, one of the main tributaries of the Siem Reap river, downstream from the main Kulen waterfall. This could bring the new CPA to a total of 800 hectares. The idea is also to develop treks for visitors to generate income for the CPA committee, and in the long term. A map of the proposed extended CPA was produced and about 100 Popel villagers agreed to support the project, with a document baring every signature. An assessment of the project by the MoE Phnom Penh is also planned in early 2019. The project should then have to be approved by the provincial (Governor of Siem Reap Province) and national authorities (Minister of Environment).
In 2019, several meeting with CPA members, villagers, MoE and PDoE representatives were organised to continue this project (27th February and 7th march 2019). During these months, the administrative process of extending a CPA was ongoing, with approved signatures from villagers, village chief, commune chief, district chief, Governor of province and departments of the MoE in Phnom Penh. Surveys were done and maps created to identify the limit of the future CPA. From May 2019, this project was integrated in the BESD project (see below), funded by UNDP (United Nation Development Program) and SIDA (the Swedish International Development Agency).

In 2020, the last funds due for this project were sent by the donors to ADF in March 2020, and integrated within the UNDP-BESD project (see below), within the ADF's environmental component. No additional funds were sent from this donor for this project in 2021, as it was finalised in December 2020.

CIRD TREES project

As developed in the Income generation (IG)/alternative livelihood program (Agriculture alternative livelihood) chapter above, ADF was approached by the Cambodia Institute for Research and Rural Development (CIRD) for a collaboration on agriculture alternative livelihood activities at the end of 2020.
CIRD was also interested in funding trees growing from ADF tree nurseries from Anlong Thom, Sangke Lak and Ta Penh primary schools.
After several discussion between CIRD and ADF representatives, it was decided that the amount of 3,120 USD provided by CIRD would be dedicated to a reforestation project, integrated into the ADF ongoing TREE 2 project developed by ADF in the 3 tree nurseries (located in 3 primary schools: Anlong Thom, Sangke Lak and Ta Penh) (see above, environmental component), which has 3 main goals:

- To grow and nurture indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP).
- To promote the regeneration of the natural forest with indigenous trees of PKNP, restoring the environment and the resources that a thriving environment provides, increasing the amount of surface water.
- To increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools.

The transfer from CIRD was done at the very end of 2020, and all these activities were undertaken in 2021. The funds were used from the 1st of January 2021 to the 31st of June 2021 to purchase the 3,000 trees seeds grown into saplings, additional material (spades, hoes, black plastic bags), to monitor the growing of the saplings, to maintain the facilities (pipped water systems, broken taps, PVC pipes, sprinklers, etc…) and to cover tree plantation costs. A short report was produced for CIRD on the 19th of February 2021. The trees purchased by CIRD were planted during the reforestation operations and the rainy season, from June to September 2021, under the supervision of ADF team and the Provincial Department of Environment (PDoE), in PKNP.

UNDP-BESD Project

Reminder: The UNDP-SIDA (Swedish International Development Agency) funded project entitled "Building an Enabling Environment for Sustainable Development" (BESD) was granted to ADF in May 2019. The duration of the project was originally 1,5 year from 1st May 2019 to 31st December 2020, focusing on two villages (Khlah Khmum and Popel) in Phnom Kulen National Park (PKNP).

These two interlinked projects, Khlah Khmum and Popel Projects, seek to address the deforestation issues and contributing to the reforestation and rehabilitation of PKNP by demarcation and zoning, by supporting community based natural resources management through alternative and sustainable livelihood options and by supporting for payment for ecosystem services (PES) by setting up a water system for Popel village, for the benefit of the local population. The overall objectives are to preserve areas of ecological and archaeological significance, to promote community based Natural Resources Management, and to operationalize Payments of Ecosystem Services (PES) scheme for PKNP.

Most of the deliverables of both Klah Khmum and Popel projects were achieved from June 2019 to December 2020. However, a few activities were delayed because of the implementation of another UNDP funded project granted to ADF from September 2020 to May 2021 ("Reforesting & building COVID-19 resilience for Phnom Kulen National Park's population and Chankran Roy Biodiversity Corridor"; or UNDP/C-19 project, see below). ADF also faced delays, particularly in obtaining the official recognition from the Ministry of Environment for the enlarged Popel CPA, and implementing the tourism facilities for alternative livelihood in Popel village. In December 2020, ADF therefore requested to UNDP a non-cost extension of the project until the 31st of May 2021, in order to implement the remaining following activities:

- For the Klah Khmum project, the following up on the chicken and pig breeders was still ongoing and required an extension. The number of beneficiaries for the Popel village water system should also be increased and the Popel Water Committee (PWC) reinforced.

- For the Popel project, the tourism facilities were under construction or definition (Prey Thom Popel CPA centre, optional rest huts at secondary waterfall and toilets, trek routes) and the tourism offers were under study. The CPA was enlarged and demarcated to 798 ha and 3 informative signboards were set up. The previous signboards and posts should be removed, to avoid confusion.
- In April 2021, UNDP completed this project with additional funding and it was slightly re-oriented towards PES related activities.

Most of the activities implemented from May 2019 and during 2020 within this project were presented in ADF 2020 activity report. However, in order to present their full extent until June 2021, we have kept in the following pages the activities done during these first 20 months and added or inserted below and for each project, the ones implemented from January to May 2021.

Khlah Khmum Project (within the UNDP-BESD project)

The purpose of the grant was to contribute to the protection of the threatened natural environment and the rich archaeological heritage of the PKNP by designing and demarcating one Archaeological Protected Area (APA) around Prasat Krohom temples, the Angkorian earth mounds, dam and reservoir (Tamnup O' Srae), with visible concrete posts and informative signboards installed at strategic locations, based on a consultative process. This new protected area should protect the archaeological sites, the natural environment and wildlife, and three local watersheds, tributaries of O'Thom river. It should prevent from deforestation, erosion, poaching; involve and inform the population and the visitors about the protected area and its environmental significance and provide environmental awareness to the local population.
This should be combined with the offering of alternative livelihood options to the Khlah Khmum villagers (292 persons, including 142 women, 60 households; Ministry of Interior, 2017) and the setting up of a water system for Popel village (379 persons, including 190 women, 89 households; Ministry of Interior, 2017). The integration of the ancient reservoir and related local watershed in the APA should ensure the protection of the forest cover, enabling to provide permanent water to the watershed-linked village of Popel.

Results from 2019 to 2021:
Consultation, organisation and surveys

A meeting was held on the 24th of June 2019 at Preah Ang Thom commune office with 18 persons (ADF director, ADF Development Manager, ADF National Manager, Commune chief, Commune council, village chief of Popel and Khlah Khmum, Popel CPA members, rangers, 2 PDoE representatives and a Svay Leu district representative, a Heritage Police representative), to present and launch the project to the local authorities and to present the main objectives (alternative livelihoods, water system for Popel and protected area at Khlah Khmum), and to get their endorsement). All local authorities encouraged and endorsed the project and a consensus was generated to implement the project. Three consultative meetings were also hold during the third week of June at PDoE, then on 5th of July (in Siem Reap, APSARA Angkor Hotel) during the meeting about zoning in PKNP, then on 23rd of August (at Phnom Kulen Ranger station). As a result, the local authorities and the Ministry of Environment globally endorsed the project, requesting for a close collaboration during its implementation, to insure sustainability. These meetings about the project were held in Khlah Khmum village on the 25 June 2019 and the 6 November 2019 with the village chief, 48 villagers including 28 women, ADF director, ADF National Manager, PKNP rangers, 2 Police representatives, 2 PDoE representatives, 2 commune council representatives. As a result, these all-inclusive and participatory meetings allowed all parties involved to share views on the project and exchange and advantages and inconvenient. All parties have a good knowledge about every aspects of the project and can share information and request more if necessary.

Meetings were also hold with the Popel CPA members and Khlah Khmum villagers and other key stakeholders on the alternative livelihood/ income generation options and APA demarcation. Six group discussions were held with 5 CPA members, 48 villagers and 16 local authorities. Fruit trees and black ginger were selected as agricultural alternative livelihood for Khlah Khmum, as well as eco-tourism for the future protected area. Later on, in November 2019, other beneficiaries were

identified to raise pigs and chicken from a meeting in Khlah Khmum village who gathered 54 persons, including 32 women. Discussions were held to ear the propositions of the communities, to submit the project and to get their feedback.

The ADF National Manager implemented the ground coordination of the team and organized the field verifications for the Protected Area in Khlah Khmum. PDoE staff (rangers), APSARA workers, CPA members, chief of 5 CPA, chief of commune, commune council members and village security staff were associated, on several occasions, to ensure the maximum participation of the local authorities and local population on the 26th and 27th July and on the 14th of August 2019. The demarcation was conceived to follow natural boundary (cliff and streams) or anthropogenic boundary (trails), rather than artificial shape. This rule was proven to be more efficient when ADF was previously establishing PA in PKNP. Based on the ground verifications, drone images, GPS coordinates, combined with elevation points, a strategic and logical route for the gravity-fed water system can be identified and clearly marked and demarcation of a water catchment and archaeological protected area (APA) at Khlah Khmum village.

Protected area In Khlah Khmum

The demarcation of a water catchment and archaeological protected area at Khlah Khmum village started on the 09th of October 2019. The cement posts were brought on site and a team of rangers and CPA members started to install the post on the ground. The preparation of the track surrounding the protected area was done (4th, 9th, 10th of October) and a total of 101 posts were marked from the 16th to the 19th of October. Every post is geo-referenced and marked with a legend ("Prasat Krohom and O Srae source protected area" in Khmer) and a number. An average of 70 meter separate each post. A clear track is now surrounding the protected area, were posts were placed and red paint marks on the trees were painted. In 2020, 4 informative signboards were set up at the entrance of the zone on the main tracks and one in the village.

In 2021, the ADF pushed for the official ratification of this PA by the Ministry of Environment, into a Community Protected Area (CPA), eventually managed by the Khlah Khmum CPA members (Chup Ta Sok) and within the general zoning of PKNP. ADF and PDoE were closely involved in this process to make sure that this new PA will be included into the protected areas of the PKNP. However, this step depends on the administrative process of PKNP zoning, which is complex and has been ongoing for years now.
The patrolling activities were delegated and supervised by PDoE and the PKNP management team. The patrols are organised in 2 different teams, on specific areas within PKNP. These areas are designated by the PKNP management team and change over the course of the year, according to the information collected and illegal activities suspected. The team of rangers is divided in 2 groups: a first group with 15 rangers is patrolling for 5 days, 2 times per month; the second group with 6 rangers is patrolling for 3 days, 1 time per month. During the last phase of the project, ADF has worked in close collaboration with PDoE and the rangers to patrol this area. During these patrols in April and May 2021, one illegal logger was caught next to the post n.1 of the PA and was given a warning. Patrols were performed from the 5th to the 7th April, 8th to 11th April, 17th to 20th April, 19th to 21st April, and 22nd to 25th of April 2021. In May 2021, they were performed from the 9th to 12th, 10th to 13th, and 12th to 15th of May 2021.

Water system in Popel

ADF and PDoE, jointly with the Popel community members and local authorities have conducted a study on drinking water harvesting and water distribution in Popel village. More than 8 rangers and 3 persons from PDoE, 5 CPA members and 1 village chief participated to these surveys. Popel Water actual situation was surveyed and discussed on several occasions on 25th of June, 25th and 26th July, 9th of September, 12th September, 3rd October, 7th and 9th of October with PDoE representatives, rangers, CPA Popel and Khlah Khmum members, commune council members, ADF director, ADF National Manager, Popel school principal and solar expert.
The existing system was not delivering water to all parts of Popel village and the system built by OOO local NGO (Our Objectives Organization was granted in January 2017 with a Small Grant through the GEF/SGP project to enhance Popel water system), using a solar panel was not

functioning because the associated reservoir was broken. ADF original plan was to bring water from O'Srae dyke, 3 Km northeast of Popel village. However, the surveys conducted by all stakeholders indicated that this point was 10m lower than the village. Numerous other sources were surveyed but all appeared to be higher and the only higher source was dry. Surveys on water sources indicated that the only solution was to pump water to a high location in Popel village (primary school), using an existing solar panel funded by SGP. The water would be then distributed with a network of pipes and water meters per household.
This solution is requiring maintenance costs. Consecutively, ADF national Manager and PDoE staff suggested setting up a Popel water management committee, in charge by village chief and CPA chief.

The implementation of a water system for Popel Village started on the 08th October 2019 to mid-December 2019. The topography of the area with the altitudes and the entire system was carefully studied before implementation. After surveys, all sources appear to be lower than the village; therefore, a gravity-fed system was impossible to set up. Items from the existing system including a solar panel and black rigid pipes (from OOO local NGO not functioning system) were reused for this project. A first reservoir (comprising 15 cement ring wells on a slab) was built by a source and filled by gravity. A pump was installed in it, so water can be pumped to a second reservoir. The pump is functioning thanks to the solar panel that was brought from the village to that location and a small hut was built nearby to protect the electric facilities and a generator, used as a secondary device in case of failure of the solar system. The black rigid pipe (unused by the previous project) was used to connect the two reservoirs, 700 meters away from the reservoir n.1 (620 m in straight line). This pipe was buried to protect them from degradation (vandalism, roaming animals…). The second reservoir was built at the highest location in the village, opposite the Popel primary school. There is 20 meters difference of altitude between the reservoir 1 and 2. This second reservoir was built with 14 cement ring wells on a slab. From this reservoir 2, a 49 mm diameter PVC pipe was installed and buried in the village on 831 m section, going through Popel village. This pipe is fed by gravity, as the reservoir 2 is on the highest location of the village.
Villagers can connect to this pipe by requiring a water meter to the village chief. Villagers will pay the pipes leading to their house, if they want to connect to the water system. A water management committee was set up and in charge of collecting the money and to insure its proper maintenance. The objective is to manage the system when it is operational, and to collect the fee from households to maintain the system. Fee was set up at 1500 riels per cubic meter (1000 riels/0,375 US$ for the first 3 months). On the total amount collected, it was agreed that 20 % is allocated for the maintenance the water system, 20 % for committee, and 60% incentive for committee members.

In 2020, the Popel Village water system installed was functioning. An additional donation from Dr. Lisa Arensen family and friends of USD $ 960 was made on the 19th of May 2020 to increase the capacity of the recently built water holding tanks at Popel village, opposite the primary school. 13 additional ring wells were installed in June 2020 (6 at the lower reservoir and 7 at the higher one). This represents a total of 14,700 litres for each of the two reservoirs, with a total of 29,400 litres for both reservoirs.
As in December 2020, the Popel water system was providing water to 27 families (130 population, 66 Female) and the primary school (93 students, including 43 girls plus 4 teachers, temporary closed due to Covid 19 pandemic). Another 10 families are also collecting water from the reservoir n.2, bringing their own water container. The total of these families is therefore 37, including 88 females and 3 widows.

During the last phase of this BESD project (Dec. 2020 to May 2021), and even though a durable and functioning water system was installed in Popel Village during the first phase of this project, ADF has reorganised the Popel village Water committee (PWC) to connect a maximum of families in Popel village (97 households, 404 persons including 204 women), by mobilising the water committee and encouraging families to connect their houses to the main pipe.
Several meetings were hold between ADF team and the water committee (10th and 17th of march and in May 2021) to remind the roles and responsibilities of each members and to ensure the proper management of the system. The PWC is placed under the authority of the Khnong Phnom

Commune chief, and managed by Popel village chief and an assistant. The outcomes of these regular meetings were:
- the reorganisation of the PWC with 2 new members (1 old member was excluded),
- the cleaning of the ring well at the source and fixing the leak between the ring wells,
- the cash collection system reinforced, with an invoice system set up and a printed receipt book,
- the training to read counter and write invoices (calculation of the cubic meter spent between 2 meter-reading),
- the plan to extend number of beneficiaries,
- the submission to the commune council of an agreement to officialise the PWC and its members at the commune level.

As in 31st May 2021, the Popel water system was providing water to 28 families (127 persons and 65 Female) and the primary school (98 students, including 42 girls, 4 teachers, closed from 30th of November 2020 to 11th of January 2021, due to Covid 19 crisis). The school was also connected as ADF started the hygiene and sanitation program in this school in January 2021 (WISH 2 project, see above). ADF has doubled the water storage capacities in Popel primary school by building additional reservoirs in march 2021 with funds from SEAF foundation (SEAF 2 project, see above). Another 10 families (50 persons including 29 female) are also collecting water directly and free of charge from the reservoir n.2 (bringing their own water container to a tap) as these households are located higher than this reservoir. The total of these families is therefore 38, including 94 females and 3 widows.

However, this objective is limited by the length of the pipe along the road where households can be connected. This pipe, due to limited budget, does not reach the western part of the villages. Also, the reservoir n.2 should be extended to provide a sufficient storage for this increased number of households. Additional funding could allow to develop the project further to the west in the village.

In the future, the main points to follow up are to convince the PWC to extend the number of beneficiaries (sometimes reticent to pay) and to ensure that the committee is properly managing the collected funds (from the connected households) and the PWC expenditures for the maintenance of the system.

Alternative livelihood

Additional agricultural alternative livelihood directly funded by the UNDP-BESD were built upon this ADF project. To prepare this phase, a second meeting hold on the 6th of November 2019 has identified a total of additional 25 families where 17 have expressed the will to raise pigs, and 8 have expressed the will to raise chicken. On the 8th of January 2020, an additional meeting was organised to exchange with the villagers and from the 9th to the 11th of March 2020, a training was organised by ADF and AGRISUD where only 13 families were finally interested in implementing these two activities. As of December 2020, 2 families were raising chickens and 11 are raising pigs. Out of these 13 families, 8 women (including 5 widows) are in charge of these raising activities, all of them raising pigs. This represents a total 95 persons (50 of them female) and more than 33% of the household village population (303 persons) affected by the new protected area.

As of 31st of May 2021, 18 families benefited from alternative livelihood options offered by the project. Among them, 2 families were successfully raising chickens and 16 were raising pigs. Out of these 18 families, 13 women (including 5 widows) are in charge of these raising activities, all of them raising pigs. During the implementation of the project, one chicken raiser stopped as he decided to leave to Thailand but one family decided to start breeding chicken.

After the initial training, AGRISUD and ADF team provided a continuous follow up on these activities. ADF alternative livelihood team implemented this component by selecting families, checking and advising for the necessary infrastructures (small shelters and fence, built over a slab for the pigs/chickens), facilitating the purchasing of the piglets. ADF and AGRISUD team monitored these households on a weekly basis. In case of sickness, the team provided medicine to cure the pigs.

A contract was drafted and signed with each family. It stipulates that every beneficiary must follow the guidelines related to the training, must cooperate and work closely according to the planning with ADF/AGRISUD, must record their expenses and incomes, must follow additional training, must

take care of their animals, and allow visit when required. The same principles were applied to the BESD/PES project (see below).

Gestation of pigs is usually 115 days (3 months and 25 days). The families raised pig successfully. Incomes from pig are quite significant for a family as they can sell each pig at 100 US$ per head. The average income per family for the families raising pigs in KK depends of the outcome for each pig raiser. For the 11 families raising pigs in 2020, 4 of them received a first income equivalent to 2400 US$ (selling Price 100 US$ each baby pig), as they were 24 piglets born and sold, 4 more pig raisers did not get piglet yet as the pig did not grow well and did not get pregnant. Another 3 families encountered issues with piglets dying at young age. For 2 of these families, the project funded them again. 4 additional families started to raise piglets in 2021 and did not get incomes yet at the end of the project. ADF team continued to monitor and train these beneficiaries after the end of the project. For the chicken beneficiaries, the 2 families implementing this activity have eaten their own production and sold 20 chickens, for a total of 90 US$ (selling price at 5 US$ per Kg). These alternative livelihoods activities represent complementary incomes for the families. Results are obtained on a long term, making sure the beneficiaries are trained well enough and are able to be self-sufficient.

From June 2019, ADF also offered alternative livelihood options to 19 families from Khlah Khmum village, together with AGRISUD International: 3 families growing fruit trees, 16 families growing black ginger out of a total of 60 households (see above, agriculture alternative livelihoods).

This component was reinforced by the UNDP additional funding (PES-March to June 2021, please see details below), complementing this project. One of the 2 areas selected for this project was the Khlah Khmum protected area. After ADF and PDoE surveys, the reforestation areas were selected together with the Khlah Khmum villagers who could benefit from additional alternative livelihoods (pig and chicken raising, fruit trees and black ginger growing). Within this project, 7 additional families were identified and agreed to give back their land with a reforestation activity and alternative livelihood (pig raising exclusively).

For the UNDP (BESD and PES project), the total number of beneficiaries in Khlah Khmum village is 24 households including 18 females. This represents 37 % of the households in Khlah Khmum village (65 families for a total of 312 persons, including 155 females; Commune data, 1st of February 2021). To summarise, the numbers of all household's beneficiaries in Khlah Khmum village were 18 households with the BESD/UNDP project, 6 households from PES/UNDP project and 19 households from AGRISUD /ADF project. These 43 families represent 66 % of the 65 households in Khlah Khmum village.

Popel Project (within the UNDP-BESD project)

The purpose of the grant is to contribute to the protection of the threatened natural environment and the rich archaeological heritage of the PKNP by proposing livelihood options pertaining to the expansion of Prey Thom Popel CPA within Govt partners, CPA members, relevant stakeholders and Popel villagers (379 persons, 89 households; Ministry of Interior, 2017).

After an appraisal on environment friendly sustainable livelihood and eco-tourism, income generation options, a study on drinking water and water distribution in Popel village should be undertaken. It should include the finalization of the extension of the Prey Thom Popel CPA demarcation (see Popel CPA project, above), to include O'Thom River, one of the main tributaries of Siem Reap River on the Phnom Kulen plateau, as its secondary waterfalls represent great assets for the development of eco-tourism in this CPA. It should also reinforce the capacities of CPA members, PKNP rangers and other key stakeholders for the management of the Prey Thom Popel CPA.

The last phase is to develop alternative livelihood options, based on eco-tourism services, and to finalize the gravity-fed water system for Popel village, which is facing water distribution issues. The integration of the ancient reservoir and related local watershed in the protected area (Khlah Khmum project) should ensure the protection of the forest cover, enabling to provide permanent water to the watershed-linked village of Popel.

Results from 2019 to 2021:

Consultation, organisation and surveys

This CPA extension project was started in 2018 with funds from an ADF private donor (see Popel CPA project above). This UNDP project allowed the reinforcement of this first initiative, adding an alternative livelihood component and the setting up of a water system for Popel village.

A meeting was held on the 24th of June 2019 at Preah Ang Thom commune office with 18 persons: ADF director, ADF Development Manager, ADF National Manager, Commune chief, Commune council, village chief of Popel and Khlah Khmum, Popel CPA members, rangers, 2 PDoE representative and Svay Leu district representative, Heritage Police representative, to present and launch the project to the local authorities and to present the main objectives (alternative livelihoods, water system for Popel and protected area at Khlah Khmum), and to get their endorsement). These consultations were also hold during the third week of June 2019 at PDoE, then on the 5th of July 2019 (in Siem Reap, APSARA Angkor Hotel) during the meeting about zoning in PKNP, then on the 23rd of August 2019 (at Phnom Kulen Ranger station).

The official request for the expansion of Popel CPA was followed up by ADF National Manager at every administrative level (Commune, District, Province, Ministry) from June 2018 to December 2019 and is waiting for the approval of the Minister of Environment.

A participatory consultation meeting with the affected farmers for the expansion of Prey Thom Popel CPA; seeking sustainable livelihood options such as eco-tourism, income generation activities was held in Popel village on the 24th of June 2019 with village chief, villagers, ADF director, ADF National Manager, ADF National Manager, rangers, PDoE representative.

After meetings with 47 villagers from Popel population, it appears that an eco-tourism through a community-based organization was largely preferred as alternative livelihood / income generation activity. Previous inquiries and meeting organized by ADF in late 2018 (within the Popel CPA project, see above) have received the support of 96 villagers (out of 219 persons over 18 years old from Popel), to support the enlargement of the existing CPA and the alternative livelihood options with an eco-tourism orientation.

The large majority of the Popel villagers and CPA members has approved the idea of benefiting from tourism through the setting up of tracks, facilities and a community-based organization for the extended CPA. The extended CPA could include non-visited waterfalls. This requires the setting up of tracks, rest hut and home stays, managed by a newly created community-based tourism organization, comprising the CPA committee. These activities were undertaken within this project, from January 2020.

The map of the extended CPA was finalized, and all 66 cashew nut famers identified. The result shows that 45% of them are living in Preah Ang Thom, 41% are living in Popel. The population from Preah Ang Thom is mostly living from tourism at the waterfall site, and is not originally from Phnom Kulen. This proposed extended CPA zone is consistent with the Phnom Kulen Management plan and the Phnom Kulen Action plan, seeking alternatives to deforestation with incomes generated activities through eco-tourism, and the demarcation of protected areas within the boundaries of the park. It is also in line with the Cambodian PA laws, as the process of extending the Popel CPA, has been strictly complying with the CPA guidelines issued by the MoE.

Extension and demarcation of Popel CPA

The expansion of Popel CPA was approved and signed by the Minister of Environment and other representatives, in a new *praka* on the 19th of October 2020. The ADF and PDoE teams organised the demarcation which started on the 21th of October 2020 by the clearing of the surrounding track by CPA members. From November 2nd until November 23rd 2020, 170 geo-referenced and marked cement posts were installed by the Popel CPA members, under the supervision of 2 rangers and ADF national manager. The result is an enlarged CPA of 798 ha. 3 informative signboards were designed and placed at strategic locations. The removal of the old CPA signboards and cement posts was requested to the MoE which replied it was not necessary. However, ADF will ask again in the future, as it is confusing to leave this information to the public and villagers.

Water system for Popel

The UNDP-BESD Popel project has also a component to improve the Popel water system. To avoid

repetition, it is described above in the Khlah Khmum project.

Alternative livelihoods

During the early phase of the project (under the sole Popel project funded by Mr. Deroo, see above), the local community (CPA members and villagers) requested eco-tourism options as an alternative livelihood, when the demarcation of the CPA was considered. The Popel CPA ("Prey Thom") and the 4 non-visited secondary waterfalls could be encompassed into an enlarged Prey Thom Popel CPA and were identified as sources of incomes via eco-tourism services.
The combined UNDP-BESD and Popel project allowed to implement this with a clear demarcation of the CPA and capacity building of CPA members. Surveys with ADF team and CPA members to identify potential areas for eco-tourism facilities (boulders, forest, secondary waterfalls) were undertaken from April to December 2020, with complementary surveys in January and February 2021, inside the existing Prey Thom Popel CPA but also in areas encompassed into the enlarged Popel CPA.

Eco-tourism facilities were defined between CPA members, ADF and PDoE and set up: a Community-Based Tourism Centre (CBTC) at Popel village (with maps, signboards and tourism offer); rest-stop facilities near Anlong Run waterfall (3 wooden rest huts, in August 2020), 2 toilets (with 2 units with a septic tank and a water reservoir hidden in the forested area nearby, in December 2020), trekking route traced (max 1 m width) from one waterfall to the other and according to the defined tours, linked to the existing "Nature trails" established in 2015 by the PDoE and the Popel CPA. The homestays initially considered were not chosen as a viable option as villagers preferred a Community centre. The Popel CBTC was built on a land donated by the Popel village chief, along the main road of Popel village. The construction started from August until December 2020 but was slow down by the heavy rains in October. It was completed by a water reservoir in early December 2020. In May and June 2021, ADF completed this infrastructure with the construction of kitchen. Materials for this were funded by UNDP and day labour was funded by HUMY NGO, a complementary donor for this project (see Humy 1 project above).

All informative material to be presented in this centre were designed by ADF team from August to October 2020. They were printed and set up after the centre was fully completed (January 2021). They are similar to the ones in Anlong Thom CBTC; minor modifications were made (pictures) and the texts were adapted for the Popel context.
As for the Anlong Thom CBTC, they are divided as followed:

- 4 signboards both in Khmer and English presenting general information about PKNP on 1) history, archaeology and heritage conservation; 2) geography, landscapes and hydrology; 3) fauna, flora and environmental protection; 4) Local life and handicrafts.
- Popel CPA rules for visitors
- Popel CPA centre context and actors.
- A Large map of the Phnom Kulen area.

From January to May 2021 and together with the CPA members, ADF and TC set up the CBTC organisation and define the tourism offer of the Popel CBTC, operated by the Popel CPA members. The design of the tracks, the eco-tourism facilities and the tours packages were discussed between all stakeholders (ADF team, PDoE, CPA members, village chief), taking into account the options for a viable system. The CBCT should charge visitors to ensure the maintenance of the facilities (centre, rest-stop areas) and to prevent and act against the dissemination of garbage in this part of the forest.
ADF was advised by its private sector partner, Terre Cambodge tour company (TC) to set up the Community centre organisation, the tracks and the services provided, with the half-time position of Ms Chhun Phirom.
A meeting to select the 2 responsible persons and to expose the different activities and positions (local guides and cook) was hold on the 13th of January 2021. The 2 responsible persons were elected by the CPA members. An important criterion is the ability to write Khmer and to use Facebook and Telegram. Unfortunately, very few people in Popel could response to these.

A Facebook page was created to promote the centre: https://www.facebook.com/PopelCommunityProtectedArea.
A Telegram group was created to facilitate the communication between all actors. 3 rest-stop facilities (wood huts) were built near the of Anlong Run waterfall in August 2020. In December 2020, a toilet (with 2 units) with a septic tank and a water reservoir was built, in the vicinity of these facilities, but hidden in the forested area. Small wooden stairs and handrails were built where necessary on the waterfall trekking path. A wooden gate was installed at Veal Ta Lo, to forbid motorbike to take the path from this place to Poeng Gnogneat. All wood used for these facilities was taken from fallen and dead trees from the CPA. The trekking routes options were studied during the previous surveys and were cleared (from 1m. to 2m. width) in January 2021 (from Poeng Gnogneat to Preah Ang Thom/Popel main road) and in February 2021 between Anlong Run waterfall to Tiep waterfall, Sman Teang and Thnous Pok waterfall. 2 large fallen trees have been cleared by CPA members at the Tiep waterfall in March 2021, with the participation of the ADF staff and the help of 2 rangers. All CBTC members received 2 shirts with CBTC mention and logos.

The CBTC grand opening was planned on the first week of April 2021 but it was cancelled due to the C-19 outbreak in February 2021. As up to the 31st of May (the end date of the BESD project) and due to the pandemic situation in Cambodia, the centre was not officially opened until the 12th of December 2021 (see below).

Within the Humy 1 project and from May to June 2021, additional facilities related to Popel CBTC and its tracks were built and activities done (see above, Humy 1 project), complementing this UNDP funded project: 2 checkpoint booths at the entrance of the CPA on Preah Ang Thom/Popel main road and at Veal Ta Lo, a kitchen at the CBTC, with cooking materials and a short video (3') to promote the CBTC, posted after its opening, on the 22nd of December 2021. A survey about the local handicrafts was implemented to localise producers and identify products. The objective is to have a few of them on display and for sale in the CBTC, in order to offer additional incomes for the producers, the centre and to promote this threaten know-how and tradition, only done by the elders of the villages.

The ADF management team (Director, Development Manager, National Manager, Alternative livelihood staff, CBTC supervisor) combined with the PDoE staff (Director, 8 persons, 3 Rangers in charge) initiated the project with the local authorities and APSARA Authority. During all ongoing aspects of the project, other key stakeholders and particularly the villagers from both Popel and Khlah Khmum were actively consulted. Capacities were built upon and their ideas were enmeshed into all of the project activities, as they would be the beneficiaries at the project conclusion. Rangers and CPA members from Khlah Khmum CPA (Chup Ta Sok) and Popel CPA (Prey Thom Popel), APSARA workers and Khlah Khmum village chief participated to the surveys for the protected area, north of the village. Rangers were trained on the use of GPS, as well as demarcation rules and process. A planning and workplan were set up. ADF's Finance officer continually monitored project expenditures, in close relation with UNDP finance team. All budget lines were spent accordingly. Risks analysis for Popel and Khlah Khmum projects with their corresponding mitigation measures were done and submitted to UNDP.
ADF, MoE and UNDP representatives including the UNDP-Small Grand Program representative visited the Popel water system and the Khlah Khmum PA, met the Popel CPA members and visited the Popel water system with the village chief on the 28th of January 2020 to clear any misunderstanding, in particular regarding the previous unfinished water system. A meeting was organised with Popel villagers that same day to understand and exchange about all previous and current activities.
UNDP representatives and Swedish Embassy representatives visited the Popel water system and the Khlah Khmum PA on the 27th of February 2020. MoE representatives (led by H.E. Sao Sopheap) visited the Popel water system on the 6th of June 2020. A visit to Popel water system and a meeting with Popel CPA and PWC members was hold during the visit of UNDP and SIDA representatives on the 24th of February 2021. Lunch was organised at Anlong Run waterfall by the ADF and provided by the other CBTC set up by ADF in PKNP (not UNDP funded, Anlong Thom CBTC). The visit was interrupted by the C-19 outbreak in Phnom Penh. Additional meetings were hold with

Popel CPA members and PWC in February and March 2021. The C-19 crisis from march 2021 did not allow to have further visits.

Four monitoring reports were handed over to UNDP in November 2019, June 2020, December 2020 and March 2021. The final report was submitted in June 2021. All project partners and stakeholders were involved in all aspects of the project. Project solution derived in a consensual conduct. The evidences and records of the involvement of all partners are the lists of attendees for large meetings, the systematic pictures taken for each activity updated to ADF, TESC/NRM/UNDP and PKNP Telegram groups.
ADF team worked and exchanged on a weekly basis on this project, to make sure the expected results were achieved on time and to solve the inevitable issues implementing such a project. Pictures were sent to ADF, TESC/NRM/UNDP and PKNP Telegram groups document each step of the project, with associated dates and comments. This allowed following up the activities and facilitates the writing of this report. All expenses were closely monitored, recorded and checked within 2 different accounting systems (ADF and UNDP), by ADF Finance, admin. and communication officer.

This tourism centre is now operational and offers half day or one-day trek tours, including local guide, local food with hygiene and eco-friendly standards. The Popel CBTC and Popel CPA consists in:

- A team of 14 members lead by 2 persons, in charge of offering trekking tours to visitors to the scenic points of Popel CPA (Poeng Gnogneat and 4 secondary waterfalls), with guides and guards, and 4 cooks in charge of cooking local lunch with environmentally friendly packages (not using plastic).
- A recently extended CPA (from 188 ha to 798 ha), demarcated by 170 robust concrete posts one placed every 80 meters, each of them marked and geo-referenced, with additional signboards for villagers and visitors at strategic locations.
- An information centre in the middle of Popel village, with information signboards and facilities (toilets, wash bay and water system),
- A kitchen and cooking equipment for Popel CBTC: cooking pan and pots mostly, no plate as the food provided by the CBTC is wrapped up un banana leaves (from Humy 1 project above).
- A network of trails for treks to the scenic points mentioned above,
- 3 wooden kiosks and toilets at Anlong Run Waterfall,
- A wooden gate (at Veal Ta Lo, one of the entry points of the Popel CPA) to prevent motorbikes to go to Poeng Gnogneat, one of the most spectacular point of the area with giant sandstone boulders,
- 2 checkpoints at the west entrance of Popel CPA and at Veal Ta Lo (from Humy 1 project above), to control the access of the CPA and to facilitate the sale of the CBTC tours.
- Several small wooden stairs and handrails where necessary on the waterfall trekking path to facilitate the walk on the tracks between the waterfalls,
- A selection of local handicrafts products. The CBTC also provide an opportunity to promote and sell traditional handicrafts, a know-how threatened to disappear as usually done by elders of the villages. Selling these items at the CBTC will encourage the elders of the Phnom Kulen villages to transmit their unique know-how of environmentally friendly crafted products, and will provide incomes for these vulnerable villagers and the CBTC (see Humy 2 project above).

After on long delay due to the C-19 pandemic and the related restriction in Cambodia, the centre was officially opened on the 12th of December 2021, in presence of Chhean Ratha, Acting Director for the department of the Monument outside the Angkor Park, APSARA National Authority, Mr. Chueum Tang, Khnong Phnom Commune Chief, Mr. Jérôme Humy, HUMY representative in Cambodia, Mr. Sakhoeun Sakada (ADF consultant and PKNP Director-PDOE), all CBTC and ADF team, representatives of local authorities and villagers. No representative form UNDP could join. In total, about a hundred people were present. This ceremony included the prayers and blessings of the bonzes of Preah Ang Thom Pagoda, a series of speeches followed by the official opening, the visit from the centre and a meal. These speeches gave the occasion to present the objectives of

the centre to a greater number of villagers. Two sets of T-shirts / polo shirts were designed and distributed to each of the CBTC members.
The previous day, on the 11th of December 2021, a cleaning operation was organised by ADF and the PDoE team to collect garbage on the road from Preah Ang Thom to Popel village today. Apsara National Authority guards, Park rangers, Popel Community Protected Area members, teachers and pupils from Popel primary school and ADF team participated. More than 30 large bags collected and brought to the Preah Ang Thom incinerator.

UNDP-PES project

In April 2021, UNDP completed the BESD project with additional funding to ADF (UNDP-PES) and it was slightly re-oriented towards PES related activities.

1) The first activity was intending to get a partnership agreement for PES financing for PKNP, such as private sector companies taking resources form PKNP and to create a CBTC PES fund and if possible, a provincial PES sub-account.

ADF conducted a short study on the 12 companies or activities extracting natural resources directly form Phnom Kulen National Park. A distinct report was prepared and is in annex of this final report. This report gives details about the exact location of each company with a location map, and its activity. A list of 18 high standard hotels and resorts, generally promoting the environmental protection, was also proposed. Due to time constraint and the Covid outbreak in Cambodia (including lock down and curfew), it was not possible to organize meetings and to get any agreements signed. However, the potential payers are identified and they could be approached to be convinced in participating in the PES project, in a next phase.

2) The second activity was to deliver a monitoring report of forest cover and land use of two selected areas.

ADF prepared a monitoring report on the forest cover changes and land use (with maps and legends) on both selected areas: Khlah Khmum PA and Popel CPA, both areas being either extended or created by the BESD project. The calculation of forested areas, cashew nut farms, grass and shrub areas were done by analysing several satellite pictures of these 2 zones over the year 2019, 2020 and 2021, the project being implemented between these years. Polygons were added to each type of land use on ArcGIS software and areas were calculated. Overall, the forest cover does not show changes over these 3 years, the cashew nut farms integrated inside the 2 PA being still maintained and harvested.

3) The third activity was sub-divided into:
    a. Conducting consultations on livelihood option pertaining to the reforestation of 2 watershed areas within cashew nut farms with Anlong Thom villagers, Govt partners, PA members, relevant stakeholders in PKNP.

The project was introduced to the local authorities during meetings hold in May 2021 at Preah Ang Thom commune office. ADF team, commune staff, PDoE and 2 villages chiefs (Anlong Thom And Khlah Khmum) were present.

    b. Holding discussions with the affected farmers for the reforestation of 1 watershed area within cashew nut farms with Anlong Thom villagers and Khlah Khmum villagers and other key stakeholders seeking alternative livelihood/ income generation options derived from the participatory meeting described in the above activity.

Surveys were done after in the farms next to the springs and all Information were collected. Some of the villagers were participating to these surveys. The 2 pre-selected watershed areas for the project were Spien Pring (south of Anlong Thom village) and O'Srae, inside the Khlah Khmum PA, north of Khlah Khmum village.
For Anlong Thom village and at Spien Pring, 5 families agreed to give back their land for reforestation, totalizing more than 5 ha. 1 additional family from Anlong Thom agreed and another land was added in the process (Veal Sambour), about 2 ha.
For Khlah Khmum village, and after numerous surveys and discussions with villagers, 7 families agreed to give back their land at O'Srae for reforestation.
The total of the 2 areas is 20,9 ha: 8,3 ha for Spien Pring and Veal Sambo and 12,6 ha for O' Srae. The total for the 2 areas involved 13 families. The original objective of 30 families was not achieved because the beneficiaries all chose the most expensive (and more profitable option) of pig raising.

The original calculation of 30 families was based on the implementation of less expensive activities such as chicken raising of ginger farming.
Maps of the reforested areas were finalized and 13 small signboards were installed at each reforested location. Each family signed an agreement together with the chief of Commune, stating that the existing plantations (cashew nut, banana, potato…) can be collected, but each owner agreed 1) to have forest trees planted on his plot, 2) to maintain these trees from growing grasses and, 3) to receive alternative livelihood compensation.

c. The reforestation by planting forest trees in old and agreed cashew nut plantations located in critical locally identified watershed areas, to become reforested area in PKNP (saplings and related reforestation costs). Based on 10 ha. with 650 trees planted per ha. (a lower number as there are cashew nut) at 0,55 US $/tree (including transportation to site=3,575 US $) and 3,425 US $ for cash for work.

The tree plantations at Spien Pring was done from the 5th to the 7th of June and from the 8th to 10th of June 2021 (6 days) and the tree plantations at O'Srae was done from the 5th to the 7th of June, 8th to 10th of June and on the 11th of June 2021 (6 days) at O'Srae, involving 322 villagers from both villages.
Trees were purchased from the ADF/Eau Kulen Sangke Lak tree nursery and from the UNEP/CPA Chup Ta Sok tree nursery in Khlah Khmum for the reforestation of O'Srea areas. For the reforestation of Spien Pring areas, trees were purchased from the Ta Penh and the Anlong Thom ADF/Eau Kulen Sangke Lak tree nurseries (with additional tree bought in Siem Reap). Details of the total number of trees, species and hectares reforested are the following: 13,525 trees were planted in the 2 areas (6,575 for Spien Pring and 6,950 for O Srae). Summing the 2 areas, the total of the tree planted per species are the following: 6,735 *Beng*, 45 *Kronhoung*, 43 *Thnong*, 2548 *Koki*, 354 *Yeang*, 1807 *Kulen*, 777 *Kor Koh*, 171 *Pring*, 774 *Phnav*, 135 *Neang Nuon*, 45 *Chres* and 100 *Khnol Prey*.

d. The support to the law enforcement by PDoE within this reforested area and along the cliffs and boundaries of the PKNP.

As for the BESD/KK project, the patrolling activities were delegated and supervised by PDoE and the PKNP management team. The patrols were organised in 2 different teams, on specific areas within PKNP. These areas were designated by the PKNP management team and change over the course of the year, according to the information collected and illegal activities suspected. The team of ranger was divided in 2 groups: a first group with 15 rangers is patrolling for 5 days, 2 times per month; the second group with 6 rangers is patrolling for 3 days, 1 time per month. In June 2021, within the PES project, ADF worked in close collaboration with PDoE and the rangers to patrol PKNP. During these patrols in June 2021, one illegal logger was caught and the chainsaw was confiscated. Patrols were performed on the 7th and 8th June (1 day), from the 8th to the 11th June 2021 (4 days).

e. The implementation of alternative environmentally friendly livelihood activities to the affected cashew nut farmers (chicken and pig raising; vegetable, black ginger and vegetable farmers).

All 13 farmers chose pig raising among the other options proposed: chicken raising, fruit trees, vegetables or black ginger farming. All these 13 beneficiaries are female, including 1 widow. ADF alternative livelihood team implemented this component, by selecting families, checking and advising for the necessary infrastructures or items delivered to each household (piglets, small shelters and fence, built over a cement slab for the pigs, water and feeding tanks, pipes), facilitated the purchasing of the piglets, and training the beneficiaries. This activity obtains results on a long term, with dedicated farmers fallowing training. Each of the 13 families from the BESD/PES (6 in Khlah Khmum village, 7 in Anlong Thom village) has signed an agreement letter, as the others (18 families) from the BESD/alternative livelihood from the KK/ BESD project (see above). The agreement letter is stating that each beneficiary is committed to follow ADF technical assistance, to record incomes and expenses, to participate to training and donors/guests' visits, to take good care of all pigs and other materials given to them, and to inform ADF in case they have some problems related all those activities.
The training was postponed due to the C-19 pandemic. Material was bought and stored in advance at ADF's house in Phnom Kulen, and was delivered later in the year to each beneficiary.

The circumstances (C-19 outbreak) and the reticence of the villagers to give back their land were the 2 main difficulties to overcome for ADF team. With a longer time, additional farmers could have been reached for an agreement to give their land back for reforestation, with an alternative livelihood activity as a compensation. However, this project showed that the formula works an should be developed in the future.

f. To continue reinforcing the cash-for work project (BESD-C19) to maintain the reforested areas in PKNP and CRBC (within the BESD-C19 or previously reforested in PKNP, see C-19 project below).

The cash for work was used to pay workers who prepared, planted and maintained the reforested areas within the PES project.

g. To develop and support the existing tree nurseries set up by ADF and supported by Eau Kulen/Kulara Water company, and run by Anlong Thom, Sangke Lak and Ta Penh primary schools' students and teachers, in order to get additional seedlings for the target area of this project.

The 3 ADF/Eau Kulen tree nurseries in Sangke Lak, Ta Penh and Anlong Thom primary schools were upgrade with lines of bricks sealed with cement to maintain the saplings bags in order and in lines. Species can now be easily separated and identified. Small extensions, used temporarily when the tree nurseries are full and before the first plantations, were being built. Additional material was purchased: wooden posts (8 per tree nursery), green-shade material (1 roll per tree nursery), metallic fence (30 Kg per tree nursery), water pipes (5 per tree nursery), irrigation tank (2 per tree nursery), black plastic bag for young trees (10 Kg per tree nursery), and tree seeds.

h. To set up signboards (in the ground) for reforested areas at Spien Pring/Anlong Thom village and Prasat Krohom/ Khlah Khmum village.

Signboards (in the ground) were installed for each reforested area at Spien Pring and Prasat Krohom PA.

i. To purchase equipment (1 computer) and office supplies.

One computer and office supplies were purchased by ADF admin. and finance manager, according to regulations.

j. To ensure the maintenance of equipment (motorbikes).

The maintenance of equipment (motorbikes) was done regularly during the project to allow the best implementation of the project.

Overall, the UNDP-BESD-PES allowed a few lessons learnt:

- The setting up of a water system is definitely a plus for Popel village. Its management is under the authority of the Popel Water committee members, under the supervision and authority of the local authorities (Commune, Police) in case of conflicts. Such a system could also be integrated in the Commune and District Development plan, and developed and replicated to other PKNP villages, if any similar projects are considered.
- Existing water systems are never maintained and inevitably break, unless beneficiaries are charges for water and a committee is managing it. Charging for water a low price allows the committee to take ownership and responsibilities of such water system, whereas free water systems do not belong to anyone and malevolent persons tend to connect themselves between the source and the main reservoirs, depriving water beneficiaries below the distribution reservoir.
- Capacity and knowledge building with key stakeholders have greatly increased, for example using drone and GPS technology has amplified the project partner's ability to better manage the PA (PKNP rangers, CPA members). This has helped the implementation of the BESD / UNDP project. However, further capacity building in future projects, particularly to the CPA members, is recommended.
- More environmental projects, linking the benefit of forest protection/regeneration and villager's general health and income (build on the success of this BESD project), would be extremely beneficial to maintain the key stakeholder's enthusiasm and to maintain the bonds between the implementation partners.
- An extension of the BESD project duration would have been positive, due to the unforeseen global pandemic of COVID 19, which has slightly delayed some of the project's activities, particularly in March and April 2020, when large meetings were not permitted.

- Communities in PKNP can benefit from alternative livelihood options that are environmentally friendly such as eco-tourism for Popel CPA. However, they are still farmers, and cashew nut is still their main source of income. To minimize this, ADF is precisely and in the framework of this project, proposing eco-friendly agriculture options such as black ginger, fruit trees, pig and chicken raising in Khlah Khmum village. Changing destructive agricultures practices to new behaviour was the most challenging aspect of this project as the process is very long. Bringing in the PES concept would be a way to change the villager's behaviour.
- A global approach, combining environmentally friendly alternative livelihoods and demarcation/ law enforcement, is required to stop the trend of deforestation and better protect PKNP forest, as well as to build environmental awareness and enhance the economic development for the benefit of the local population.
- The PES approach was developed towards several families in Anlong Thom and Khlah Khmum villages and beneficiaries were keen to give their cultivated plots for the reforestation, in exchange of an alternative livelihood activity (exclusively pig raising). This is an encouraging result and it shows this concept can be developed in the future.
- Approaching private partners for PES implementation require a longer time and has been extremely challenging during the C19 pandemic. A continuation of the project would help to finalize this first phase and to approach a maximum of targeted companies extraction resources from PKNP.

UNDP-C.19 project

Reminder:
Another project was granted from UNDP to ADF in 2020: "Reforesting & building COVID-19 resilience for Phnom Kulen National Park's population and Chankran Roy Biodiversity Corridor".
The purpose of the grant was to reforest and to build COVID-19 resilience for Phnom Kulen National Park's population and Chankran Roy Biodiversity Corridor in Siem Reap Province, Cambodia. PKNP has one of the few remaining evergreen forest areas in the northern region of Cambodia, with a majority of forest cover consisting of evergreen and semi evergreen forest, combined with small patches of deciduous dipterocarp forest. In 2017, the UNDP land use study of the park estimated that its forest cover could be estimated to 20 to 23%, (from 7300 to 8500 ha). The deforestation of PKNP is mostly due to the extension of the cashew nut cultivation on the Kulen plateau, population growth and encroachments in the lowlands. In the remaining part of forest, large to middle size tree are subject to illegal logging. PKNP has an essential hydrological significance, at the source of the regional watershed.

The Ministry of Environment and the PDoE in charge of the park, have still insufficient financial and human resources to monitor, manage and to enforce the environmental laws that govern and protect the national park. The local population has limited to no knowledge of the environmental laws and the importance forest protection, environmental preservation, and the effects of deforestation on water catchment and climate change. The Covid 19 crisis has a serious impact to the low-income communities of PKNP. This project would bring additional cash to these struggling populations.

The absence of well-defined and cohesive park management, zoning and demarcation and law enforcement has contributed to the destruction of the forest. The approved Phnom Kulen National Park Management Program and Action Plan, (2018-2022), under the leadership of the Ministry of Environment (MoE), are aiming to tackle the identified issues. This project (BESD 2) is in direct line with these milestones' documents.

The project objectives were to:

- Plant about 36,000 trees corresponding to 48 to 55 hectares reforested with indigenous trees (with an average of 750 trees per hectare) during the 2020 rainy season, within water catchment and protected areas of the PKNP: Prasat Krohom PA, 5 CPAs, Chankran Roy Corridor and other degraded water catchment areas of PKNP.
- Using practical facilities (tree nursery) in Khlah Khmum village with trained local staff.
- Maintenance of the reforested areas, ensuring that trees are properly growing.
- Patrolling to a maximum of 60 times the reforested areas by PKNP rangers and communities
- At least 50% of the project budget is set aside for cash-for-work income for PKNP low-income and returnee population, during the hard time of the Covid 19 crisis.
- Provide emergency response to 690 COVID-19 and vulnerable villagers (at 50% women) through the tree planting and expected results need to be updated
- Build environmental awareness for the local communities (villagers, CPA members) and local authorities (village and commune chief, PDoE rangers) by involving them in all aspects.
- Enhance key stakeholders' knowledge (local population, PKNP rangers, PDoE staff, MoE), regarding the reforestation process and the importance of a protected natural environment in PKNP, linked with the importance of water for health, in the context of the COVID-19 pandemic.
- Rehabilitate the PKNP and Chankran Roy Corridor forest, with the following effect of a restored natural environment and resources, notably rainwater, biodiversity.

To achieve the above objectives, the following expected results are:

- 48 to 55 hectares in PKNP and Chankran Roy Corridor should be restored, which is divided as follow:
- Reforestation of selected areas [to be determined after field verification and risks assessment] within the 5 CPAs by GDANCP.
- Reforestation of selected areas within the PA north of Khlah Khmum village (Prasat Krohom water catchment area) by ADF [to be determined after field verification and risks assessment
- Reforestation of selected areas within Chankran Roy Corridor by ADF [to be determined after field verification and risks assessment].
- A tree nursery at Khlah Khmum village for indigenous saplings (seedling, preparation) strengthened
- A maintenance program to protect the tree growth from invasive species (grass and shrubs) developed
- A law enforcement component, aiming to support training, material and financial resources to ranger patrols of the reforested areas.
- 690 COVID-19 and vulnerable villagers (aiming to reach 50% of women) selected and benefiting from the tree planting and maintenance of planted trees.

Implemented activities

The original project was planned from the 1st of September to the 31st of December 2020. However, due to the late first transfer from UNDP and the heavy rains slowing down the project's implementation, it was extended at no cost until the 31st of May 2021. The report of this project presents the results from 2020, completed with the 2021 activities and results.

Site assessments

Several site assessments were undertaken for the 2 selected sites for this project (Phnom Kulen National Park {PKNP} and Chankran Roy Biodiversity Corridor {CRBC} (or Community Forestry, {CF}), through observation of recent satellites images and field visits. These assessments were done in August and September 2020, prior to the reception of the funds into ADF/Environment account (on the 25th of September 2020) and continued in PKNP in October. They were done by the ADF national manager and the PDoE staff, including rangers of PKNP.

In PKNP, the field verification and risks assessment on biodiversity focused on degraded plots of young forest, illegally cut and burn in 2018 and 2019 by local farmers. Since 2019, the PDoE and the PKNP authorities have warned the population that slash and burn agriculture is no longer

permitted and that every plot illegally deforested using this technique should be seized for reforestation.
The deforestation of PKNP is due to this slash and burn practice for cashew nut faming, usually corresponding to one of two hectares per plot. Large surfaces for reforestation are usually not existing but fragmented into several of these illegally farmed areas. This means the surveys are longer, the access to these plots are often problematic as they are disseminated in multiples areas with small access tracks and the transportation of saplings requires several rounds trips.
After observation of satellite images and additional field verification by PKNP staff and rangers, a selection of these recently deforested plots was established, prioritizing the local watersheds (streams and river banks) and water sources. The reforestation of these areas will mitigate the soil erosion and flash floods, and will help to maintain surface water and regenerate the aquifer. The area selected for reforestation are completely deforested and only present high grasses growing.
In CRBC, the field assessment was done in conjunction with the Community Forestry leader, CF members and PKNP rangers, selecting two separated area on 11.5 and 17.1 hectares within the CRBC. These two areas appeared as forested on the recent satellite images. However, they were recommended by the CF team as they were previously burn a few years ago (2016, 2017). As a result, the large trees died and field assessments and field verification indicated that they were covered with grass and low vegetation. A third area of 10.2 hectares was selected after a meeting hold between CF members, ADF and PdoE staff and PKNP rangers.

Beneficiaries selection and arrangement:
The beneficiary's selection was done after several meetings.
For PKNP, two meetings were organized on the 24th of September and on the 6th of October 2020, at the Phnom Kulen Preah Ang Thom ranger station. On the 10th of October, another meeting was organized at the Phnom Kulen Preah Ang Thom ranger station to comfort the beneficiary list. A field survey was done afterwards until night time to assess the selected areas to reforest. A last meeting was organized on the day after (Sunday 11th of October) to finalize the findings of the previous meetings and surveys and set up the action plan.
For CBRC, two meetings were organized on the 2nd of October at the Varin District hall and on the 9th October 2020, at the Srey Noy commune hall. In both occasions, the deputy governor of Varin district, Mr. Both Vibol was the chairman).
All meetings were following UNDP criteria for this project. These meeting gathered the ADF Director and National Manager, the PDoE Director and staff, rangers of PKNP, the local authorities (Districts deputies of Varin and Svay Leu districts, commune chiefs and village chiefs), the CF chief and members of CRBC and the Community Protected Areas (CPA) chief and members in PKNP.
The entire project involved the populations from one commune in Svay Leu district (Khnong Phnom) and 5 communes in Varin district (Lovea Krang, Srey Noy, Svay Saa, Prasat, Varin).
These meetings presented the project to all parties involved and helped to determine the respective roles and responsibilities. For the PKNP area, it was decided that the national park rangers would survey the areas and that the village chiefs would provide the list of people corresponding to the project criteria. For CRBC, it was decided that the local authorities would help to determine the identity of the beneficiaries corresponding to the project criteria and that the CF team would determine the area to select for reforestation.
In both target areas, a draft list of beneficiaries was requested from the local authorities taking into account the level of vulnerability and the criteria for engaging workers in the cash for work project: people who lost their jobs in cities and neighbouring countries due to the ongoing COVID-19 crises, local people who directly or indirectly impacted by the COVID-19 through losing of jobs or income in the tourism sector, households that have returnees, including local migrant members, local people who are classified as poor members in the village or commune with holding ID poor 1 and 2 labels, members of CPA or Community Forest communities, women headed households, and an additional criterion was added by the commune chief: the poor villagers with no ID label yet, but sanctioned by the commune chief.
For the criteria concerning the local people who are classified as poor members with holding ID poor 1 and 2 labels, ADF and PDoE could not always quantify this parameter as: some beneficiaries have "poor ID cards" 1 and 2, as indicated in the payment forms, some beneficiaries are poor without "poor ID card" yet but came and got paid, some beneficiaries have "poor ID cards" but did

not come (even if we announced this opportunity) as they have no transportation ways to reach the plantation areas. These problems happened in both target areas: PKNP and CRBC and for both reforestation and maintenance operations.
For the C-19 affected criteria, the people from these rural areas have seasonal employments, when they have one, and are most of the time farmers. Therefore, it was not possible to quantify these criteria, in the limited amount of time we had. Due to time constraint, ADF was not able to record the women headed household criteria. However, the difference of sex was recorded for each beneficiary during the project.
These lists of payment were signed and stamped by the two commune chiefs involved for PKNP and CRBC, the representative of PDoE or ADF, and the Director of the Provincial Department of Environment.
ADF, in collaboration with the local authorities, has organized village meetings in Popel village on the 6th of October 2020 inviting people in the draft list and key community people to participate. Due to time constraint, no other meeting was organized in PKNP/Khnong Phnom commune. For the CRBC, meetings were organized by the Varin District and the commune chiefs, notably at the Srey Noy commune hall, and at the CF station by the FC team to inform the population about the project. Villagers were briefed about the project objectives and activities including payments they can receive and they were explained about selection criteria as listed above for selecting cash for work participants.
Due to time constraint, ADF/PDoE was not able to send the final list and submit it to UNDP for review and endorsement prior to kick off the field activity implementation. The funds were received 3 weeks after the official starting date of the project (1st of September 2020), on the 25th of September 2020. Due to this delay, the land preparation had to be done quickly and workers for this task were selected according the UNDP criteria.

Dissemination and awareness raising on reforestation/ Signboards setting up and mapping of the reforested areas:
These meetings were also giving the occasion to disseminate and bring awareness on reforestation. Every reforested area has been mapped and each map is presented on each signboard. The signboards for each reforested area were designed and set up from the 26th of November to the 3rd of December 2020. Each signboard presents a title in Khmer ("Reforestation" + the name of the project), the map of the reforested area, the UTM coordinates of the area, and the logo of all stakeholders. For PKNP, 5 signboards were set up: 1 at each location (4) and 1 general (presenting all 4 areas), close to the "Halo Trust" bridge, close to the first location and on the main road from Preah Ang Tom to Anlong Thom village. For CRBC, 6 signboards were set up: 1 at each location (3) and 3 general (presenting all 3 areas), at the difference entrances of the area.

Tree purchasing
The saplings from ADF 3 tree nurseries (in Sangke Lak, Ta Penh and Anlong Thom tree nurseries, PKNP) were too small to be planted within this project. The saplings from Chup Ta Sok CPA tree nursery in Khlah Khmum village (PKNP) were counted and only 3600 Beng (*Afzelia xylocarpa (Kruz.)* were available. They were not used for this project yet as this village is difficult to access and it would have raised the transportation costs. They may be used for future reforestation activities in PKNP, if a selected area is located in the vicinity of this tree nursery. A quotation from each potential tree provider was done comparing the prices of purchasing saplings and transportation. The private tree nursery in Kompong Thom, located in the same province had sufficient saplings to reach the project target (36,000). However, transportation costs were too high to respect the project budget constraint.
Most of the trees (24,200) were therefore purchased from the Forestry Administration (FA, Ministry of Agriculture, Forestry and Fisheries) tree nursery ("Khna nursery") in Phum Khna Krew, Svay Leu district, Kantuot commune, Siem Reap province. From early October to the 6th of November, 36,0000 saplings were purchased and transported in 3 different occasions to the selected areas. On the 6th of November, 6000 last saplings were purchased to finalize the reforestation area in CRBC and transported the following day. 11,000 were purchased in Siem Reap from 3 different places.

Sapling available for reforestation from this tree nursery were Beng (*Afzelia xylocarpa (Kruz.)* Craib), Koki (*Hopea helferi*), Yeng (*Dipterocarpus alatus*), Kronghoung (*Dalbergia cochinchinensis Pierre*) and Thnong (*Pterocarpus Macrocarpus Kurz*). These species were selected as they are already present in CRBC and PKNP (Hayes and al 2013, and Mould and al 2014).

With the remaining budget, it was decided in agreement with UNDP on the 4th of May 2021, to replace the dead trees in PKNP. 3912 trees were purchased from Teukville tree nursery (Siem Reap) and Vireak tree nursery (Trapeang Seh village) on the 14th and the 17th of May 2021, for the reforestation activities in two areas next to Sangke Lak village, and one area next to Anlong Thom village (see below, tree planting). The saplings from ADF tree nurseries in Phnom Kulen were too small to be purchased and planted.

Site preparation, seedlings transportation:
The plantation of the different areas could only start when they were cleared from high grass or small bushes. The cash for work planting budget line was partially used to implement this task.
In CRBC, 27 ha were identified in 2 separated areas (17.1 and 11.5 hectares). For the first area, the land preparation has started from 8th October and it was ready to plant on the 26th of October 2020. For both areas, the trees (5 species above) were transported from Kantuot commune tree nursery between the 23rd and the 25th of October to the two areas to reforested. The main challenge for the reforestation of the CRBC was the access to the area. It was extremely difficult because of the access road conditions. The hand tractors transporting the saplings got stuck many times in the muddy track and could barely cross a river. They had to be pulled quite often by a tractor. It took 3 days for 5 hand tractors and 2 trucks to bring saplings on site. On the 6th of November, 10 additional hectares started to be cleared for planting at Phnom Chan Krohom.
In PKNP, the land preparation was done during October and November, previously or simultaneously to the area to be reforested. As mentioned above, this required more time and organization because of the fragmentation of areas to reforest and the small size of each plot (1 to 2 hectares in general). The access to the areas to reforest in PKNP was blocked for trucks transporting the saplings due to heavy rains. The Siem Reap River could not always be crossed at "Spien Halo", as the main bridge was not finished. ADF/PDoE had to wait several days until the river could be crossed by truck to bring the saplings to resume the reforestation activities. At the time of the writing of this report, the new "Spien Halo" bridge is now open for cars and trucks. In all cases, the high grass on each selected plot had to be cut by workers using brush cutters. They were selected according to the UNDP.

Tree planting:
- In CRBC:
  - 28.6 hectares were planted on the 27th and 28th of October 2020 (in only two day) with 18,000 saplings (FA Kantuot tree nursery). This represents an average of 81 tree planted per person and 630 trees planted per hectares. Additional trees were planted along the track.
  - From the 6th to the 10th of November, 10.2 additional hectares were planted with 6,000 trees at Phnom Chan Krohom.
  - These planting operations, including the preparation of the lands, some maintenance and patrolling, benefited to 405 persons (including 190 women).
- In PKNP, several areas were planted on different dates.
  - 3.2 hectares (2600 trees) were planted next to Phum Thmey, on the 06th of October 2020.
  - 4.7 hectares (3600 trees) were planted on the trail from Anlong Thom to Sangke Lak village on the 14th of October 2020.
  - 4.5 hectares (3400 trees) were planted next to Sangke Lak village (O'Ong) on the 28th of October 2020.
  - 3 hectares (2400 trees) were planted on the north of Thnal Dac (east of Anlong Thom village) on the 5th of November 2020.
  - Total planted for PKNP=15.4 hectares, 12,000 trees planted by 873 persons, including 467 women (406 male), including the preparation of the lands and some maintenance.
  - 9 additional hectares were identified in PKNP and the administrative procedures are proceeded by PDoE. However, some plots still pose problem as their retribution to the PKNP

was not acknowledged and signed by the farmers. In order to avoid social issues and conflicts, it was therefore decided to complete and reach the target's project with the 10 additional hectares in CRBC.

- The TOTAL for the 2 selected zones (PKNP and CRBC) is therefore 15.4 hectares for PKNP + 38.8 hectares for CRBC = 54.2 hectares planted.

Where the survival rate from 2020 reforestation was low, the replanting activities in PKNP were undertaken from the 19th to the 22nd of May 2021.

- In the first area of Sangke Lak village (4,7ha), 1400 trees were planted, divided as followed: 500 *Beng* (*Afzelia xylocarpa* (*Kruz.*) *Craib*), 400 *Yeng* (*Dipterocarpus alatus*), 300 Koki (*Hopea helferi*), 100 *Kronghoung* (*Dalbergia cochinchinensis Pierre*) and 100 *Thnong* (*Pterocarpus Macrocarpus Kurz*).
- In the second area of Sangke Lak village (O' Ong, 4,5 ha), 1300 trees were planted, divided as followed: 400 *Beng* (*Afzelia xylocarpa* (*Kruz.*) *Craib*), 400 *Yeng* (*Dipterocarpus alatus*), 300 *Koki* (*Hopea helferi*), 100 *Kronghoung* (*Dalbergia cochinchinensis Pierre*) and 100 *Thnong* (*Pterocarpus Macrocarpus Kurz*).
- In the area next to Anlong Thom village (north of Thnal Dac), 1212 trees were planted, divided as followed: 300 *Beng* (*Afzelia xylocarpa (Kruz.) Craib*), 300 *Yeng* (*Dipterocarpus alatus*), 300 *Koki* (*Hopea helferi*), 150 *Kronghoung* (*Dalbergia cochinchinensis Pierre*) and 162 *Thnong* (*Pterocarpus Macrocarpus Kurz*).

These reforestation activities do not modify the total area planted in 2020, as these are replacement of dead trees planted in the same areas.

- Planting technique: the workers were divided in groups corresponding to tasks. In PKNP, one group was pulling ropes on the ground with markers every 5 meters (a red string) to indicate the space between the trees to be planted, one group was digging holes at the location of these markers and last one group was planting trees in these holes. Lines were set up parallelly, in order to facilitate the future maintenance of these reforested areas. In other occasions, saplings were planted without using these ropes but respecting lines. In CRBC, a wood stick was added next to each planted tree to facilitate its location for the maintenance operation. No fertilizer or nutrient were applied in the holes as there is no budget nor time for this. However, PDoE and ADF previous experiences of reforestation in PKNP have shown that this is not necessary to ensure the normal growth of the trees.
- The plantation project in 2020 involved for both areas 1336 persons including 685 women: 463 persons (including 218 women and 54 widows) in CBRC and 873 persons (including 467 women and 207 widows) in PKNP. In 2020, the objective of 690 persons (300 for PKNP and 390 for CRBC) was therefore reached and exceeded. The total of women involved was 51.27%.
- In 2021, 155 persons participated to the reforestation activities (only implemented in PKNP) with 81 persons during 2 days for the 2 areas at Sangke Lak, and 74 persons during 2 days for the area north of Anlong Thom village. More persons were hired for tree maintenance operation in 2021 (see below).

Payment Method and extension of the project

As indicated by the ADF-UNDP agreement, "the payment for the selected beneficiaries should be done in mobile transfer where the technology is contextually available at the village. If impossible to use those means of transfer the grantee must have a clear evidence of justifying to change of means of payments in consultation with UNDP team". ADF and PDoE could not guarantee that the payment could be done by mobile transfer as not all the beneficiaries have mobile phone. It was also decided to proceed to a cash payment as the local people specifically requested it, arguing that they would have difficulties to reach any withdrawal office (*Wing…*) next to their home. This kind of facilities are not always available in PKNP or in Varin District. The payment by cash was therefore preferred to ensure transparency and actual payment of each worker present on the day of the planting. Each worker was usually paid at the end of each planting day, according to the activities. Please refer to the financial performances and report as well as the payment lists with thumbprints and signatures provided when signed and stamped by the various commune chiefs.

As requested by UNDP, ADF and PDoE continued the reforestation activities until the 15th November 2020 as the rain stopped. The objective of ADF/MoE/PDoE was to reforest 48 to 55 hectares in total. At the end of 2020, 54.2 hectares were planted with 36,000 saplings. ADF and PDoE considered that the objectives were reached and that the remaining funds should be allocated to implement the maintenance operations for the reforested areas, during the coming month.

The non-cost extension was agreed in December 2020. The maintenance operations of the planted areas already stared in November 2020 (see below). They were able to be continued from January 2021, until the end of the project in May 2021. Due to the low survival rate in PKNP reforested areas, ADF requested to UNDP to use some of the remaining budget for maintenance to purchase sapling, in order to replant saplings in the plots where the survival rate was low (2 areas next to Sangke Lak village, 1 area next to Anlong Thom village).

36,000 trees were planted in the two selected areas: 12,000 (+3912 additional for replacement) in PKNP and 24,000 in CRBC. These operations, including land preparation and plantation involved 1336 persons in 2020, including 685 women (51.27%). For 2021, 155 were involved in preparation and plantation, all in corresponding to the UNDP criteria for this project.

Weeding of reforested areas

Due to the late start of this project, this activity has started in December 2020 until May 2021, as the non-cost extension was approved by UNDP. C-19 affected workers and CF members were hired on a regular basis to clear grass re-growing around each tree, insuring a better survival rate. Regular surveys and patrols of the reforested areas were implemented by ADF and PDoE staff together with the PKNP rangers and the CF members.

Due to the high numbers of trees planted in a limited amount of days (for example, 18,000 trees planted in only two days in CRBC), the tree planting cash for work funds were not fully spent.

Maintenance operations started from the 1st of November 2020 in CRBC. In CRBC, a wood stick was installed next to each planted tree and grass cleared (29-30th of October 2020). This is facilitating the future clearing of grass as trees will be easily visible with these markers. Maintenance started on the 12th of November in PKNP and continued on the 17th, 21st, 22nd, 23rd, 24th, 25th, 26th, 30th and 1st of December, in both target area, with a large number of participants. Due to the Covid-19 pandemic risks, the maintenance had to stop after this date.

The maintenance operations consisted in placing a wood stick next to each planted tree (to spot easily the tree in the grown grass during the next maintenance phase), weeding, watering if water was available closely and, in some cases, digging around the tree, to set up a circular dike to retain water.

During the period covering December 2020 to 31st of May 2021, the maintenance operations took place at the following dates: In CRBC it was started in January 29th, 30th, 31st and 1st of February 2021. It was resumed on the 23rd, 24th, 25th February 2021, then again 3 days from the 25th to 27th of march 2021 and finally 4 days from 19th of May to 22nd of May 2021. In PKNP, it was implemented on the 6th and 7th, 11th and 12th, 16th and 17th and 24th of February 2021 (4 days at Phum Thmey location), and in March 29th, 30th and 31st (3 days in Sangke Lak area n.1), and finally 4 days from 19th of May to 22nd of May 2021.

All maintenance operations took place under the responsibility of ADF and PKNP rangers. Maintenance operations continued with the same sequence, from the 1st of December 2020 to the 31st of May 2021.

In CRBC, 276 persons were involved in these maintenance activities, including 138 females, 138 head of families, 28 CF members, 1 disable and 25 widows. In PKNP, 287 persons were involved in these maintenances and planting activities, including 167 females, 144 head of families, 9 CPA members and 59 widows. For the PKNP, these figures combine the number of participants replanting trees in the areas were the survival rate was low (2 areas in Sangke Lak and 1 area in Anlong Thom, all in PKNP) and regular maintenance.

For both areas (CRBC and PKNP), this represents a total of 563 persons, including 305 females (54.17%), 282 head of families, 37 community members, 1 disable and 84 widows. The selection

of the beneficiaries was validated by the Khnong Phnom Commune Council for the PKNP reforested areas and by the Community Forestry in CRBC, respecting the UNDP criteria.

A visit to the Phum Thmey reforested area in PKNP was done during the visit of UNDP and SIDA representatives on the 24th of February 2021, while the maintenance operation was undertaken. The visit was interrupted because of the C-19 outbreak in Phnom Penh and the visit scheduled for the 25th of February 2021 in CRBC was cancelled. An additional visit by UNDP team took place on the 21st of May 2021 in CRBC.

Regular monitoring & forest fire prevention

In 2020, patrolling of the reforested areas was started in CRBC only. It was started in January 2021 in PKNP. The regular surveys of the different reforested areas were implemented by ADF and PDoE staff, together with the PKNP rangers and the CF members.

The survival rates for the different reforested areas were the following: 90% alive in Chankran roy (in the 3 areas); in PKNP (4 areas): Phum Thmey area =40%, Sangke Lak 1 and 2 areas=10%, AnlongThom area=10%. The low survival rate in PKNP is due to 1) Late plantation in PKNP and lack of rain (whereas there were a few late rains in Chankran Roy) 2) the villagers were still cultivating the reforested areas (with beans) while trees were planted. They might be responsible for the loss of trees. PDoE (PKNP rangers) and ADF monitored the situation with the farmers of these 3 locations with a low rate of survival (10%). An agreement was concluded (on the 3rd of April 2021) with 1 farmer (at Sangke Lak), stating that the trees (planted forest trees and young cashew nut) should be preserved in this particular area. The farmers who illegally cut plots of forested area (for slash and burn cultivation then cashew nut farming) were employed by the project for their reforestation and maintenance. No other agreements were signed with the farmers of the other low survival rate areas, as they all agreed to give back these deforested plots. This has ensured that the reforested areas were well maintained. The weeding of these areas has also prevented fire to destroy these newly reforested areas.

The patrolling activities were implemented in April and May 2021, when the villagers are usually cutting forest for the slash and burn agriculture. ADF and PDoE teams selected the areas to be patrolled in PKNP. Each area was georeferenced and given a name corresponding to the high point, a stream, or a rock formation. They include 34 rangers, divided in 7 groups. The patrols took place during 3 to 4 days, from the 5th to 7th of April, from the 8th to 11th of April, from 17th to 20th of April, from the 19th to 21st of April, 22nd to 25th of April 2021. In May 2021, they took place from the 9th to 12th, from the 10th to 13th, and from the 12th to 15th of May 2021.

The rangers have stopped illegal wood cutting and transportation, confiscated hunting weapons and animal traps, educated the persons they caught, marked dozens of trees with the letter "Don't" (cut the tree). During, these patrols, 7 persons were taken into court by PDOE staff through the legal procedure and are waiting for a judgment.

The maintenance operations have started from November and December 2020 in the reforested areas using the remaining tree planting cash for work funds as well as the maintenance and patrolling funds. The non-cost extension for this project, focusing on the maintenance and the patrolling activities during the next 5 months (from January to May 2021) was approved in December 2020. It has ensured a better survival rate of the planted trees, prevent grass fires during the dry season, and allow to involve more beneficiaries. The maintenance and patrolling budget were used for this.

The funds not used for reforestation were reallocated to the maintenance of the reforested areas. The financial report and the budget lines were redefined accordingly, in concertation and with the agreement of the UNDP team.

Coordination with GDANCP and between PDoE, ADF, local authorities and CF

The GDANCP staff was supposed to oversight the planting activities. However, and due to time constraints, ADF and PDoE had to start the reforestation activities urgently. ADF and PDoE will

require their visit during the maintenance operations, in order to present the entire project in both areas (PKNP and CRBC).
The PDoE staff coordination and support was ensured by one staff from PDoE, with the help of the Park director and the deputy park director (mostly for meetings, surveys and logistic), and involved more than 40 rangers.
The ADF staff coordination and support was done by the ADF Director and ADF National Manager who attended launching meetings in PKNP, Varin and CRBC. ADF National Manager is in charge of the implementation of the project together with the staff from PDoE. ADF Accounting and Administration officer was in charge of recording every expense, making sure all budget lines were not overspent and finalizing the financial reports.

During the entire project, there was a regular coordination between PDOE-ADF and UNDP to adapt the project to the evolving circumstances. For example, the ADF team have requested to use some of the remaining maintenance funds to purchase trees to allow reforestation where the survival rate was low (PKNP).

The UNDP-C.19 project, originally scheduled to end on the 31st of December 2020, was extended until the 31st of May 2021 with the weeding of the reforested areas and regular monitoring and forest fire prevention. This delay with no additional funds was mostly due to the late transfer of the funds and the heavy rains in October 2020, slowing down all activities.

Overall results
There were 1899 (1336 in 2020 and 563 in 2021) selected COVID-19 affected and/or vulnerable people selected (52,21% of women) for this project. The objective of 690 was largely exceeded as 1899 persons benefitted from the project. These lists were sent by ADF/PDoE to UNDP as supporting documents, together with the receipts.
Mobile transfer was not practically possible as not every villager has mobile phone and cash withdraw offices are not easily accessible nor existing for workers in the 2 selected areas. 11 signboards were set up for each location and at strategic locations for both target areas.

54.2 ha of degraded areas were reforested trees with almost 40,000 trees planted.

The 2 maintenance programs to protect the tree growth was set up and defined in January 2021, after the second trench was transferred from UNDP to ADF. The maintenance program of the 2 areas (PKNP and CRBC) was undertaken every month (except April 2021 because of C-19 lockdown), for 3 to 7 days.

Four monitoring reports (15th of November 2020, 30th of November 2020, 18th of February 2021, 30th of March 2021) were sent to UNDP as well as and 1 final report at the completion of the project.

Risks analysis for the project with their corresponding mitigation measures were done and submitted to UNDP.

Overall, the UNDP-C-19 allowed a few lessons learnt:

- Funds for the implementation of the project should not be transferred too late after the signing of the LVGA between the parties, particularly when the project involves reforestation activities at the end of the rainy season.
- Reforestation activities should be undertaken at the beginning or at the mid-term of the rainy season rather than at the end. This would ensure a maximum rainfall for the planted trees and an easier access to the areas to be prepared and reforested. Some of the reforested areas were extremely difficult to access due to heavy rains in October 2020 and the process of bringing the saplings was slow down.
- Reforestation in PKNP is sometimes problematic as the land selected is not completely retaken by the government (MoE-PDoE). The use of the plots, even though for illegal farming, is often claimed by the villagers. An administrative procedure, quite often long, is necessary to guarantee that the villagers are officially ready and agree to give up the plot for reforestation.

This procedure is not preventing reforestation activities but it should be anticipated, particularly during the dry season, so the land can be available for reforestation during the rainy season.

- Reforested areas can sometimes be used by farmers to cultivate crops. This can also explain the low survival rates in some reforested areas in PKNP. A better communication and engagement between the PKNP rangers and the farmers should be initiated before reforestation happen. A stronger involvement of the farmer's family for the reforestation and maintenance activities should be considered.
- Payment by Wing or other similar ways for workers should not be considered as a payment solution for these villagers. The withdraw offices are not easily accessible for these remote areas. Additionally, they do not always have smart phone and even though, they are not familiar with these ways of payments. The payment of every workers through these transfers would have required additional time to teach them how to get paid through this way. Due to time constraint, it was not possible.
- The general budget should include some budget lines for the transportation of saplings and material to support the tree planting and maintenance.

Reforestation activities (others than the UNDP-C19 project)

Reminder: Since 2015, ADF participated and facilitated several activities related to tree planting activities in PKNP: selection of the area to be planted, organisation and logistic on the field, design of signboards, plantation, mobilisation of person to plant. As an example, 23 hectares were planted with 31,200 saplings in 2019 within PKNP. ADF also combined the list of all replanted area from 2015 to 2019 in PKNP. The total of saplings planted reaches 241,500 for 97.5 hectares during this 5-year period.

In 2020, this total figure was largely expended due to the UNDP-C.19 project (see above). The total number of reforested hectares, including the ones form the UNDP-C.19 project, reached almost 90 hectares. 87,100 trees were planted in 32 different locations.

In 2021, within the UNDP-BESD, 20,9 hectares were planted within cashew nut farms (see above, UNDP-BESD project). 6,8 additional hectares were planted in 3 different locations with a total of 5,600 trees (including 3000 trees on 2,5 hectares within the Popel CPA thanks to the CIRD project, see above). Apart from the UNDP-C-19 project (2020-2021), 27,7 hectares were therefore planted in 2021 in PKNP.

These combined figures include projects in which ADF was the main actor, and projects were PDoE was the main implementing partner. A large majority of these projects have been supported by UNDP.

Additional Support to PDoE/ Ranger patrol support funded by Terre Cambodge

Due to the financial difficulties encountered by this donor, this project was not continued in 2021. It has been integrated in 2021 within the Humy 2 project (see above). The patrolling training sessions were organised from October to December 2021 and field patrols in PKNP only started in January 2022. ADF continued to support the Provincial Department of Environment (PDoE) with mapping for specific projects such as around Phnom Hop area (Orchid centre), or the PKNP general zoning.

Road construction project across PKNP

As per the previous years, ADF has participated and advised PDoE and APSARA about the road construction project across the national Park. ADF also advised the APSARA Authority and the UNESCO-ICC sustainable development experts in June and December 2021.

f. ADMINISTRATION

In March 2021, ADF finalized and signed a Memorandum of Understanding (MoU) with HUMY NGO. It formalizes all responsibilities of the two parties. It was signed for a 3-years period, from March 2021 to March 2024.

In preparing this report, the trustees have taken advantage of the small company exemptions provided by section 415A of the Companies Act 2006

This report was approved by the Trustees and signed on their behalf by:

Vincent Chevance
Trustee

Date: 21 October 2022

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

INDEPENDENT EXAMINER'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2021

Independent Examiner's Report to the Trustee of Archaeology and Development Foundation ('the Charity')

I report to the charity Trustee on my examination of the accounts of the Charity for the year ended 31 December 2021.

Responsibilities and Basis of Report

As the Trustee of the Charity (and its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the Charity are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of the Charity's accounts carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Charity as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair' view which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities [applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102)].

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

This report is made solely to the Charity's Trustee in accordance with Part 4 of the Charities (Accounts and Reports) Regulations 2008. My work has been undertaken so that I might state to the Charity's Trustee those matters I am required to state to them in an Independent Examiner's Report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustee for my work or for this report.

Signed: Lee Facey Dated: 21 October 2022

Lee Facey

Lubbock Fine LLP
Chartered Accountants & Statutory Auditors
Paternoster House
65 St Paul's Churchyard
London
EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2021

	Note	Unrestricted funds 2021 £	Restricted funds 2021 £	Total funds 2021 £	Total funds 2020 £
Income from:					
Donations	3	34,035	110,083	144,118	161,613
Investments	4	-	77	77	188
Total income		34,035	110,160	144,195	161,801
Expenditure on:					
Charitable activities	5	43,080	128,462	171,542	262,833
Total expenditure		43,080	128,462	171,542	262,833
Net movement in funds		(9,045)	(18,302)	(27,347)	(101,032)
Reconciliation of funds:					
Total funds brought forward		(19,768)	88,876	69,108	170,140
Net movement in funds		(9,045)	(18,302)	(27,347)	(101,032)
Total funds carried forward		(28,813)	70,574	41,761	69,108

The Statement of Financial Activities includes all gains and losses recognised in the year.

The notes on pages 69 to 79 form part of these financial statements.

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee) **REGISTERED NUMBER: 06429421**

BALANCE SHEET

AS AT 31 DECEMBER 2021

	Note	2021 £	2021 £	2020 £	2020 £
Fixed assets					
Tangible assets	10		5,667		9,944
Current assets					
Debtors	11	-		10,001	
Cash at bank and in hand		42,655		52,440	
		42,655		62,441	
Creditors: amounts falling due within one year	12	(6,561)		(3,277)	
Net current assets			36,094		59,164
Total net assets			41,761		69,108
Charity funds					
Restricted funds	13		70,574		88,876
Unrestricted funds	13		(28,813)		(19,768)
Total funds			41,761		69,108

The Charity was entitled to exemption from audit under section 477 of the Companies Act 2006.

The members have not required the company to obtain an audit for the year in question in accordance with section 476 of Companies Act 2006.

The Trustee acknowledge their responsibilities for complying with the requirements of the Act with respect to accounting records and preparation of financial statements.

The financial statements have been prepared in accordance with the provisions applicable to entities subject to the small companies regime.

The financial statements were approved and authorised for issue by the Trustee and signed on their behalf by:

Vincent Chevance
Trustee
Date: 21 October 2022

The notes on pages 69 to 79 form part of these financial statements.

1. General information

Archaeology and Development Foundation is a charitable company limited by guarantee incorporated in England and Wales. Its registered office address and place of business is 25 Brooks Mews, London, W1K 4DZ.

2. Accounting policies

2.1 Basis of preparation of financial statements

The financial statements have been prepared in accordance with the Charities SORP (FRS 102) - Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

Archaeology and Development Foundation meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy.

2.2 Going concern

The Charity is in the main reliant on donations and the support of related parties to meet its running costs. Due to the nature of its activities, the majority of the Charity's expenditure is incurred directly on charitable projects and so the Charity is able to control its direct charitable expenditure based upon the level of donation income that it has received and the anticipated ongoing support of related parties.

The Trustee considers it appropriate to prepare the financial statements on a going concern basis on the assumption that sufficient incoming resources will be generated to meet the Charity's running costs. The financial statements do not include any adjustment which would result if there were insufficient funds available in respect of the Charity's operations.

2.3 Donations and gifts

All income is recognised once the Charity has entitlement to the income, it is probable that the income will be received and the amount of income receivable can be measured reliably.

Donations and gifts are included in full in the Statement of Financial Activities when receivable.

2.4 Expenditure

Expenditure is recognised once there is a legal or constructive obligation to transfer economic benefit to a third party, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is classified by activity. The costs of each activity are made up of the total of direct costs and shared costs, including support costs involved in undertaking each activity. Direct costs attributable to a single activity are allocated directly to that activity. Shared costs which contribute to more than one activity and support costs which are not attributable to a single activity are apportioned between those activities on a basis consistent with the use of resources. Central staff costs are allocated on the basis of time spent, and depreciation charges allocated on the portion of the asset’s use.

Expenditure on charitable activities is incurred on directly undertaking the activities which further the Charity's objectives, as well as any associated support costs.

2. Accounting policies (continued)

2.4 Expenditure (continued)

All expenditure is inclusive of irrecoverable VAT.

2.5 Interest receivable

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the Charity; this is normally upon notification of the interest paid or payable by the institution with whom the funds are deposited.

2.6 Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into sterling at rates of exchange ruling at the reporting date.

Transactions in foreign currencies are translated into sterling at the rate ruling on the date of the transaction.

Exchange gains and losses are recognised in the Statement of Financial Activities.

2.7 Tangible fixed assets and depreciation

Tangible fixed assets costing £200 or more are capitalised and recognised when future economic benefits are probable and the cost or value of the asset can be measured reliably.

Tangible fixed assets are initially recognised at cost. After recognition, under the cost model, tangible fixed assets are measured at cost less accumulated depreciation and any accumulated impairment losses. All costs incurred to bring a tangible fixed asset into its intended working condition should be included in the measurement of cost.

Depreciation is charged so as to allocate the cost of tangible fixed assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following bases:

Freehold property	- over 10 years straight line
Motor vehicles	- 25% straight line
Office equipment	- 33.33% straight line

2.8 Debtors

Trade and other debtors are recognised at the settlement amount after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

2.9 Cash at bank and in hand

Cash at bank and in hand includes cash and short-term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

2. Accounting policies (continued)

2.10 Liabilities and provisions

Liabilities are recognised when there is an obligation at the Balance Sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably.

Liabilities are recognised at the amount that the Charity anticipates it will pay to settle the debt or the amount it has received as advanced payments for the goods or services it must provide.

2.11 Financial instruments

The Charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

2.12 Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the Trustee in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The costs of raising and administering such funds are charged against the specific fund. The aim and use of each restricted fund is set out in the notes to the financial statements.

Investment income, gains and losses are allocated to the appropriate fund.

3. Income from donations

	Unrestricted funds 2021 £	Restricted funds 2021 £	Total funds 2021 £
Donations	34,035	110,083	144,118

	Unrestricted funds 2020 £	Restricted funds 2020 £	Total funds 2020 £
Donations	11,313	150,300	161,613

4. Investment income

	Restricted funds 2021 £	Total funds 2021 £
Bank interest	77	77

	Unrestricted funds 2020 £	Restricted funds 2020 £	Total funds 2020 £
Bank interest	9	179	188

5. Analysis of expenditure on charitable activities

Summary by fund type

	Unrestricted funds 2021 £	Restricted funds 2021 £	Total 2021 £
Charitable costs	43,080	128,462	171,542

	Unrestricted funds 2020 £	Restricted funds 2020 £	Total 2020 £
Charitable costs	68,987	193,846	262,833

6. Analysis of expenditure by activities

	Activities undertaken directly 2021 £	Support costs 2021 £	Total funds 2021 £
Charitable costs	166,632	4,910	171,542

6. Analysis of expenditure by activities (continued)

	Activities undertaken directly 2020 £	Support costs 2020 £	Total funds 2020 £
Charitable costs	255,668	7,165	262,833

Analysis of support costs

	Charitable costs 2021 £	Total funds 2021 £
Accountancy fees	1,784	1,784
Independent examination fees (governance)	1,500	1,500
Foreign currency loss	144	144
Bank charges and interest	1,482	1,482
	4,910	4,910

	Charitable costs 2020 £	Total funds 2020 £
Accountancy fees	2,513	2,513
Independent examination fees (governance)	750	750
Foreign currency gain	2,256	2,256
Bank charges and interest	1,646	1,646
	7,165	7,165

7. Staff costs

	2021 £	2020 £
Wages and salaries	49,570	69,850
	49,570	69,850

The average number of persons employed by the Charity during the year was as follows:

	2021 No.	2020 No.
Average number of employees	11	12

No employee received remuneration amounting to more than £60,000 in either year.

8. Trustee's remuneration and expenses

During the year, no Trustees received any remuneration or other benefits (2020 - £NIL).

During the year ended 31 December 2021, no Trustee expenses have been incurred (2020 - £NIL).

9. Taxation

The company is a registered charity with the Charity Comissioners for England and Wales. It is not liable to corporation tax on any surplus arising from its charitable activites.

10. Tangible fixed assets

	Freehold property £	Motor vehicles £	Office equipment £	Total £
Cost				
At 1 January 2021	28,288	19,590	21,828	69,706
Additions	-	-	662	662
Disposals	-	(2,500)	-	(2,500)
At 31 December 2021	28,288	17,090	22,490	67,868
Depreciation				
At 1 January 2021	22,413	17,777	19,572	59,762
Charge for the year	2,829	743	1,367	4,939
On disposals	-	(2,500)	-	(2,500)
At 31 December 2021	25,242	16,020	20,939	62,201
Net book value				
At 31 December 2021	3,046	1,070	1,551	5,667
At 31 December 2020	5,875	1,813	2,256	9,944

Motor vehicles sold in the year resulted in a profit on disposal of $850 which was been included in direct costs of charitable activity.

11. Debtors

	2021 £	2020 £
Due within one year		
Prepayments and accrued income	-	10,001
	-	10,001

12. Creditors: Amounts falling due within one year

	2021 £	2020 £
Accruals and deferred income	6,561	3,277

13. Statement of funds

Statement of funds - current year

	Balance at 1 January 2021 £	Income £	Expenditure £	Balance at 31 December 2021 £
Unrestricted funds				
General Funds	(19,768)	34,035	(43,080)	(28,813)
Restricted funds				
Hygiene and sanitation project	2,616	73,932	(40,993)	35,555
Income Generation project	26,663	2,535	(11,715)	17,483
TREE project	20,345	7,963	(17,328)	10,980
UNDP	39,252	25,730	(58,426)	6,556
	88,876	110,160	(128,462)	70,574
Total of funds	69,108	144,195	(171,542)	41,761

13. Statement of funds (continued)

Statement of funds - prior year

	Balance at 1 January 2020 £	Income £	Expenditure £	Transfers in/out £	Balance at 31 December 2020 £
Unrestricted funds					
General Funds	41,714	11,322	(68,987)	(3,817)	(19,768)
Restricted funds					
Hygiene and sanitation project	24,154	593	(22,131)	-	2,616
Income Generation project	48,926	6,703	(28,966)	-	26,663
Environment Reforestation	(3,817)	-	-	3,817	-
TREE project	9,795	23,120	(12,570)	-	20,345
Popel project	5,347	-	-	(5,347)	-
UNDP	44,021	120,063	(130,179)	5,347	39,252
	128,426	150,479	(193,846)	3,817	88,876
Total of funds	170,140	161,801	(262,833)	-	69,108

. **Statement of funds (continued)**

Hygiene and sanitation project - Project to develop accessibility to water, sanitation and hygiene, combined with environmental awareness, in two primary schools of Phnom Kulen.

Income Generation project - Provision of technical and other assistance to farmers to replace destructive farming practices. This fund also covers the CAR project which is to develop a community based tourism centre to develop incomes from the local community. The separate CAR project fund was reallocated to the Income Generation project to combine projects with concurrent aims. This also includes the rangers patrol project.

Environment Reforestation - Projects to reinforce ADF activities towards the reforestation of the Phnom Kulen National Park and the Chankran Roy Community Forestry.

TREE project - This relates to a participatory tree growing project to be implemented in three village schools on the plateau of Phnom Kulen National Park and includes the HUMY 1 & 2 project and CIRD project which are explained below.

HUMY 1 & 2
Relates to a project providing infrastructures and materials necessary for a Community-based Tourism Centre (CBTC) in a Popel Community Protected Area (CPA). Also provides for training for CPA members.

CIRD
Relates to a project to implement tree growing and tree planting in Phnom Kulen National Park.

Popel project - This relates to the expansion of a Community Protected area within Phnom Kulen National Park, to protect the remaining forest from the expansion of the illegal cashew nut farming.

UNDP - This relates to a project to demarcate and enlarge forest areas, to set up a water system and to propse alternative livelihoods to villagers through agriculture and a community based tourism centre.

Transfers
During the prior year, a transfer was made from general funds to the restricted Environment Reforestation project totalling $3,817 to cover the underspend.

During the prior year a transfer was made from the restricted Popel project to the UNDP project totalling $5,347 to represent the end of the first phase of the Popel project and the start of the UNDP project, projects with concurrent aims.

14. Analysis of net assets between funds

Analysis of net assets between funds - current year

	Unrestricted funds 2021 £	Restricted funds 2021 £	Total funds 2021 £
Tangible fixed assets	5,667	-	5,667
Current assets	(27,919)	70,574	42,655
Creditors due within one year	(6,561)	-	(6,561)
Total	(28,813)	70,574	41,761

14. Analysis of net assets between funds (continued)

Analysis of net assets between funds - prior year

	Unrestricted funds 2020 £	Restricted funds 2020 £	Total funds 2020 £
Tangible fixed assets	9,944	-	9,944
Current assets	(26,435)	88,876	62,441
Creditors due within one year	(3,277)	-	(3,277)
Total	(19,768)	88,876	69,108

15. Members' liability

Each member of the charitable company undertakes to contribute to the assets of the company in the event of it being wound up while he/she is a member, or within one year after he/she ceases to be a member, such amount as may be required, not exceeding £10 for the debts and liabilities contracted before he/she ceases to be a member.

16. Related party transactions

Included within incoming resources is an amount of $9,993 (2020 - $4,575) which was donated by the trustee / close family member of the trustee.

ARCHAEOLOGY & DEVELOPMENT FOUNDATION

England & Wales - Charity number 1122750

Accounts

Registered number: 06429421
Charity number: 1122750

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

FINANCIAL STATEMENTS

YEAR ENDED 31 DECEMBER 2020

LUBBOCK FINE LLP
Chartered Accountants
Paternoster House
65 St Paul's Churchyard
London EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

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ARCHAEOLOGY AND DEVELOPMENT FOUNDATION

(A Company Limited by Guarantee)

REFERENCE AND ADMINISTRATIVE DETAILS OF THE CHARITY, ITS TRUSTEES AND ADVISERS

FOR THE YEAR ENDED 31 DECEMBER 2020

Trustees	Vincent Chevance
Company registered number	06429421
Charity registered number	1122750
Registered office	25 Brooks Mews London W1K 4DZ
Company secretary	Jean-Baptise Chevance
Accountants	Lubbock Fine LLP Chartered Accountants & Statutory Auditors Paternoster House 65 St Paul's Churchyard London EC4M 8AB

TRUSTEE'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2020

The Trustee presents the annual report, which includes the directors report, together with the financial statements of the Archaeology and Development Foundation for the period from 1 January 2020 to 31 December 2020. The Trustee confirms that the Annual Report and financial statements of the Charity comply with the current statutory requirements, the requirements of the Charity's governing document and the provisions of the Statement of Recommended Practice (SORP), applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019).

Since the company qualifies as small under section 383, the strategic report required of medium and large companies under The Companies Act 2006 (Strategic Report and Director's Report) Regulations 2013 is not required.

STRUCTURE, GOVERNANCE AND MANAGEMENT

Archaeology and Development Foundation is a company, incorporated on 16 November 2007, governed by its Memorandum and Articles of Association. It registered as a charity with the Charity Commission for England & Wales on 12 February 2008.

New Trustees are appointed by the members. The Trustees may appoint a person who is willing to act to be a Trustee, either to fill a vacancy or as an additional trustee.

New Trustees are briefed on their legal obligation under charity and company law, the content of the Memorandum and Articles of Association, the committee and decision making processes, the business plan and recent financial performance of the charity.

In setting the objectives and planning the activity of the charity, the Trustees have given careful consideration to the Charity Commission's general guidance on public benefit.

OBJECTIVES AND ACTIVITIES

The objectives of the charitable company as set out in the governing document are:

The Archaeology and Development Foundation has been undertaking archaeological research in Phnom Kulen since 2008. One of the objectives is to understand the extent of this first capital as well as to define the various settlements during the period of time, from pre angkorian period to the post angkorian period. Working in close collaboration with the APSARA National Authority (National Authority in charge of Angkor region), the Ministry of Environment and other institutional partners, ADF is the main institution working on both development and archaeology in Phnom Kulen.

ADF is also disseminating the archaeological knowledge of the findings. Reports and conferences are regularly given and specific publications on archaeological research are also published in specialised review.

Historically, geographically and from a hydrologic point of view, Phnom Kulen is very closely linked with Angkor World heritage site. The Royal Government of Cambodia has registered Phnom Kulen on the indicative list of the world heritage site, and ADF is working closely with UNESCO and APSARA to move toward the recognition of this site and to meet the standards of a world heritage site.

Additionally, ADF is strongly collaborating with the Ministry of Environment, in charge of the Phnom Kulen National Park, for the management of the protected areas. Others activities in the environmental protection field are implemented such as reforestation, environmental awareness campaigns, demarcation of protected areas, training and supporting to ranger patrols in the National Park, mapping etc.

Conservation and protection of the sites

In the post war years (1990's) Cambodia suffered from endless looting. It is well known that archaeological site protection goes hand in hand with an increased local awareness that arises as a result of research and conservation programmes.

The Phnom Kulen programme is providing APSARA Authority a better knowledge of the archaeological value of the plateau, in order to extend its activities on the Phnom Kulen. ADF is also helping the Ministry of Environment by providing information relative to protected area, forest cover, and illegal activities (encroaching, illegal logging etc).

The programme is also helping to define demining areas and specific archaeological protected areas. The regular cleaning of vegetation and the maintenance of the monuments can then occur. Curators and guards/workers have been appointed by APSARA in order to follow up this initiative. The Archaeology and Development Foundation is providing APSARA advice and expertise to improve the management of the sites in terms of conservation and tourism management. ADF has regularly asked APSARA to increase the human and technical resources, to fulfil these missions. For the last years, the Archaeology and Development Foundation is also sponsoring the activities from the APSARA Stone Conservation Unit (transports, salaries, materials) to restore the sandstone artefacts and bas reliefs discovered during the excavations.

Training of Khmer specialists

One of the long term outcomes of this project is the training of Cambodian specialists, in providing them with knowledge, expertise and know how to preserve these sites.

This project provides an opportunity to train the young Khmer specialists on specific search processes. All stages of the archaeological research process, beginning at the preparation phases then field work phases (prospecting to diagnostic trenches or open area excavations, conservation of monuments, inventories) all the way through to annual and final report and publication, is done working closely with ADF and APSARA archaeologists. The project also provides young students graduated from the Royal University of Fine Arts, faculty of archaeology, with their first fieldwork experience.

ADF also provide regular trading to the Provincial Department of Environment of Siem Reap staff and the rangers in charge of the Phnom Kulen National Park.

Economic and social impact on local populations

Cambodia has been devastated by civil wars which were fought from 1970 through to the 1990's; this period saw one of the largest genocides in the world which killed between 1.7 to 2 million people. Fighting, aerial bombardments and minefields had a significant impact on the lives of three generations.

Phnom Kulen region was the scene of violent fighting between Khmer Rouge and government troops; the consequences are still evident today. It was one of the last Khmer Rouge strongholds to surrender in 1996.

This project is providing jobs to seasonal workers and, consecutively, full time activity to guards and specialised workers. In providing the villagers with heritage and conservation knowledge it is helping to prevent further looting and is creating a safe archaeological zone by initiating a land mine removal programme and archaeological protected areas.

An important effort is also done towards the villagers from the Phnom Kulen region for food security/nutritional health, medical and health support, hygiene and sanitation (particularly in primary schools), alternative livelihood generating incomes, as well as environmental education and protection.

These initiatives have an important impact on the social and economic development of Phnom Kulen and especially improve the level of education and health care of the inhabitants.

FINANCIAL REVIEW

Income for the year ended 31 December 2020 was $161,801 with expenditure totalling $262,833. At the year end, the charity was holding restricted reserves of $88,876 and the unrestricted reserves were in a deficit position of £19,768.

As the Charitable company has minimal fixed costs therefore its policy is to hold approximately $5,000 in reserves in order to use as much of the funds received each year for charitable purposes.

PLANS FOR FUTURE PERIODS

For the archaeological activities (maintenance and conservation program), there is no plan to coordinate demining operations in 2021 by CMAC teams. According to budget constraints and work plan, ADF will decide if excavations are possible in 2021. If possible, it would most probably take place on a site already secured over the previous years.

ADF will continue to maintain a regular coordination with APSARA National Authority and provide assistance and advices for a better heritage management of the archaeological sites in Phnom Kulen. This involves advices for the general maintenance of the sites and the control of the Archaeological Protected Areas. ADF will continue to encourage APSARA to increase the material resources for these tasks. ADF will provide any recent and old documentation on archaeological sites to be restored by APSARA in 2021.

For the Kbal Spean and 1000 linga sites, the ADF team will intend to finalize the signboards and with their text and submit them to APSARA, so information panels can be edited and set up by ADF & APSARA, providing APSARA a better tool to manage this area and a better knowledge of the site for the public. The maps and their study will also be published in a specialised review in 2021 or 2022.

In the restoration field, only small sandstone fragments from previous archaeological campaigns will require complementary restoration in 2021. As our requests from 2018 to 2019 were left unanswered, we will have to ask again if this small operation can be done.

ADF will continue to encourage the Cambodian authorities (APSARA National Authority, Ministry of Environment, Provincial Authorities) to officially recognise the Archaeological Protected Areas and to allocate more resources for their effective protection.

The archaeological research, diffusion, communication and training will continue. ADF team will also participate in two publications in the volume dedicated to the Angkorian World, published by Routledge. A third one will focus on the heritage management and the local communities. ADF will also intend to finalise the publication about the 1000 linga and Kbal Spean sites with the most recent maps of these two sites.

Further studies and analysis from previous excavations archaeological samples and artefacts could also be undertaken such as ceramic or roof tiles studies, charcoal analysis for radiocarbon dating and tree identification, or phytolyth analysis.

The continuation of our collaboration with EFEO/Dharma project and APSARA will allow additional surveys for the recording, rubbing and studies of unregistered ancient inscriptions in Phnom Kulen. Additional surveys to check specific archaeological features will also be undertaken.

In 2021, ADF will also start various photogrammetric acquisitions in Phnom Kulen, in collaboration with APSARA National Authority. Previous excavations at Poeng Tbal (2009 and 2012) and Poeng Eisei (2020) allowed a publication about the rock shelters sites in Phnom Kulen (« Pœng Tbal et Pœng Eisei, ermitages angkoriens méconnus du Phnom Kulen », Aséanie 32, Décembre 2013, p. 11-76). ADF has also have surveyed a maximum of these sites over the years, to complete their inventory, documentation and the general archaeological map of Phnom Kulen. To strengthen this dynamic and complete the documentation of these sites, ADF will undertake photogrammetric surveys in Srah Damrei, Poeng Eisei and Poeng Tbal. As the nearby temple of Prasat Damrei Krap will be cleared of vegetation thanks to APSARA's restoration, the photogrammetric documentation of this temple will also be implemented. The complete photogrammetric acquisition of these site presents several interests such as documentation, an easier access to the data once acquired, measurements possible from the computer file, a facilitated sharing of the results (eventually accessible online) and a larger communication. They would of course be shared with the APSRA National Authority once completed. In the perspective on an excavation of one of these sites, this work can also be very useful.

In term of communication and collaboration with APSARA, UNESCO, UNDP and MoE, ADF will continue to participate to the ICC meetings (in January, June and December 2021), APSARA meetings, MoE and UNDP meetings and all events related to the Action Plan and the Phnom Kulen Management Program.

The ADF Facebook page as well as ADF website will continue to be regularly updated with pictures from our various operations, to share our actions and inform our donors and partners.

Regarding the development activities, the main components will continue to be reinforced and adapted, according to their results.

In ADF's operational year 2021, ADF Income Generation (IG) team will continue to monitor and support (financially and technically) every small farming production unit: chicken and pig breeders. ADF will strongly encourage them to re-invest their profit into their micro-enterprise, in order to create sustainable models, applying a 75% reimbursement rate. ADF IG team will continue to develop the IG-agriculture activities in Khnong Phnom commune villages, with the AGRISUD project, proposing alternative livelihoods to more than 180 families. All IG beneficiaries will be registered and will continue to be monitored. ADF will also encourage its IG staff to attend technical training and will encourage exposure visit for the beneficiaries. Additional beneficiaries from Khlah Khnum village interested in pig and chicken raising will be included, within the UNDP-BESD project. Families from other villages could also be involved, if additional funding is provided by UNDP within this project. The Rice bank sub-component in Thma Chruogn village will continue to be monitored, encouraging the local population and authorities to take their ownership.

Regarding the alternative livelihoods related to tourism, the CAR project will be terminated. However, ADF will continue to support and the Anlong Thom CBTC by advising and training his team. The objectives remain to offer tours with stronger sustainable and local impacts. The collaboration with our partner from the private sector Terre Cambodge will continue and Ms. Chhun Phirom will continue to be employed for these activities.

The hygiene project (WISH 2) will start in January 2021, for a 2-year period, targeting 4 primary schools (Popel, Khlah Khmum, Sangke Lak and Ta Penh), continuing to address environmental, hygiene and health issues. It will encompass the recommendations from the WISH 1 evaluation report finalised in February 2020 and will be flexible enough to be implemented within the Covid-19 pandemic.

ADF will propose to the South-East Asian Foundation (SEAF) another project to support additional infrastructures needed in the primary schools of four villages, with others in Phum Thmey and Preah Ang Thom schools.

ADF team will continue to work closely with the local Health Centre (Anlong Thom) to assist poor people facing emergency situations. As per the previous years, an Emergency Relief Fund will be reserved within the ADF budget, in case of major emergency for the poorest of people (domestic fire or accident, illness, natural disaster…).

Finally, ADF Environmental Support will continue, as ADF is strongly committed to the environmental protection of the Phnom Kulen National Park, and as the MoE is seeking support from our organisation.

ADF will continue to contribute to the Phnom Kulen Management Plan and the Action Plan, in the framework of the Phnom Kulen working group. With the assistance of UNDP, ADF will assist the MoE for the completion of these documents and studies. ADF will continue to recommend the official recognition of the archaeological protected areas (APA). ADF will seek for donors to implement activities corresponding to the Action Plan. ADF will continue to participate to the PES studies for the PKNP, if required.

ADF will continue the BESD project, funded by UNDP and SIDA, until the 30th of June 2021, with a particular focus on continuing the monitoring of the agriculture alternative livelihood in Khlah Khmum village (pig and chicken raising), the creation of an community based eco-tourism centre in this village, with corresponding tourism offers (centre, treks, rest-houses…) and the training for the CPA members. A maximum of households should also be connected to the water system in Popel and the water committee should be properly functioning. Additional funding from HUMY French NGO could complete this project.

ADF will continue the UNDP-C.19 project with the weeding of reforested areas and the regular monitoring and forest fire prevention, until the 31st of May 2021. ADF will continue the CIRD tree growing project until June 2021.

The Popel CPA project will be finalised, similarly to the BESD project, and should be achieved in June 2021. The TREE project focusing on growing saplings in tree nurseries located in three primary schools should be continued in 2021, until august 2022.

ADF will continue to advise and assist the APSARA Authority and the MoE on large project such as the waterfall area ("Green zone project") and the road project crossing the PKNP.

ADF will assist tree-planting project with APSARA and MoE. The continuation of the Income Generation activities and the systematic report to the relevant authority of illegal activities (ex. logging, construction, land speculation) will also contributing to assist the MoE for the protection of the National Park.

ADF will possibly assist the PDoE with reinforced patrolling funds for the rangers and a special training about GPS use and basic GIS notions.

ADF will continue to stress Phnom Kulen National Park threat's at every level (local, national, international) and, if funded, to implement the demarcation of additional protected areas, within the park.

ADF will be associated to the project entitled "Integrated Natural Resource Management (INRM) in the productive, natural and forested landscape of the Northern Region of Cambodia". ADF will be associated with the project entitled "Cambodia Sustainable Landscape and Ecotourism Project (CSLEP)" a partnership project between the Ministry of Environment (MoE) and World Bank Group (WBG), working to improve protected areas management and promote ecotourism in the Cardamom Mountains-Tonle Sap landscape.

All ADF activities will be implemented in accordance with the Khnong Phnom Commune development Plan. To do so, ADF will continue to attend the regular meeting with the local authorities.

ACHEIVEMENTS AND PERFORMANCE

1. INTRODUCTION

This report presents the ADF activities in Phnom Kulen during the year 2020. They are implemented by ADF within the framework of the MoUs signed between the APSARA National Authority and the Ministry of Environment, ADF's two principal governmental partners. Other governmental bodies are also involved on a local scale such as the Health Department (Sotr Nikum), the Educational Department, the commune Council of Khnong Phnom Commune (Svay Leu District). This report is divided in two main parts, presenting the two axes of ADF's activities: the archaeological component and the development component. The last chapter presents the perspectives and the plans for the future.

ADF/ Phnom Kulen Program team for 2020

Administration, finance and communication officer:
- Hoeung Hourapich (ADF)

Archaeological and environmental team
-Sakhoeun Sakada (ADF archaeologist, National Manager and Environmental Coordinator, MoE),
- Seng Samry (Environmental assistant)
- Yon Sokchea (Tree nursery Supervisor)

Development team
- Mien Mout (Income Generation Supervisor)
- Bis Chhoeurng (Income Generation field assistant)
- Seng Samry (Hygiene and sanitation Supervisor and house manager)
- Loem Nimul (Hygiene field assistant)
- Khen Savann (Hygiene field assistant)
- Chhun Phirom (CBTC supervisor, part-time, from April 2020)
- Kong Leaksmy, (translator for the WISH project evaluation, until February 2020)

Logistic team
- Lay Thol, guard
- Som Chanthou, cook (until December 2020)

The ADF international team in 2020:
- Jean-Baptiste Chevance (Archaeologist, Phnom Kulen Program Director, full time),
- David Sandilands, (part-time Development consultant, 6 months from March to May and from October to December 2020).
- Sebastian Van Shreeb, (evaluator of the WISH project).

All fields' activities are implemented with local partners such as the Phnom Kulen National Park Rangers, the APSARA archaeologists and guards, the Community Protected Area members of Popel and Anlong Thom villages, the teachers and principals at Sangke Lak, Khlah Khmum, Anlong Thom and Ta Penh primary schools and the Anlong Thom Health Centre staff.

2. ACHIEVEMENTS AND PERFORMANCE

ARCHAEOLOGY: FIELD OPERATIONS

The 2020 archaeological activities are a continuity of the programme launched in 2008 in collaboration with the APSARA National Authority. The 2020 activities can be summarized as below.

a. MAINTENANCE AND CONSERVATION PROGRAM:

Land Mine & UXO removal program

There was no demining campaign in 2020, as no archaeological operation was planned. The annual demining program set up by ADF, in collaboration with CMAC and APSARA, allows the regular clearing and the maintenance of the archaeological sites in Phnom Kulen. As stated in the MoU between ADF and the APSARA National Authority, and as implemented from 2008, the ADF team is selecting the sites, after approval by APSARA, and is coordinating the demining operations with the CMAC teams.

In addition to these demining orations related to archaeological research, ADF team reports and follows up the Unexploded ordnances (UXO) founded by villagers to the local authorities. It was the case in Khlah Khmum primary school in late 2018 and July 2019 (see WISH project, Hygiene and Sanitation program below)

Assistance to the APSARA National Authority for heritage management in Phnom Kulen

ADF is continuing its assistance to APSARA for the conservation and the maintenance of the Phnom Kulen archaeological sites. This concerns the ongoing maintenance and conservation of the monuments and sites and their respective Archaeological Protected Areas (APA, 800 hectares).

ADF maintains a regular coordination with the APSARA deputy director, heads of departments, archaeologists, workers and guards in charge of Phnom Kulen sites, and provides assistance and advices for a better heritage management of the archaeological sites.

In August 2020 and in the framework of the restoration of Prasat Damrei Krap (one of the most important ancient temples in Pkhnom Kulen) by the APSARA National Authority, ADF has provided to the governmental agency all the existing the documentation, from the most recent to the oldest:

- Excavations data (pictures, stratigraphy, plan) and pictures of the clearing of the vegetation on the main tower from 2010 (ADF),
- Sandstone artefacts restoration data (report and pictures), funded by ADF and implemented by the APSARA Stone Conservation Unit in 2010,
- JB Chevance Master Thesis chapter about Prasat Damrei Krap,
- Plan published in Dumarcay-Royère, 2001

- Excavation pictures, plan and elevation drawings from 1969 by E. Hansen (UNESCO),
- Pictures taken by Boulbet in 1960's and published in Boulbet-Dagens 1973,
- Excavation pictures from 1936-38 by Ph. Stern and P. Dupont (EFEO) and published in Stern 1938,
- Scan of drawing from Parmentier, published in 1927.

These were very useful to the APSARA architect team to restore and consolidate the brick masonry of the upper parts of Prasat Damrei Krap and the sandstone doorframe. On the 19th of January 2020 and following a Facebook post, ADF was solicitated by the Department of

Environment of Siem Reap Province for a survey at the foot of Phnom Kulen on a non-documented site with a large sculpture of a *Makara*.
The survey team identified at least 12 sandstones carved blocks scattered, some of them carved as a gutter and cover, acting as the body of the *makara*. This site is located very close to an ancient dam and the large quarries, used to build the Angor temple. It is not clear if these blocks were originally destinated to another location.

Following ADF visit to Prasat Krohom restoration, by APSARA National Authority, on the 28th of January 2020, ADF team noted that some architectural sandstone fragments unearthed during APSARA's operation could complete the ADF/APSARA 2017 inventory. The sandstone artefacts inventory and additional documentation (pictures form 1936-38, from EFEO) were also provided to APSARA to facilitate this.

On the 25th of March 2020, ADF director implemented archaeological surveys to check features to the north of Prasat O'Paong mentioned in the 1960's archives by J. Boulbet, and on the 2nd of April 2020 to the south of Prasat Krohom to check a representation of Ganesha, mentioned by Parmentier and Stern in the 1930's. If the ramp with laterite walls was spotted between Prasat O'Paong and Prasat Rong Chen, the image of Ganesha (sculpture or bas-relief) was not found, probably looted during or after the Cambodian war.

ADF was also solicitated by APSARA National Authority for documentation about Srah Damrei site, for a possible excavation project. Despite its importance and popularity, this site has never been excavated. However, ADF has organised its landmine removal in 2012, discovering a third pond to the north, implemented several surveys to check if others rocks were carved with animal figures and inscriptions (recently discovered: 1 in 2014 and 2 in 2020). ADF has also funded the restoration of the carved animals by SCU in 2014. All documents were given to the APSARA National Authority, including maps with the 2015 Lidar data. In the future, ADF has the plan to excavate the site to better understand the organisation between the carved figures and the ponds and to date it more accurately.

In June 2020 and following a Facebook post about a temple and an inscription located 8 Km to the northeast of Phnom Kulen, ADF provided to APSARA National Authority the general information existing in the ancient documentation.

The temple was identified as Prasat Dambok Khpuos, north of Dambok Khpuos village and was visited and recorded by Lajonquière (late 19th century) and Parmentier (in 1932) who did the rubbing of the inscription. The inscription was later recorded under the number K.196 by Coedès who published it in 1954 (Inscriptions du Cambodge, vol.VI). In September 2020, ADF advised APSARA Kulen team for the conservation of 3 particular sites: at Poeng Eisei (regarding the water flow out of the pond through the original outlet), at 1000 Linga (to advice for a fallen tree to be removed from the carved figures on the riverbed) and at Prasat O Top, where the eastern doorjamb of the temple was presenting to sign of possible collapse. Finally, in 2020 the ADF team finalised the MoU with the APSARA National Authority for its 3-years renewal.

Following the 28th of February 2020 meeting and discussions at the Ministry and Culture and Fine-Arts in Phnom Penh, ADF Director and National Manager participated to the updating of the criteria to register Phnom Kulen as a World heritage site. This led to a text, for which ADF has been strongly involved, embracing all comments and approved in March 2020 by the Royal Government of Cambodia. The criteria of Phnom Kulen and its ancient city Mahendraparvata are now updated and registered on the tentative list of the Royal Government of Cambodia, as a potential World Heritage site (https://whc.unesco.org/en/tentativelists/6460/).

Restoration of sandstone, ceramic and metallic artefacts

No ceramic or metallic artefacts required restoration/conservation in 2020.

In February 2018, ADF requested to APSARA the participation of the Stone Conservation Unit (SCU) for the restoration of small sandstone fragments, kept at the Preah Norodom Sihanouk Museum and at ADF office. In December 2019 and after delivering the last sandstone fragments kept at ADF office to APSARA, ADF is waiting for the official authorisation to finalise this task.

Archaeological protected areas (APA)

The main objective of the APA is to protect the immediate environment of the archaeological sites in Phnom Kulen from damaging agriculture practices, including deforestation and uncontrolled fires and erosion. The identification of archaeological sites thanks to the LiDAR was also one of the outcomes, as well as to build awareness towards the population and the local authorities on their cultural heritage and the natural environment.

After the 2017 assessment of each zone, ADF reminded APSARA National Authority to replace the broken posts demarcating the areas and submitted a report in Khmer to APSARA on the 1st of October 2017. It summarises the number of broken (or missing) posts for each zone. A total of 45 should be replaced, as stated in APSARA-ADF MoU, signed at the end of 2017.

After their official recognition by the APSARA, the Ministry of Environment and the provincial authorities of Siem Reap (May and June 2015), these zones still need a jurisdictional framework and a clear definition of the responsible authority. Presently, the APSARA National Authority, in charge of the archaeological sites in Siem Reap Province, manages them. Their exact status should be defined within the framework of the Management Plan of PKNP, implemented with the Action plan since 2018 and onward.

The additional APA (799 hectares demarcated in the Phnom Kulen National Park) in 2019 was implemented within the UNDP-BESD project around the Prasat Krohom 1 and 2 temples, the dike Thnal O' Srae, and a group or earth mounds, north of Khlah Khmum village (see below, Environmental program, UNDP-BESD project). Patrols by MoE rangers were organised regularly to control this area.

b. ARCHAEOLOGICAL RESEARCH, DIFFUSION/COMMUNICATION AND TRAINING:

Field verification of features from the 2012 and 2015 Lidar campaign:

The Phnom Kulen 2012 Lidar Campaign was undertaken within the KALC project, covering Angkor and Koh Ker archaeological sites, and 30 km^2 in Phnom Kulen, funded by ADF. The 2015 Lidar campaign was initiated by EFEO under the CALI project and was covering 5 major archaeological sites in Cambodia. The largest acquisition area was the entire range of the Phnom Kulen National Park (975 km^2), from Varin district to Beng Mealea temple.

From 2012, ADF was responsible for the field verifications, focusing on the top of the plateau, in close collaboration with the CALI/EFEO project. ADF team, in association with the APSARA Authority archaeologists, finalised the ground verifications and the inventory of the archaeological features revealed by the 2012 and 2015 Lidar campaigns in March 2017. The final report in Khmer was submitted to APSARA in May 2018. In total, 600 features were inventoried. The digitization of discovered features was finalised and made coherent with the CALI team in 2017. In total, more than 3200 archaeological features have been identified and digitized. Punctual and additional surveys were implemented in 2020 to verify key archaeological points (see above).

The final objective was to create a comprehensive archaeological map of Phnom Kulen and to disseminate these results. This was finally done in a publication summarizing these findings, entitled "Mahendraparvata: An Early Angkor-Period Capital Defined through Airborne Laser Scanning at Phnom Kulen" by Chevance, Jean-Baptiste, Damian Evans, Nina Hofer, Sakada Sakhoeun, and Ratha Chhean, published online by Cambridge University Press on the 15th of October 2019 in Antiquity, a peer-reviewed journal of world archaeology (https://doi.org/10.15184/aqy.2019.133).

This publication was completed by a second one in 2020, published by Dumbarton Oaks (Trustees for Harvard University, Washington D.C), following the participation of JB Chevance to the Garden and Landscape Studies Symposium (May 4 – 6, 2017) on "Landscapes of Pre-Industrial Cities" (see below).

Archaeological Excavation campaign & topographical survey, archaeological research:

Excavations

No excavations were undertaken in 2020 as in March and April 2018, when ADF team undertook an excavation campaign on the Royal Palace (Banteay/Pteah Kruh Chas) of the former 9th century capital in Phnom Kulen. The data from these excavations are providing additional information for a publication. More specialised studies will be undertaken in the coming years with ceramics and radiocarbon studies.

Artefact inventories

The complete list of artefacts kept for studies at ADF office was provided to APSARA (on the 4th of April 2019; 109 boxes and baskets, containing mostly roof tiles and ceramic fragments but also soil samples, bricks samples, charcoal samples and slag samples).
Considering further studies should be undertaken and according to the MoUs signed between ADF and APSARA and the Angkor Code of Conduct, ADF has kept these artefacts in 2020.

Specialised studies

- **Flotation of soil samples**

No further studies were undertaken in 2020, following the 2019 flotation of soil samples from the 2014 and 2016 excavations. Further archaeological studies will be done in the future.

- **Ancient inscriptions/ CIK/ DHARMA Project**

In 2020, the collaboration with EFEO (DHARMA Project, ERC 809994), APSARA and ADF continued with surveys to document ancient hermit sites and inscriptions. On the 22nd of January 2020 and together with the APSARA team, ADF and EFEO members implemented a survey in a few rock shelters sites (Srah Damrei, Peng Ta Roet, Wat Chas). On this occasion, 2 unknown inscriptions were reported on the northern and southern side of the carved elephant at Srah Damrei, later recorded as K.1452.1 (north side) and K.1452.2 (south side). On the 6th of February 2020, no inscription was discovered at Wat Phnom Bay but traces of old occupation were noted (small carved pond), as well as modern hermit practices. Additional surveys in rock shelter sites were done in collaboration with Ms Chloé Chollet, PhD student at the EPHE-PSL/EFEO at Poeng Eisei n.2 (7th of February 2020) and Phnom Aksar (13th of February 2020). At this last site, known for 2 inscriptions, three pedestals and one previously non-documented inscription was found on the rock holding the known inscription.

Further specific archaeological studies and publications concerning previous excavations undertook by ADF are ongoing. More publications will reveal particular aspects of the ancient city in Kulen for the coming years (water management, main sites, industries…).

For the next publications, ADF team is focusing on the Kbal Spean and the 1000 linga site, Rong Chen mountain temple, the ancient mound fields, and two other general articles to be published in a large volume about Angkor by Routledge editor.

Diffusion of the archaeological research and communication:

Following the publication in 2019 of the LiDAR results entitled ("Mahendraparvata: An Early Angkor-Period Capital Defined through Airborne Laser Scanning at Phnom Kulen" by Chevance, Jean-Baptiste, Damian Evans, Nina Hofer, Sakada Sakhoeun, and Ratha Chhean), published online by Cambridge University Press in October 2019 in Antiquity, https://doi.org/10.15184/aqy.2019.133), a second article was published in 2020, after its submission in 2018 to the Dumbarton Oaks (Trustees for Harvard University, Washington D.C) and following the participation of JB Chevance to the Garden and Landscape Studies Symposium (May 4 – 6, 2017) on "Landscapes of Pre-Industrial Cities".

It is entitled " The Phnom Kulen Capital, A Singular and Early Case of Landscape Construction in Ancient Cambodia" in Dumbarton Oaks Colloquium on the History of Landscape Architecture (41st: 2017: Washington, D.C.) Landscapes of preindustrial urbanism / Georges Farhat, editor. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2020, p. 173-192.

In November 2020 the archaeological guide of the Angkor region was published, (excluding Angkor main site). ADF Director took an important participation on the Phnom Kulen region part. It is now available under the following references: « Les Marches d'Angkor », Guide archéologique du Cambodge, Tome VI, 841 pages, Phnom Penh by Bruno Bruguier, Jean-Baptiste Chevance and Olivier Cunin.

On the 5th of June 2020, ADF director presented ADF general activities and perspectives to the Provincial Department of Environment, in charge of Phnom Kulen National Park, provincial authorities and others stakeholders in the area (other NGO and local authorities).

ADF team presented an activity and perspectives reports for the 34th technical session of the ICC-Angkor (June 2019 to June 2020). This session was cancelled due to the C-19 pandemic. The 34th ICC technical session and the 27th Plenary Session of the ICC, originally scheduled for December 2020, were postponed to in January 2021.

On the 4th of March 2020, ADF Director participated to a documentary called "Ancient Superstructures - Angkor", directed by Pernel Production, to be broadcasted by RMC Découverte and Histoire channels in 2021.

On the 3rd of June 2020, ADF Director and National manager proposed a presentation and training to the Anlong Thom Community-based Tourism centre (CBTC) and Community Protected Area (CPA) members. This session was focusing on presenting the general history of Phnom Kulen, presenting the archaeological sites of the plateau during the angkorian and post-angkorian periods. This comes to reinforce the capacities of the CBTC members, to welcome the visitors at the centre (see Development chapter below) and to train the local guides. A bullet point list per site will be developed in the future so they can present shortly each site, in Khmer and English.

On the 15th October 2020, ADF director gave a lecture entitled « An overview of ADF activities in Phnom Kulen, Cambodia" within the framework of a webinar series entitled "Indigenous Peoples, Heritage and Landscape in the Asia-Pacific: Knowledge co-production, Policy Change and Empowerment". The webinar was organised and co-hosted by the University of California (USA) UCLA Department of Anthropology, UCLA Center for Southeast Asian Studies, UCLA Asia Pacific Center, University of Hawai'i-Mānoa Center for Southeast Asian Studies, Save the Ifugao Terraces Movement (SITMo), Ifugao State University, and the Partido State University. The can webinar be visible online on the panel 5 at https://dal.ucla.edu/engagedresearch/video-gallery-2/. This will lead to a publication in 2021.

ADF team regularly update our website (www.adfkulen.org) and our Facebook page where the last pictures of our main activities are displayed (www.facebook.com/adfkulen).

Training of Cambodian archaeologists

There is a close collaboration between the APSARA Authority and ADF archaeologists. This is providing a platform for field training to the APSARA local staff (archaeologist and local workers) during all activities (excavations, surveys, APA surveys and management, site management…). However, the activities of this component were reduced due to the limited amount of archaeological fieldwork in Phnom Kulen during the year 202

DEVELOPMENT: Field operations
Overview:
The Archaeology & Development Foundation has, since its conception, closely linked the two axes of its action on the field. The beneficiaries of the development activities, the population of Phnom Kulen, have suffered from a dark chapter in Cambodia history and civil war. The side effects are still very tangible today: lack of trust, lack of public infrastructures, lack of access to healthcare, food, nutrition and sanitation, lack of education and awareness, difficulties to bring products to market, low resources from the governmental bodies (Health dpt, Education dpt, Police, Ministry of Environment…).

Some of the schools are facing an important turn over as qualified teachers are reluctant to work in Khnong Phnom commune, and facilities are poor as compared to other communes in Siem Reap province. This results in inadequate education for the children rendering yet another generation that is very likely to fall into the poverty. There is only one secondary school and one health centre for nine villages of the commune (Khnong Phnom, 4750 inhabitants in 2020).

For a significant percentage of this population, peace and stability is enough and they don't see the need for further change and development. Breaking the poverty cycle in any context is challenging. For this population located on a remote plateau with a difficult access, it is even more problematic. An important proportion of the population in Khnong Phnom commune live in extreme poverty or poverty, surviving on 'day to day' bases. Others are now wealthier thanks to the illegal cultivation of cashew nuts.

Seasonal food shortages continually affect the population of Phnom Kulen. The ramifications of food shortages are numerous, the most notable are family health and wellbeing. Sickness exacerbates the multitude of issues that poor families have to endure, further interning them into the poverty cycle. A large proportion of the poor people are suffering from the lack of liquid assets. They are subsistent farmers and have little to no money to buy the basic necessities to attain the very basics of life: soap for personal and family hygiene, fundamental household materials, cooking pots and/or basic repairs to their dwellings and/or basic farming tools.

However, the new road being built from Svay Leu to the checkpoint on the west side of Kulen is now changing this general dynamic. The southern villages of Anlong Thom, Thma Chruogn and Ta Penh are now accessible by car. Tourist (national or foreigners) can now visit these villages and the archaeological sites nearby. The C-19 pandemic has stopped all international tourism in Cambodia but many Cambodians are now able to travel to national parks and sites in their country.

Other government bodies, for example the Ministry of Environment (MoE) and the police, have limited resource. The result of this is a lack of law enforcement, illegal logging, illegal building and house construction, a general depletion of the environmental natural recourses; which are having serious consequences for the water of Angkor Park and Siem Reap town, as Phnom Kulen is the natural water tank of the region.

The Phnom Kulen National Park faced a very important deforestation mostly due to the slash and burnt practice; combined with the illegal cultivation of cashew nut. Illegal logging of large trees is still observed.

Under the development program, ADF has set up four main components to address these issues: 1) Income Generation/alternative livelihoods, 2) Hygiene and sanitation/Emergency Relief, 3) Educational support, and 4) Environmental component.
They are all tailored-made to the Kulen problematic and are implemented in coordination with the Khnong Phnom Commune Development plan.

The 2020 activities are presented below.

c. INCOME GENERATION (IG)/ALTERNATIVE LIVELIHOOD PROGRAM

Agriculture alternative livelihood

The objective remains the same as the previous years: to enhance and develop alternative income generation activities, with the purpose of encouraging the Phnom Kulen population to move away from their current unsustainable, illegal and destructive practices (mono-culture of cashew nuts and slash-and-burn) to sustainable and environmentally friendly income generation activities. As behaviour change is a process taking time, this component has to aim towards positive examples and repetition. It is therefore the most challenging component of ADF within the development component.

ADF agriculture alternative livelihood

Reminder: As for the previous 11 years (since 2010), ADF continued in 2020 the support to local communities and villagers from Khnong Phnom commune. ADF propose technical assistance and materials for the families to undertake animal raising (chicken, pig). However, ADF stopped supporting families previously growing seasonal vegetables (during the cool season, from the end of October to the end of February) as the beneficiaries claimed results were too hard to obtain. Similarly, ADF stopped supporting the fish raising activity as some beneficiaries did not require further assistance. One other reason was the lack of water during the dry reason, preventing any fish raising activities. The 2 farmers raising butterflies with the technical support of the Bantey Srey Butterfly Centre also stopped in 2020, as the centre was closed due to the C-19 pandemic.

Following the annual review of the IG activity summarised in a report entitled "Income Generation (I.G.) Review & Report", covering the period from August 2017 to June 2018 several decisions taken and implemented in 2019 were continued in 2020. It was decided to increase the beneficiary's contributions for equipment and materials to 75% from January 2019 onwards; to better monitor, evaluate and draw lesson learned from both successes and non-successes of each activity; to establish a warning system for the farmers who are not following the ADF "step by step". As mentioned in ADF 2019 report, ADF has also developed the small-scale pig raising with 2 families and extended it to 2 other families in 2020.

In 2020, the direct beneficiaries of ADF IG component were 9 families raising chicken (1 in Ta Penh, 5 in Anlong Thom, 3 in Phum Thmey), 4 families raising pigs (1 in Ta Penh, 1 in Sangke Lak and 2 in Phum Thmey). Some pig and chicken raisers, after being warned in 2019, were not follow up any more by ADF team, as they stopped to comply to the team recommendations and advices. This explains the lower number of beneficiaries in 2020 compared to 2019 (19 families were raising chickens and 6 were raising pig) for this sub-project. This was largely compensated by the higher number of families reached by the two other related projects (ADF/ AGRISUD project and UNDP-BESD project; see below).

ADF IG team continued to monitor these animal raisers and provided material if needed.
With the objective to transform these producers into independent local entrepreneurs, ADF encouraged them to contribute with their incomes to the costs. This allows taking ownership for their business, ensuring sustainable alternative incomes. Beneficiaries were previously asked to repay back to ADF's IG accounts 50% of the amount spent for the materials and equipment they received from ADF. As in 2019, ADF applied the 75% rate for the reimbursements, to encourage the beneficiaries to be responsible. ADF collected these reimbursements over the year 2020, and they were reused for the IG program.

- UNDP-Funded ADF agriculture alternative livelihood

Reminder: Since 2019, ADF has granted funds to provide alternative livelihoods to Khlah Khmum villagers in Kulen, in relation with the creation of a protected area to the north of the village, from UNDP and SIDA, within the BESD project (see Environmental component, below in this report).
In 2020, ADF team has proposed alternative livelihood activities to the villagers of Khlah Khmum. They selected chicken and pig raising. At the end of the year 2020, 2 families were raising chicken and 11 families were raising pigs. ADF provided technical advices and material (piglets and chicks, nets, nails, cement, bricks, water tanks and feeding tanks), with funds from the BESD project.

- AGRISUD and ADF joint-project in Khnong Phnom Commune

Reminder: The partnership between ADF and AGRISUD International officially started in may 2019 with a signature of a Memorandum of Understanding and the beginning of the field activities. AGRISUD International is active in Cambodia since 1995 on supporting family farms to improve their activities for a better and sustainable livelihood. The project "Agroecological and diversification family farming in peri-urban of Siem Reap Province" (IADA-2) is ongoing since May 2016 supporting 820 small agricultural family enterprises to help them increase their income and living conditions.

The concept developed with ADF and AGRISUD is to expend this project to more beneficiaries offering various alternatives to the population, adapting it to the commune of Khnong Phnom specificities, and including ADF existing direct beneficiaries.

The partnership of both organizations commenced in June 2019 with a joint rapid assessment, closely followed by an introduction and dissemination meeting in the 5 legal villages of Anlong Thom, Thma Chrougn, Ta Penh, Sangke Lak and Khlah Khmum. The main purpose of the village meetings was to explain to the existing beneficiaries and the potential new beneficiaries the partnership of ADF and AGRISUD, the benefit of the new synergy of the combined experience of both organizations, and finally the strategy for new agriculture / IG activities. The agreement between ADF and AGRISUD consists in a partnership where both organisations join their funds in the same project. ADF continues to pay for the costs of ADF IG component (salaries of both Ms. Mien Mout and Ms. Bis Cheung, their operational cost: transportation costs, monitoring / reporting costs, stationery, material for ADF beneficiaries, etc…). AGRISUD covers their staff operational costs, all material for the new 120 families, and AGRISUD staff salaries. AGRISUD will benefit from ADF's extensive knowledge of Phnom Kulen National Park (PKNP), its population and their local agricultural habits, the local network of influential people and local authorities (village chief, Commune chief), the provincial authorities and the national authorities (Ministry of Environment, Provincial Department of Environment and APSARA National Authority). ADF staff will gain in professionalism, learning from AGRISUD long experience in this field of agro-ecology, from the producers, to the group then to the market linkage. The beneficiaries will benefit with AGRISUD approach of organizing the farm families into groups / cooperatives, with prospective new products: black ginger, premium fruit trees and possibly pepper. These new products have a higher value per kilogram, and markets in Siem Reap and Phnom Penh are willing to purchase them. The project aims to set up a marketing chain, from the family to the market.

From June 2019, 120 additional families have started activities: 70 for the black ginger growing (27 in Anlong Thom, 16 in Khlah Khmum, 8 in Sangke Lak, 9 in Ta Penh, 10 in Thma Chruogn) and 50 for fruit tree growing (16 types, about 1450 trees distributed, 13 families in Anlong Thom, 3 in Khlah Khmum, 16 in Sangke Lak, 8 in Ta Penh and 10 in Thma Chruogn), bringing the total of families benefiting from this project to a total of 150. In 2020, the number of families benefiting from the project was extended to 28 additional families (5 families in Sangke Lak, 3 in Ta Penh and 20 in Anlong Thom) for the black ginger growing, and to 6 families for fruit tree growing. Later in the year 2020, a black ginger producer also agreed to grow long pepper (Anlong Thom village) and 3 new farmers accepted to enrol the project: 1 family in Anlong village (black ginger) and 2 families in Thma Chruogn village (pepper, long pepper and black ginger).

The 2 demonstration farmers who started in 2019 (1 in Sangke Lak and 1 in Anlong Thom and included in the figures above) continued their production in 2020 of vegetables, fruit trees and black ginger.

At the end of the year 2020, the joint project AGRISUD-ADF was totalising 158 families: 99 black ginger producers and 56 tree fruit farmers, 3 doing pepper or long pepper (one already doing black ginger). Combined with the UNDP-BESD project beneficiaries (13 families) and the ADF beneficiaries (13 families), it brings the total number of ADF beneficiaries in Phnom Kulen to 184 families.

In 2020, more than 4 tonnes of black ginger were distributed to start their production as well as 2000 fruit trees. ADF and AGRISUD team continued to monitor all beneficiaries to ensure the quality of the practices and collect data about their incomes. The black ginger value is 14,000 riels (3.5 us$)/Kg. A group of 3 farmers per village was formed to buy the production from all producers. In 2020, it was stocked at 2 locations in Anlong Thom village. During the planting season, it was then redistributed to the producers for the equivalent of the borrowed amount. The surplus of production is bought by the AGRISUD project. A local donor was identified by AGRISUD in March 2020 to fund a drying unit house will be set up in Anlong Thom village in 2021 for collecting and processing all the black ginger production.
Contracts were signed between ADF-AGRISUD and each beneficiary. They present the roles and responsibilities of each parties (ADF/AGRISUD and the beneficiary), in order to engage the beneficiary to take responsibilities. The organisations commit to provide trainings on strengthening agricultural techniques (production of vegetable crops and fruit trees) and marketing to farmers; to facilitate planning, implementation, revenue recording, production costs, and marketing; to provide assistance, technical advices and regular monitoring; to provide materials to farmers according to the project possibilities and upon request. The beneficiaries must comply with the status of the organization and group of farmers, must collaborate with agri-businesses and agricultural extension officers, have to participate in training programs and follow the instructions from the NGO technicians on agriculture, must follow the best instructions from the technicians and share good techniques with other farmers, must commit to grow crops and fruit trees on their farms regularly and until the end of the project, must record their amount of products borrowed and produced and must allow the visit of international and national guests and provide brief explanations. It is agreed that if a beneficiary does not comply with this agreement, he should pay back the cash equivalents of the investment with equipment.

One trainer per village was assigned (or master farmer) for each group of producers (fruit trees and black ginger). Distribution of material (watering can, shovels, hoes, green shade nets…) was also organised for each farmer. T-shirts of the project were also distributed to the farmers to promote it.

Despite all the efforts, the 2020 rainy season affected the black ginger production. The September survey indicated that 60% of the black ginger production was damaged and that 36% of the fruit trees were lost, because of the lack of water in dry season, and the roaming animal eating them.

Training was ongoing over the year 2020 (with numerous sessions from 8th to 11th and 16th to 18th and 23rd to 25th of June 2020), with courses about weeding, fertilizing and pruning. This project also brought 15 farmers (including 11 women) at Kandek commune for a 1-day visit to learn about vegetable growing on tables. Other trainings proposed to learn the drying techniques for the black ginger producers and the grafting techniques for the fruit tree producers. One of them included a visit to Pursat Province.

On the 21st of January 2020, ADF team participated to the workshop about the development plan of agriculture in Khnong Phnom Commune, at Department of Commerce in Siem Reap, organised by AGRISUD. The team also participated to meeting to summarize the work results of the year 2019 and the scope direction for 2020 with the Siem Reap Safe Vegetable Growers Association

and to the workshop "Think together, act together" at the Khnong Phnom commune.
The team also or organised meetings to improve the external communication of the project such as gathering fruit tree farmers with the AGRISUD photographer for interviews and photo shoots.

- ADF- AGRISUD collaboration project with CIRD

ADF was approached by the Cambodia Institute for Research and Rural Development (CIRD). After several exchanges, preliminary meetings were hold between CIRD, ADF and AGRISUD (28th of September 2020), then ADF and CIRD (20th of November 2020), it was decided to coordinate the respective activities of each NGO in Phnom Kulen National Park (PKNP), in order to avoid overlapping and to complement each other, for the benefit of the local population. CIRD is implementing alternative livelihood in PKNP villages such as Ta Penh, Thma Chruogn and Sangke Lak (vegetable farmers and chicken raisers). CIRD had secured an agreement with AGRISUD (partner of ADF for the implementation of alternative livelihood activities) to implement these activities in PKNP. CIRD provide seeds and small fruit trees as well chicks and ADF and AGRISUD provide additional training to the beneficiaries.

In partnership with CIRD, the ADF-AGRISUD team led the Phnom Kulen village trainers to train the farmers of CIRD beneficiaries in 3 villages (9 demonstration farmers and 105 regular farmers in Thmor Chruogn, Ta Penh, and at the bottom of the Phnom Kulen, Bit Phka). These villagers also benefiting from this organisation with chicken raising, fruit tree and vegetable growing activities.

On the 20th of August 2020, ADF team organise the visit for the APDRA organisation, for their assessment of the feasibility of fish raising activities in Siem Reap province, within the DéFiP project. A one-day tour was organised with their partner TCO (Trailblazer Cambodia Organization) to visit previous fish farmers from the ADF project in Phnom Kulen and present the Phnom Kulen context and its challenges.

In 2020, ADF continued to be part of the "ALiSEA", the Agroecology Learning alliance in South East Asia, a network of Agroecology practitioners and supporters (sharing and supporting common goals on agroecology) that actively engages its members into information/knowledge sharing and vibrant collective actions promoting an agroecological transition, and providing meaningful benefit for all participants.

Eco-tourism alternative livelihood

- **Community-based tourism centre (CBTC) in Anlong Thom (CAR project)**

Reminder: A new road crossing Phnom Kulen National Park now reaches Anlong Thom, Thma Chruogn and Ta Penh villages. The archaeological sites close to Anlong Thom are now easier to access.

The objective of the CAR project, designed by ADF team (submitted to the donor ECM travel agency in May 2018 and accepted in August 2018) is to ensure that the centre will be used by and for the benefit of the Anlong Thom CPA members, as a tool to create alternative income from tourism. ADF and Terre Cambodge (travel company, ADF partner and donor) and were closely associated to train the Community Protected area (CPA) members, and to design and set up tourism products. A preliminary meeting with the local authorities and the CPA members took place on the 19th of September 2018. A first location was decided in Anlong Thom village. However, the location turned out to be unfit for the centre, as it belongs to the police. The final choice for a proper location has slowed down its construction but was finally agreed on the 24th of April 2019, with the Commune chief and the Community Protected Area (CPA) members. The community-based tourism centre (CBTC) in Anlong Thom was built from June until November 2019 and turn into this. Funds from TDS travel agency were added in December 2019 to this project, as both travel agencies are working with ADF private partner, Terre Cambodge. This centre will allow additional incomes to villagers from the local tourism and a shared knowledge and increased protection of the Phnom Kulen historical sites and its natural environment.

From January to October 2020, the Anlong Thom CBTC was finalised and opened. Roles and responsibilities of the CBTC members were defined together with the CPA members, TC and ADF. The CPA is the villager's organisation in charge of the preservation of 365 ha of preserved forest by Anlong Thom village. Because of the long-lasting history of this structure, ADF was inclined to use it for the management of the CBTC.
It was also recommended by the MoE. However, the CBTC was requiring more and various positions (moto drivers, cook, guide…) than the CPA and therefore the 2 structures are closely linked but their organisation charts slightly different. Anlong Thom CPA is hosting the CBTC and the CBTC team manages the centre.

TC was providing technical help to define the CBTC touristic offers, the training of the CBTC members and ensured the promotion of the centre. ADF was proving the general follow-up of the project and technical assistance and specific trainings. The organisation of this structures was done progressively during the year 2020, together between CBTC, TC et ADF members. ADF has hired on a part-time basis from April to December 2020 Ms. Chhun Phirom, TC staff, as a manager for this project. She was in charge of setting up the centre and its organisation. This includes the trainings of the CBTC members and the definition of the good practices and security measures for visitors and staff, the hygiene and environmental rules for visitors and staff, check-up lists and security regulation for moto-drivers, hygiene rules and menu lists with environmentally-friendly packaging and internal rules of the CBTC. Several documents were designed such as the visitor recording system, receipts and invoices from CBTC and parking, motorbike check-list for moto drivers, emergency contact list, contract for cooks, drivers and local guides.

ADF has also hired a person on a part-time basis contract to run the centre from October to December 2021 and continued over a few months in 2022. Others CBTC members would be paid a task-basis according to their responsibilities: 2 local guides, 3 cooks, 14 moto drivers. Other responsibilities were defined such as CBTC fund manager, secretary, maintenance, tree nursery and vegetable garden, camping manager, tools and equipment manager, for a total of 17 persons. Activities such as tree nursery and vegetable garden were requested by the CBTC team to provide additional incomes. They benefitted from ADF experience and training in vegetable farming and tree nursery to start these activities. The centre also displays local handicrafts products (mats, baskets, knives…). These traditional objects are crafted by elders in villages. This know-how is threatened to disappear if it is not transmitted and supported by a larger market. The centre aims to encourage their production and sales, bringing additional incomes to this vulnerable population. The CBTC will provide direct income to the associated team and handicrafts producers but also indirect incomes to the animal raisers and vegetable farmers providing food for the lunch packages, and others such as gasoline and mechanic shops.

From April to June 2020, Ms. Chhun Phirom and the CBTC staff undertook surveys to define the tours that could be offered to the visitors, particularly to the south and east of Anlong Thom village where there are more archaeological remains. Three tours were defined and include ancient sites, preserved forested areas, and cultivated areas. Services are offered on a daily basis as visitors come for a day from Siem Reap. Walking tours were preferred to tours with mototaxis; others are combining both. Drivers take turn so every one of them can get incomes. The prices for each of these tours have been calculated by Terre Cambodge and include the local guide, the price of mototaxis, meals, water and a snack. They range from 25 US $ to 30 US$ per person. These prices are calculated based on costs and include a margin for the CBTC.

A Facebook page has been created (https://www.facebook.com/anlongthom.cbtc.5) to promote the CBTC. The rules for "post" have also been defined jointly between the CBTC and TC, in order to avoid selfies, ensure consistency and a quality of service. This page is run by two members of the CBTC, Ms. Chhun Phirom and Mr. Laurent Holdener of TC. It promotes the centre via Facebook, a very popular social network in Cambodia.
A welcome booklet has also been designed to be presented to visitors upon arrival at the CBTC. It presents the predefined maps and routes. These routes have not been indicated on the general

map so they can not to be photographed or copied, and thus avoid going through the services of the CBTC.

Following the start of Covid-19 crisis in March and April 2020, and the reactions to it, some Cambodians camped near the river passing just north of the Anlong Thom CPA, at three distinct points (Peam Kre, O'Ta Chok, O'Chup Thnal). The Anlong Thom CPA members therefore tried to organize these areas to take advantage of the economic benefits of these campsites. They invested in buying tents, building toilets and doing some clearing by the river to set up the tents. It was not the intention of TC or ADF to encourage the practice of camping in these conditions, but with no choice regarding this situation, ADF and TC provided their advice to improve these camping conditions. On a fourth location, the Angkorian dyke of Thnal Dac, members of the CPA had previously built picnic kiosks. ATC and ADF helped define the prices for the rental of kiosks, equipment, security and parking, and finally the prices of the meals offered.

The training of the CBTC team has been continuous since May 2020. It is provided by Ms. Chhun Phirom and has been focused on the reception and management of groups of visitors, training in hygiene rules for cooks and rules safety for mototaxis, and finally the preservation of the environment and waste management. A water filter was purchased by ADF out of the project budget. It allows CBTC members to fill their aluminium gourds. These, as well as a garbage bag, were provided free of charge by Terre Cambodge for each member of the CBTC. Mr. JB Chevance also provided two introductory sessions to the archaeology and history of Phnom Kulen to members of the CPA and the CBTC (June 3rd and November 18th, 2020). The training and support to CBTC members of Anlong Thom by Ms. Chhun Phirom continued over 6 months, between January and June 2021, thanks to another similar and simultaneous project in the village of Popel (CBTC of Popel), funded by the UNDP (United Nations Development Program, see ADF environmental component below). ADF also provided training for CBTC members for the nursery and vegetable garden.

The CBTC also aims to increase awareness of the natural and archaeological sites of the Anlong Thom region to visitors and local population. This included designing the information panels and maps presented in the centre. The centre and its interior volumes were designed in part taking into account the existence of information panels. Several were designed, printed and installed:

- A large map of Phnom Kulen with as much information as possible. It includes the location of main roads and paths, villages and archaeological sites. Protected areas within the National Park and its outer limits are also indicated.
- 4 general information panels (double-sided and bilingual: Khmer and English, 1m x 1.6m, suspended), relating to Phnom Kulen (1: Geography, hydrology and landscapes, 2: History, archaeology and heritage conservation; 3) Local life and crafts, 4) Fauna and flora.
- 3 other information panels (bilingual: Khmer and English relative and in the centre: 1) Context of the creation of the centre, its objectives, funders and partners (80 x 150 cm); 2) Code of conduct for visitors (80 x 150 cm); this panel summarizes in several simple points the rules to be observed in matters of safety, preservation of the environment and general attitude; 3) Organizational charts of Anlong Thom's CPA and CBTC (80 x 60 cm).
- A double-sided sign on the main road directing visitors to the centre, 80 meters away.

All of these panels were designed by Mr. JB Chevance and Ms. Chhum Pirom. The English texts were translated into Khmer by Mr. Sakhoeun Sakada and Ms. Hoeung Hourapich (ADF). Once the texts and design were validated by ADF and TC, they were printed in Siem Reap then transported and installed in the building the days before the official opening of the centre. A volunteer photographer (Mr. Keo Kosal) was kind enough to take several photo shoots to illustrate some of the information boards (agricultural activities, livestock and local crafts, identity photos of the CBTC members).

The centre was officially opened on the 11th of November 2020, in presence of Mr SUN Kong, Provincial Director of the Environment (Ministry of the Environment), of the team of CBTC and CPA of Anlong Thom, of the team of ADF and Terre Cambodge (Mr. Laurent Holdener), representatives of local authorities and villagers. In total, about a hundred people were present.
This ceremony included the prayers and blessings of the bonzes of Anlong Thom Pagoda, a series of speeches (Mr. SUN Kong, Mr. PHANN Phin, Mr. JB Chevance) followed by the official opening, the visit from the centre and a meal. These speeches gave the occasion to present the objectives of the centre to a greater number of villagers. Two sets of T-shirts / polo shirts were designed and distributed to each of the CBTC members.

The CBTC is operational. It is nevertheless necessary to continue training his team, and to continue to ensure his promotion. The Covid-19 crisis allows this centre to run in with local or expatriate visitors. there are still a number of areas for improvement, including:

- Clearer access to the centre's accounts with its income (in particular the number of people for each of the tours, the selling prices, the costs and profits per month) and its expenses, with a monthly return to ADF and TC.
- Better establish the responsibilities and refining the positions of each member of the CBTC and replacing / modifying them in the event that some members are not competent.
- Seek funding to ensure the continuity of Miss Chum Phirom's half-time for the months of June to December 2021, and possibly that of the two officials of the CBTC.
- Present the tours in Khmer on the FB page with descriptions, photos, prices, etc.
- Present a marketing model of the centre for travel agencies.
- Ensure camping conditions worthy of the name, while respecting the quality of service and the environment.

On November 4th 2020, H.E. SAY Samal, Minister of Environment of Cambodia, presented the third prize for the best CPA in the country to the Anlong Thom CPA. This was an encouraging sign. However, the success of the CBTC depends on its good management and on maintaining the quality of the tourist offer. AT and TC committed to remain in support from January to April 2021 (thanks to the UNDF-BESD project and its CBTC in Popel village), with the commitment of Ms. Chhun Phirom, the maintenance of the two salaries of the CBTC and the training by TC and ADF teams. However, it was recommended that this support should be extended until the end of 2021.

- **Development of eco-tourism and presentations to visitors from Terre Cambodge travel agency**

Reminder: In order to create another source of income for the villagers, ADF previously helped Terre Cambodge to select families who are willing to develop home stays in Anlong Thom and Sangke Lak villages. Terre Cambodge built toilets for the beneficiaries and they received cooking and hygiene training. The tour organiser can also buy the products farmed by the villagers (vegetable, mushrooms, fish, chicken). ADF has also advised Terre Cambodge to select motivated villagers to join the group of visitors, as a local guide. Having westerners' visitors in their households, or being a local guide, also provide an opportunity for a unique cultural exchange, for both visitors and villagers.

From January to March 2020, this Income generation/agriculture project (IG) component was still supported by Terre Cambodge travel Agency and Frangipani Spa. Due to the C-19 pandemic, international tourism has completely stopped in Cambodia in March 2020 and these donors were no longer able to support any longer ADF. From March 2020 onward, it was no longer funded by these two donors but financial reserve of funds was made over these years of regular funding and ADF was able to go through the year 2020 by using them. ADF continued to receive the financial support another associated tour operator (Chamäeleon Stiftung, November 2020), to sustain the Income generation (IG)/alternative livelihood program. The regular donation from a faithful private donor (Mr. Eric Bettens) was also fully allocated to the Income Generation Component.

In return, ADF provides presentations to the visitors from these tour operators about the ADF activities. Visitors are encouraged to give private donations in cash to ADF, which are dedicated to the IG budget. In some cases, if the tours are long enough, visitors can also participate in the IG activities with the beneficiaries (ex: help the farmer to maintain his vegetable farm).

There were only a few presentations done from February to March 2020 (07th of February 2020 presentation to 14 guests at Sangke Lak, 17th of February 2020 presentation to 8 guests at Anlong Thom, 21st of February 2020 presentation to 11 guests at Anlong Thom, 02nd of March 2020 presentation to 3 guests at Preah Ang Thom) as no more visitors came later on.

Rice Bank in Thma Chruogn village

Reminder: The ADF input and support for the Rice Bank, set up in 2013 in Thma Chruogn village, is now mainly of a technical nature, guidance, monitoring and recording. The objective of this project is to alleviate food insecurity amongst the target population.

The concept is similar to a bank: beneficiaries can borrow rice when they have a shortage of supplies and have to give it back with a low interest, after the harvesting season (usually in November each year).
The beneficiaries are divided into 8 groups of household members, an equivalent to 34 families. The rice bank committee consists of 4 permanent members who are organizing in-house activities, ranging from administration to the maintenance of the rice bank. They are also responsible for lending to and collecting rice from the household members. 18 families borrowed rice in 2019, 24 families borrowed rice in 2018, 27 families in 2017, 39 families in 2016, 23 families in 2015 and 34 families in 2014.

On the 09th of January 2020, the rice bank collected rice from farmers for a total of 6456 Kg. Some farmers pay back in cash which was used for paying villagers who participated to the storing of the rice in the rice bank. The remaining was kept to rice bank's committee. The number of borrowers in 2020 was 13 families (total of 201 persons, including 97 female). 3800 Kg of rice were distributed to villagers, and the remaining 801 Kg were kept in rice bank. Some was later sold for a total of 1,755,600 Riel (=438.90 us$). Later in 2020, the committee sold 252 Kg of rice paddy, leaving 549 Kg at the end of the year.

Additional support consists in minor repairs and maintenance of the Rice Bank building, trying to make it as pest proof as possible. From 2020, ADF IG program stopped paying additional rice to compensate the loss from the pest infiltration and weather impact on the total rice weight.

d. HYGIENE AND SANITATION PROGRAM/EMERGENCY RELIEF

Hygiene and sanitation program: the WISH project

Reminder: The WISH project, focusing on Hygiene and sanitation, was designed and proposed to the Almayuda Fundación (Spain) in March 2018 and started in June 2018.
The Water In-environmental Sanitation & Hygiene (WISH) project is based on the Karolinska Institute report from the assessment of the SMU project, but also on the activities undertaken by ADF in Sangke Lak primary school, with the KURERE project (KUlen REhabilitation & REgeneration project), from September 2016 to February 2018.

The objective of the project is to promote and disseminate correct personal hygiene behaviour change, building and expanding on the successful KURERE primary village school project executed in Sangke Lak village. The project aims to promote and develop Water Sanitation and Hygiene facilities in two primary schools on the plateau of Phnom Kulen National Park (Klah Khmum, Sangke Lak). The project is combining hygiene and environmental awareness practices. Both interventions will foster preventative healthy behaviour to primary school children, resulting in affirmative life skill behaviours. A third intervention is to rehabilitate or built efficient water systems and hygiene facilities in the primary school of Ta Penh, Sangke Lak and Khlah Khmum.

The project started in June 2018 with an assessment or baseline survey until August 2018 (See ADF 2018 activity report). The year 2019 was focusing on improving the work done started in June 2018. In order to reinforce the participation of the primary school teachers from Sangke Lak and Khlah Khmum, ADF had a contract signed with each of them to insure their roles and responsibilities.

Additionally, ADF management staff set up a check-up list for ADF hygiene assistants to fill randomly, to determine if all infrastructures related to hygiene were functioning and to monitor the hygiene standards of the school facilities. Almayuda Fundación representatives visited the Phnom Kulen schools with ADF team late February 2019.

Two reports were submitted to the donors (in April 2019, covering the period from June 2018 to March 2019 and in June 2019, covering the period from April 2019 to June 2019). These project reports narrate the activities implemented during the first 12 months of the WISH project (June 2018 to June 2019), presenting every activity, challenges met and solutions found, as well as plans for the futures and expenses and were summarised in the 2019 ADF report for the Charity Commission.

The WISH project was originally planned from June 2018 to May 2020 (24 months). Due to the Covid-19 crisis and the closure of all schools in Cambodia on the 17th of March 2020, it was decided with Almayuda Fundación to shorten it until the end of April 2020, one month prior to the original closing date. The remaining budget would be used for an adapted project (C-19 WISH) which started in May 2020 and lasted until December 2020. Before the end of the C19-WISH project, another project (WISH 2) would be proposed for funding to Almayuda Fundación. Any remaining funds of the C19-WISH project should be integrated into the new project (WISH 2).

The final report for the WISH 1 project was submitted to Almayuda Fundación in May 2020 and is summarised below.

The inception of WISH project started with an explanation to key stakeholders of planned activities, to work towards the objectives of the project. This concerned the school teachers and principals, the local authorities (village, commune and district), the Health Centre of the commune (Khnong Phnom). This activity went off smoothly and in accordance with the WISH activities plan. Formal and semiformal meeting were held to all stakeholders, and continued throughout the project duration, to remind stakeholders of their respective roles and responsibilities, and to keep them fully engages.

The Baseline survey of the WISH project was also conducted according to the Activity Matrix. The objective of the survey was to determine the conditions, situations, beliefs and behaviours of the two-targeted primary schools. This included the students, teachers and all other relevant stakeholders as well as the facilities. The first activity of the WISH project was to conduct a baseline survey. The results of the survey would act as key measuring tools, to determine if all subsequent activities and implementation of the project would be successful and if the expected results and objectives achieved. According to the Independent External Evaluation report, results improved substantially, tooth brushing for example increased by a factor of seven (7) fold. The External Evaluation report summarizes the comprehensive details.
The construction (and where required rehabilitation) of the WASH (Water and Sanitation and Hygiene) facilities and related infrastructures in the 3-primary school on the Phnom Kulen plateau (Khlah Khmum, Sangke Lak and Ta Penh) have all been completed, as detailed in the WISH project proposal.

The WASH facilities included spring water catchment systems, including brick pond collecting water from the springs, several concrete ring wells holding water tanks, pipes buried over 600 to 900-meter-long distances. They were completed by the construction of a protected wash bay, the renovation of the toilets, the setting us of drinking water filters, the rehabilitation of an existing but non-functional solar panel and the construction of an incinerator in Khlah Khmum school.

This was completed by a playground, 3 rubbish bins and 1 concrete table. Sangke Lak primary school's WASH facilities were constructed during the former project to the WISH project, the KURERE project. However, WISH project allowed to upgrade them with the completion of 600-meter-long buried pipe system and fixed a 100-meter-long destroyed section due to illegal slash and burn farming, with a financial and labour contribution from the villagers responsible for the fires.

Delays in construction and renovation were encountered, due to extreme raining episodes during the monsoon and the discovery of several Unexploded Ordnances (UXO) at Khlah Khmum primary school. The UXO were safely removed and the whole school compound was carefully secured. ADF is pleased to announce that Khlah Khmum School compound is now an UXO-free area, thanks to the collaboration between ADF team, the local authorities and the Cambodian Mine Action Centre (CMAC).

The other setback for the rehabilitation and the maintenance of the WASH facilities was the destruction by fire of the water system at the Sangke Lak School. The ADF team fixed both constraints, after time consuming negations and subsequent approvals with the local authorities. All pipes are now buried. Vegetable garden were implemented in both schools, with the technical and material support of the ADF alternative livelihood/ Income generation team.

Sanitation and Hygiene information signboards, and Information, Education & Communication (IEC) materials. Both of these resources have been developed and tailored to add and aid the prime activity of the WISH project. They involve preventative health care education and awareness combined with environmental education. In both schools, signboards have been placed in key locations to assist the ADF's Hygiene assistants (Ms. Nimul & Mr. Vann) and the respective teachers. These materials help to disseminate the proper hygiene procedures, including appropriate timing, and the benefits of personal sanitation and hygiene, alongside with a clean and thriving environment.

The Preventative health care education and awareness was the prime activity of the WISH project, with an emphasis on Preventative Health Care / Sanitation and Hygiene. It was combined with environmental education. This was implemented in the two primary schools of Sangke Lak and Khlah Khmum with various activities such as: Daily washing hands, at least 3 to 4 times per day, under the supervision of teachers and ADF staff; daily brushing teeth, twice a day; regular nail-cutting; weekly training session from ADF staff and teacher to the school young students. Each child has his own toothbrush and a special hanging place was design to store it, by name, in each classroom. Preventative health care has been incorporated into the school curriculum. During the school public holidays (30th August to 1st of November 2018 and 2019), ADF WISH team members organized training sessions about hygiene for the children and their mother at their households.

The independent finding of the External Evaluation report shows that the WISH's prime activity has been an overwhelming success. "Results showed that student's hygiene has improved substantially during the project. Daily handwashing practices increased more than a threefold and toothbrushing increased by a factor of seven. Now, all children brush their teeth and wash their hands at least twice daily. Almost all children have learned that diarrhoea is caused by germs. Many can give examples of preventive measures, such as handwashing, drinking clean water and washing vegetables before cooking…" (External Evaluation Report, p.3). More generally, "The daily hygiene practice is a major strength of the WISH-project. The large effort made by ADF staff have resulted in a visibly higher hygienic level among the school children." (External Evaluation Report, p.10). From January 2019 and along the WISH project, it appeared essential to closely link the Commune Health centre staff with the WISH activities. Various activities were therefore organized such as monthly training sessions from the Head of the Nurse (Mr. Ngey) and one nurse assistant from Anlong Thom Health centre, in the 2 targeted schools to disseminate health and hygiene messages.

This was also ensuring a regular checking of children who might have health problems and not being able to go to the Health Centre, located at Anlong Thom village, 4 Km away from the two schools. ADF team was also participating to the monthly meeting of the Anlong Thom Health centre. The evaluation team has also assessed this activity and has, after a request from the Health centre, compiled a document with health information from trusted sources, covering 12 topics relevant to Phnom Kulen's health context. It has been translated into Khmer. The Independent External Evaluation report provides a comprehensive view of the results and findings of the WISH project.

The environmental activities were divided in two parts.

- Educating and highlighting the correlations and the relationships between water, sanitation, hygiene, and personal / household health; promoting a cleaner and healthier environment. This environmental activity was termed as "Clean-Up" day. This event normally occurred once a week where all the students from the 2 schools, teachers, the ADF team and some of the parents, worked in groups to collect all the rubbish and burn it in the school incinerators. One or two times per month, the "Clean-Up" day extended to the villages of Sangke Lak village and Khlah Khmum.

- Creating synergies with other ADF projects, for example the tree growing project in primary schools and reforestation, the environmental zoning, and more generally the environmental preservation. Connecting the WISH project with the tree nursery at Sangke Lak primary school is a prime example of this dynamic. This tree-growing project is not funded by Almayuda Fundación but by Kulara Water Cie/Eau Kulen mineral water. This second environmental activity was held all year long as children are in charge, with their teachers and ADF team, to maintain the tree nurseries. During the monsoon season, ingenious trees grown in the school tree nurseries were planted by the students, teachers, parents and the villagers, alongside with the Provincial Department of the Environment (PDoE) and the ADF team, in designated areas of Phnom Kulen National Park (PKNP).

The most notable constraints and challenges encountered during the WISH project were:

- The presence of Unexploded Ordnances (UXO's) discovered at Khlah Khmum School. This very unfortunate event put human safety at risk and delayed the construction and the rehabilitation of the water systems, sanitation, hygiene and playground infrastructures.
- The local authorities were very slow and excessively bureaucratic in ratifying and signing documents, allowing the demining operation in Khlah Khmum School by the Cambodian Mine Action Centre (CMAC).
- A delay was due to inclement weather and a particularly strong period of heavy rain, which impeded the delivery of construction materials and equipments.
- The head teacher at Khlah Khmum School did not have a strong work ethic and was not working as well as expected. Fortunately for the WISH and Khlah Khmum primary school, he was demoted and removed from the school.
- From early time during each dry season (from early March 2019 and 2020), severe droughts were observed and threatening the supply of water for the schools and the other reservoirs of the targeted villages. This phenomenon, clearly increasing over the last years, is a main challenge as it is impeding water supply, necessary for any WASH-related project in the Phnom Kulen villages. It is clearly due to the largely but illegal main farming activity, the cultivation of cashew nut in Phnom Kulen National Park.
- The local authorities (Village chiefs and Commune chief) are clearly not proactive for the management and the maintenance of the water systems. Malevolent persons are redirecting pipes from the sources to their houses, capturing the small quantity of water left during the dry season. Moreover, water being free of charge, no one feels responsible for it. Villagers and school teachers are counting too much on ADF to fix the water systems when they come to fail.

- The Independent Evaluation has highlighted the human or animal faecal water contamination in both primary schools. As the pipe systems are buried, the origin of the contamination was suspected to be at the sources of each water system, both being opened. The WISH project has addressed the issue by providing individual metallic cups and water filters, campaigning for their use for toothbrushing at school and building a closed and covered shelter above each of the source providing water for the 2 schools. Further tests will help to determine if these actions were effective.
- However, trying to get E. coli down to zero is probably not possible as the situation is very different from more advanced economies, where water systems are passed through water purification systems and treated with fluoride and chlorine, before they reach school, homes and other establishments. Despite the shelters above the sources, obtaining pure water from a spring water catchment in a national park (were wildlife is in and around the water springs), is difficult and there will undeniably be a degree of E. coli in the water system. ADF is committed to test again the water to determine the levels of E. coli. Water testing will depend on the possibility of collecting samples and having them tested. The use of robust water filters at the schools is still recommended.
- The Covid-19 crisis has led to the schools closing, from 17th of March 2020, across the country country. Daily hygiene sessions and monthly health-related (health centre disease training) and environmental-related ("Clean-up" day) activities were halted. It was decided not to distribute the tooth brushes and toothpaste to each child involved, and normally kept at school, as other members of the family could use it. This would have been counterproductive in term of hygiene and sanitation. ADF has reassessed these measures during the C-19 WISH project, in order to keep the benefit acquired and the behaviour built during the WISH project.
- Finally, the Cambodian Government has imposed a lockdown from the 10th to the 16th of April 2020, to avoid all travels between provinces and districts during Khmer New Year. Additionally, ADF office in Siem Reap was closed from the 25th of March to the 4th of May 2020, forcing the management staff to work from home. From the 6th of April, ADF management team has decided to limit the movement of the team members, opting for a delegation of responsibilities from the ADF Siem Reap-based team to the ADF Phnom Kulen-based staff. ADF Kulen staff was given instructions from Siem Reap by phone.

The last activity of this project was to conduct an external and independent evaluation, which started in November 2019 until February 2020, aiming to assess how the WISH-project is performing, and to provide recommendations for further action. It was done by medical student Mr. Sebastian Von Shreeb and his assistant Ms. Kong Leaksmy (at no cost for the WISH project, as the evaluator was a volunteer and the evaluator paid the translator). It was presented to all ADF team on the 6th of February 2020. A mixed methods approach was applied, including research-administered surveys, semi-structured interviews, site inspection, microbiological testing and analysis of health centre admission data. The result was a high-quality report, evaluating positively the methodology and the results of the WISH project. The Evaluation report encapsulated some very positive results and findings, alongside with some interesting recommendations.

Results showed that student's hygiene has improved substantially during the project. Daily handwashing practices increased more than threefold and toothbrushing increased by a factor of seven. It has directly benefit 82 students in Khlah Khmum schools (40 females) and 113 children in Sangke Lak (56 females). At the time of the survey, all children brush their teeth and wash their hands at least twice daily.

Almost all children have learned that diarrhoea is caused by germs. Many can give examples of preventive measures, such as handwashing, drinking clean water and washing vegetables before cooking. The team also found that children talk about hygiene with their parents.

However, challenges remain for the WISH project. For instance, the evaluation found high levels of faecal contamination in the tap water the children drink from.

Also, a large majority still practice open defecation, which contaminates soil and water sources. Project staff lack basic education in the concepts of water, sanitation and hygiene, as well as the principles of health behaviour change. Moreover, girls largely lack access to any information about menstrual hygiene management. Finally, there is a large risk that achieved improvements will be lost if involvement in the schools ends abruptly.

To address these issues, as well as the other issues presented in the report, the evaluation team have compiled 17 recommendations, along with detailed instructions on how to implement them. Recommendations include: a filter water campaign, a module on menstrual hygiene, a review of hygiene teaching methods, fact-checked health information for monthly teaching sessions and educational opportunities for staff-training. If the WISH follows the suggestions in this review, it was also recommended that the project should be expanded to the nearby schools in Ta Penh and Popel.

The main reasons to select these 2 schools is the request from their teachers and principals to benefit from a Hygiene and sanitation project in their school, the existence of a water system set up by ADF, the important level of ADF's involvement for the development of the villages at various levels (agriculture alternative livelihoods, tree growing in the school tree nursery, forest zoning and protection and Community-based Tourism Centre at Popel, water system for the village in Popel and for the school in Ta Penh, lack of hygiene facilities at Popel School), the numerous children registered in these 2 schools (Ta Penh school is the third most frequented school in the Commune with 144 students, including 79 females; Popel schools has 100 students, including 43 females; Commune data, 22 Nov. 2019). In the two schools were WISH is currently active, it was recommended a future project to gradually transform activity into providing a minimum level of involvement during an extended period of time, in order to enhance sustainability.

Some of the recommendations were piloted from February 2020 but regrettably they had to stop from the 17th of March 2020, as all schools in Cambodia were closed due to the Covid 19 global pandemic. Others require a larger project.

C-19 WISH project

Due to the extraordinary circumstances of the global Covid-19 pandemic, ADF requested to the Almayuda Fundación in late April 2020 that the WISH project should be adapted and transformed into a Covid-19 preventative health project (C19-WISH project) to support the under-resourced Khnong Phnum Commune / Phnom Kulen's Health Centre. To address this new challenge, the project has commenced at the beginning of May 2020. The objective of this project would be to help fight and contain this virus in the villages of Phnom Kulen. When schools reopen, ADF should also be able to turn the project back to the WISH original project, together with C19 preventive activities. After completion of this C-19-WISH project, a WISH 2 project, extended to additional schools, could be implemented.

The predominate effect on ADF's Water In-environment Sanitation, and Hygiene (WISH) project was the closing of the Khlah Khmum and Sangke Lak primary schools, the projects target schools. Like all schools in Cambodia, they were closed to contain the spread of the COVID 19, from 16th of March to 7th of September 2020. Later on, from 30th of November 2020 to 11th of January 2021, a second closure of all schools in Cambodia was decided by the government to avoid the spreading of the C-19 virus, after a limited outbreak in Phnom Penh capital.

Due to time and budget constraints, it was agreed with the donor that the C-19 WISH project would focus on water supply and fundamental preventative health care equipment and materials. As an example, COVID 19 posters, disinfectant, cleaning materials and soaps were distributed and numerous preventative COVID 19 information awareness sessions were organized by ADF team staff in the 9 villages of Khnong Phnom Commune. The objective was to communicate the knowledge of preventative measure to COVID 19 with health care behaviours, to the communities of Phnom Kulen.

The project's starting date was 04th of May 2020. The original duration of the project was six (6) months, until the end of October 2020. In October, it was decided in accordance with Almayuda Fundaciòn to extend the project until the end of the year (31st of December 2020), so all remaining funds would be spent at this date. If agreed by the Almayuda Fundaciòn, a new project (WISH 2) could then started from 2021, for a 4-year period.

Project Inception: Explain to the key all stakeholders, especially the Health Centre head nurse, health centre staff, ADF's Hygiene assistance's the purpose of the C19 WISH project. From then, convey another meeting to explain to the other key stakeholders (commune office, police). Thereafter, role and responsibilities assigned to the personnel &/or groups were determined. This activity started immediately after the Almayuda Foundaciòn agreed with ADF the implementation of the C19 WISH project. The first step was to orientate and train the ADF staff of how to protect themselves and others not to contract the Corona C-19 Virus. Following this crucial step, procedures were explained if someone contracted COVID 19 (who to contact and where to take the patient, etc.).

A meeting was organized with Mr. Cheab Ngey, the head nurse and his Staff at the Khnang Phnum Commune / Phnom Kulen's Health Centre, at Anlong Thom village. The purpose of this meeting was to strategize and plan the most effective approach to implement the COVID 19 project, how and when to involve the other main stakeholders such as the Police members, the commune and village chiefs etc…, and to determine the role and responsibilities of these actors.

Purchase / procurement of all necessary equipment & materials and transporting them by the ADF car to the target area. This second activity consisted in the purchase of all necessary project equipment and materials, and to transport them by the ADF car and moto to the various target areas on Phnom Kulen. This activity was ongoing throughout the project duration and was adjusted on a needs and budgetary bases. Additional donations of soaps, disinfectant material, masks and gloves were given by external and complementary donors of the project (see below), to complete the core materials provided by the C19-WISH project.

Dissemination of preventative COVID 19 health information & practices through sessions in households, in 9 villages of the Khnong Phnom Commune. This activity has been repeated until the end of the project. Repetition of these activities have worked towards the project purpose, obtaining positive behaviour change. 57 sessions were organized in 9 villages involving 708 participants.

Adjustments to the project were made & based upon update and/or new information from the Ministry of Health, or new emergency laws from the Government of Cambodia. For example, the school reopened in Cambodia in September 7th of 2020 but a second closure of all schools of Cambodia was decided from the 30th of November to the 11th of January, due to a limited outbreak of C-19 cases in Phnom Penh. The ADF team adapted to the situation by proposing accordingly C-19 awareness sessions in villages and/or hygiene activities in Sangke Lak and Khlah Khmum schools.
The activity was the nucleus of the C 19 WISH project, giving preventative advices and information on how to protect yourself, families and the communities. The preventative advice and information were centred on three fundamental, clear and easy themes.

- Be Informed & ready: Listen / read and follow factual information from your local health centre, and from the WHO (World Health Organization) and from the MoH (Ministry of Health). Avoid unreliable information, especially rumours from platforms like Facebook. Listening to factual informed advice is very important in the Phnom Kulen context as a significant majority of the population is unable to read Khmer. ADF did a lot of repetitive advocacy and awareness campaigns in numerous households' sessions. Be ready and know what, where and who to go if you anyone you know have any symptoms. Know how to call and seek care immediately.

- Be Safe: Follow as many of the precautions as possible. Wash your hands for at least 20 seconds, and as frequently as possible, avoid touching your mouth, nose and eyes, maintain personal and domestic hygiene. Other preventative safety precautions in poor communities, like social distancing, are difficult as many people live in one household and sometimes sleep under one mosquito net. Hand washing and maintaining personal hygiene was also difficult to promote in some households, as access to clean water is in some cases far away or not always available. For this reason, ADF distributed over 180 sealed water buckets with a tap to every households in Khlah Khmum and Sangke Lak village on the 3rd of September 2020, and trained the villagers on basic hygiene measure related to the C-19 pandemic. 57 sessions were organized in 9 villages, involving 708 participants, raising Covid 19 awareness, but also hygiene practices and environmental education (stressing the risks of using and burning plastic for the environment and the health, addressing recommendation #8 from the WISH 1). ADF team also follow up and assisted the Health Centre team to village sessions and had regular training about 12 local diseases (intestinal worms, dengue, pneumonia, diarrhoea, infected wounds, dental caries, malaria, typhoid fever, anaemia, mosquito, cold, influenza) and their prevention, implementing the recommendation of the WISH 1 project, and particularly the annex 2 of the evaluation report. There was a close coordination with the Health Centre team during the vaccination campaigns in the village, so the hygiene sessions could be held at the same time, with both teams. In addition, the ADF team distributed over 200 bars of soap in the village of the Kulen plateau (9 in Khnong Phnom commune). Budget constraints prevented ADF team to distribute more items but it was completed by external donation such as the important one from Ms. Lisa Arensen (School of Field Studies) and friends (see below) in March 2020.
  In this context, this is always insufficient. However, the main purpose of the C19 WISH project was to spread preventative awareness information to the population of Phnom Kulen which was done through the household sessions.
- Be Kind: Be kind and supportive to your neighbours and the community at large. Share the latest facts and updated information and do not share misinformation.

With a limited budget, ADF was only able to facilitate the distribution of several external donation, helping directly the Phnom Kulen population and listed below. These donations were directly complementing the C-19 WISH project and were therefore facilitated by ADF Hygiene and sanitation team.

- The EcoSoap Bank Organization (https://ecosoapbank.org) donated to ADF one box of fifty soap bars for every box that the C-19 WISH project bought.
- Dr. Lisa Arensen family and friends donated on the 30th of March 2020 USD $ 2000 worth of prevention, C.19 protection and control materials and equipment. It was distributed by ADF team to the local authorities and families. The donation consisted in almost 3000 soap bars, mask (150/12 boxes), gloves (500/4 boxes), thermometers (50), hydro-alcoholic gel (32 bottles), alcohol (8 sprays and 9 bottles) and floor cleaner (5L) for the Khnong Phnom Health centre.
- An additional donation from Dr. Lisa Arensen family and friends of USD $ 960 was made on the 19th of May 2020 to increase the capacity of the recently built water holding tanks at Popel village, opposite the primary school (see the details in UNDP-BESD Popel project, Environmental component below).
- On 20th of August 2020, Ms. Chhun Phirom friends (from Terre Cambodge) donated food (rice, tin-fish, fish sauce, salt, soya sauce, oil, sugar, garlic, noodle) to 14 families in Sangke Lak and uniforms to 14 students. Several light bulbs were also given to village chiefs, teachers and ADF house. These donors also provided a water purification unit to a very poor family in Khlah Khmum village, whose mother is affected by a very severe skin disease. ADF is team is regularly following up her health conditions, to insure she can receive her medical treatment from the Health Centre.
- This family also received on the 13th of August 2020, milk powder and food from the Svay Leu District authorities. and USD $ 50 to contribute to the emergency food provisions to this impoverished family.

Cambodia has been -on a sanitary point of view- very little affected by the virus in 2020, compared to other countries in the world. However, the economic consequences were very important, with a total shut down of the international tourism for example. The C-19 WISH project was implemented during 8 months from May to December 2020, combining C-19 awareness sessions with environmental education and hygiene sessions for hundreds of Khnong Phnom Commune villagers. Additional donations allowed to distribute more hygiene materials.

As the general pandemic is evolving, facts and mitigation / prevention measures were also evolving and updating. Consequently, clear communications, flexibility in planning and activity implementation were essential in implementing this emergency projects. The Anlong Thom health centre and the Svay Leu district authorities were very supportive in working with the ADF C19 WISH team, adjusting activities on a need's bases.

If the C-19 pandemic in Cambodia is not as dramatic as in other countries in the world, the C-19 WISH project in Phnom Kulen has given the opportunity to raise awareness towards villagers about the risks of this pandemic and to reinforce the messages on general hygiene practices in households. Lessons learned from this project, and particularly the fact that hygiene practices at home are not always respected as in schools, will be associated, as much as ADF can, within the WISH 2 project, from January 2021 onward.

Emergency Relief support

In 2020, ADF decided to allocate the left over from SEAF extra donation in 2018-2019 from the Educational support (see below) to fund this component. On the 20th of November 2019, a meeting with the Health centre staff was hold to determine the needs of the centre (both material and financial) and to agree on following the emergency relief for the year 2020.

The funds allowed to pay the transportation costs of the Village Health Facilitators to meetings in Anlong Thom Health Centre, the transportation costs for nurses to the villages for the vaccination campaigns, and the transportation costs for poor people presenting severe health cases to the Health Centre or hospitals (Sotr Nikum or Siem Reap) and back. In most cases, these poor families have no transportation mode to travel this distance, the roads are in bad conditions, and don't have enough financial resources to buy food while in town. In 2020, 35 persons benefited from this emergency fund. They came from Phum Thmey, Ta Penh, Khlah Khmum, Popel, Preah Ang Thom and Sangke Lak, suffering from severe traffic accident, broken leg, childbirth issues, diarrhoea, eye surgery, dengue fever, cold, animal bites (dog, snake) and were sent to Kantha Bopha Hospital, Angkor Hospital for Children, Damdek Referral hospital or Siem Reap Referral hospital, depending on the cases.

ADF also supported the vaccination program by joining the Health centre staff and providing extra health education into villages. This represents a total of 2,353 persons reached. ADF Hygiene staff joined to the Anlong Thom Health Centre monthly meeting. With the same funds, a material support to the Anlong Thom Health Centre was also decided. It allowed the purchasing of a generator and the complete painting of 3 rooms as well as the outside walls of the Anlong Thom Health Centre.
Finally, ADF was also given clothes by friends to redistribute to the poorest families on regular occasions.

e. EDUCATIONAL SUPPORT

The objective is to enhance local school facilities and resources, to provide a favourable educational environment in Khnong Phnom commune. If appropriate, facilities are built to create a conducive learning environment that entices the children to come to school and learn, as opposed to staying at home and/or working on the subsistence farms. ADF provide infrastructures according the teacher's needs.

Reminder: In February 2018, ADF finalised the "Kurere" (for Kulen Rehabilitation and Regeneration) project, started in late 2016. This project was focusing one sole primary school, corresponding to the needs of the most neglected school of the plateau: Sangke Lak primary school. The "Kurere" project, defined and approved by the teachers, the village chief and the commune, enhanced the school facilities and encouraged good hygiene and environmental practices. The WISH project started in June 2018 is a continuation of the hygiene activities in Sangke Lak, with an expansion to Khlah Khmum and Ta Penh primary school (see above: Hygiene and sanitation program). The TREE project (funded by Kulara Cie/Eau Kulen mineral water, see below: environmental program) is also focusing in Sangke Lak primary school on the field of environmental education with a tree nursery (as well as Ta Penh and Anlong Thom schools).

To reinforce ADF actions and to answer additional and basic needs in these two primary schools (Khlah Khmum and Sangke Lak), ADF approached in August 2018 the South-East Asian Foundation (SEAF), a US charity, to provide basic missing infrastructures to other primary schools. The original project (funding the construction of a single storeroom in September 2018 at Sangke Lak school) was expanded to a larger project, benefiting the 2 schools of Sangke Lak and Khlah Khmum. Sangke Lak School had, at the time of the inception of the project, 119 students (64 girls), 5 teachers, 3 classroom (1 without doors/windows), for 6 levels (1 to 6) and Khlah Khmum School had 86 students (40 girls), 4 teachers, 2 classroom, for 6 levels, (1 to 6). In November 2018, ADF and SEAF teams visited these schools and were presented to the teacher's needs, in term of missing infrastructures. A priority list was later established by both principals and was sent in December 2018 to the SEAF board, for approval. Accepted and mostly supported by SEAF (with additional support from M. Vernier, Ms. Chhun Phirom and friends, Ms. A. Drache and smaller donation transferred from ADF Paypal Account to ADF bank in Cambodia), this additional program started in January until November 2019.

A participatory approach was developed; asking to every principal and teachers what missing infrastructures should be built, with a priority list. ADF team, working in close collaboration with these teachers and principals, had to involve, as much as possible and where/when possible, students, teachers, local communities, to participate to these construction activities, so they can take ownership of the new facilities. The secondary objective is to increase the quality of education to the pupils and teachers of the two targeted village primary schools. The pupils and teachers are the direct beneficiaries. The pupil's families and the village communities are the secondary beneficiaries.

Numerous buildings, construction were built and set up at Sangke Lak primary school: 1 building for 1 classroom with a metallic structure, fully equipped with 50 tables and benches for kids, 3 tables for teachers; 1 building for a library furnished with 3 metallic shelves (books were already in the school); 1 building for a storeroom equipped with 1 shelf; 1 hut to cover the cement table; a fence around the entire school compound (260-meter perimeter, 4600m^2), with the school land size defined and officialised with a map given to local authorities; 1 playground item fixed; the sewage system of the wash bay fixed; the upper part of the water system, partially destroyed by illegal slash and burn fires in March 2019, was upgraded with reservoirs and pipes were replaced and buried on 600 meters. Funds were also allocated for additional salaries for 2 teachers to teach English. For Khlah Khmum primary school, the following items were set up or built: 1 building for 2 classrooms, one of them also used as a library (fully equipped with 4 shelves), fully equipped with 50 tables and benches for kids, and 4 tables for teachers and 2 black boards; 1 building for a storeroom equipped with 1 shelf; 1 hut to cover the cement table; 1 metallic mast for the flag; 1 Incinerator; 1 fence around the entire school compound (411-meter perimeter, 10,521m^2), with the school land size defined and officialised with a map given to local authorities; 2 illegal houses inside the school compound were moved out of the school compound; demining of the entire school compound, after the discovery of several unexploded ordnance (UXO) in Dec 2018. The existing solar panel, funded by Kulen Outreach NGO, was fixed with this NGO funds. It was moved to the teacher house to the north of the main building. The main school building was repainted and trees from UNEP were planted in the school compound.

On the 5th of December 2019, several meetings were held between ADF team, the principal of Preah Ang Thom school and the principals and teachers of Anlong Thom, Ta Penh, Sangke Lak and Khlah Khmum schools. The objectives of these meetings were to evaluate the existing collaboration (TREE and WISH projects) and to assess the needs for each school in term of infrastructures and materials. A detail list was established for a further project.

On the 14th of January 2020, ADF team met the SEAF Director to discuss further project. It was decided to submit a project in February to SEAF, including the school's needs identified in December 2019. This project was unfortunately not funded. It was then decided to propose it to the swiss NGO Don d'un Choeur but due the global context of the pandemic they did not agree to fund it. It will be review and resubmitted in 2021.

Ms. Nguon Rothsophal, a senior former director and lecturer at the Paññasastra University of Cambodia (Siem Reap branch), also supported with her friends (more than 60 persons) this component in 2020. The objective was to provide bicycles to secondary school students living in the remote villages of Thma Chruogn, Ta Penh, Khlah Khmum and Sangke Lak, so they can go to the secondary school in Anlong Thom, 4 to 5 Km away from their villages. Funds were also allocated for the maintenance of the bicycles and a mechanic was selected. ADF did not receive the funds directly as they were purchased by Ms. Nguon Rothsophal but the team participated to the identification of the 25 students in late December 2020. A financial contribution from each parent was asked (10 US$) so the families take ownership and responsibilities for their maintenance. The bicycles were distributed on the 21st of January 2021.
Ms. Nguon Rothsophal also supported a tree-planting event organized on the 21st of September 2020 (see Environmental component below). 1,260 trees were purchased to the 3 tree nurseries developed by ADF at Khlah Khmum, Sangke Lak and Anlong Thom schools. 1.2 hectares were planted of forest trees near the Halo Trust bridge. 180 person participated: 1 Chief of Commune, 2 villages chiefs (Phum Thmey and Preah Ang Thom), 20 police and security representatives, 3 representatives from tourism police, 15 PKNP rangers, 20 donors, 4 ADF staff (Mr. Seng Samry as organiser of the event), 10 Apsara team, 6 CPA team members (Popel and Anlong Thom), 6 teachers and 45 students of schools participated.
Funds were used to provide snacks, purchase the saplings and transport them to the area to be reforested. They were used directly and not integrated into ADF accounting system.

f. ENVIRONMENTAL PROGRAM

Environmental and social studies

During the year 2020, ADF continued to define and facilitate the studies implemented by the School of Fields Studies (SFS), with a research collaboration program focusing on natural resource governance and management; livelihoods; and the environment interface in the Phnom Kulen National Park. However, and because of the pandemic, no student was able to come to Cambodia and no studies were implemented.

ADF and SFS continued to collaborate and exchange about these subjects. ADF was provided the SFS Taxonomy of Medicinal Plants in use in Phnom Kulen, as of May 2020. This document has 360 entries including, 241 verified and 119 still to be identified. ADF was also provided with the summary of research on Natural and Cultural Resource Heritage, including the list of the local spirits from the Phnom and the complete list of plants identified along the Kulen Nature Trails, in Popel CPA.

The ADF team participated, in association with SFS, to an online conference with a presentation entitled "Two Roads and Three Towers: A Photographic Essay of Technology, Power and Access on Kulen Mountain". This conference paper was included into the panel "Shifting Technologies, Mines, and Rituals of Relatedness: a Multimedia Montage of Post-war Cambodia and Laos" and was presented at the conference Asia at the Crossroads: Solidarity through Scholarship, hosted by the Association of Asian Studies in Asia in Kobe, Japan, from August 31st to September 4th 2020.

ADF kept regular contacts with the two Canadian PhD candidates who started their studies related to Phnom Kulen in 2019 (Ms. Leah Marajh from the University of Toronto, Department of Geography & Planning and Mr. Remy Chhem from the University of Ottawa, International Development and Global Studies).

ADF was also involved in the environmental protection by combining data to the geo-database about the environmental threats, and by disseminating them to the relevant authorities (Ministry of Environment, APSARA Authority, District and commune authorities…). ADF continued in 2020 to integrate in our GIS system all illegal-logging points and recently burned plots of forest for cultivation purposes within the Phnom Kulen National Park and has reported them to the Ministry of Environment (MoE) and APSARA.

ADF team has continued to be one of the main actors to provide information from the field for the implementation of the Phnom Kulen Management Plan, and the Phnom Kulen action plan both under the supervision of the MoE, with the assistance of UNDP experts.

Meetings, workshops and events

ADF management team met representatives from the Ministry in Phnom Penh and Siem Reap, and attended to various meetings at national level, organised by the PDoE, the MoE or the National Council of Sustainable Development (NCSD).

- On the 5th of June 2020, ADF director presented ADF general activities and perspectives to the Provincial Department of Environment, in charge of Phnom Kulen National Park, provincial authorities and others stakeholders in the area (other NGO and local authorities).
- The Forum on Natural Resources Protection and Conservation under the theme: "Enhancing Local Food Production to Attract Tourists", 31st of July 2020, Siem Reap, organised by the MoE and the Ministry of Tourism.

-The validation workshop of "Biodiversity expenditure review and financial needs assessments" on the 13th of October 2020 in Siem Reap, within the biodiversity financial Initiative in Cambodia" (BIOFIN) project, organised by the National Council of Sustainable Development (NCSD) and MoE.
- Following the National Dialogue on "Payment for Ecosystem Services in Cambodia", on the 17th and 18th of September 2019, several meetings were attended by ADF team, with MoE, PDoE and UNDP. On the 14th of October 2020, ADF attended a meeting on PES at PDoE.

TREE project

Reminder: In June 2018, ADF started an environmental project, supported by Kulara Water Company, producing the only mineral water in Cambodia, Eau Kulen, based at the bottom the plateau. The project is entitled the "Tree Recourse combined with Environmental Educational project" (TREE). The 2-year project's (June 208- May 2020) goal is to provide young indigenous trees from ADF tree nurseries to the Kulara Water Company facilities at the base of Phnom Kulen National Park (PKNP), and for others areas within the PKNP selected for reforestation by the Ministry of Environment, the Provincial Department of Environment and the PKNP management team.

The project's goal is also to implement a practical environment awareness program for the students and the teachers of Sangke Lak, Anlong Thom and Ta Penh, village primary schools, where the tree nurseries are located. This participatory tree-growing project allows the involvement of the teachers and students from each school to grow young saplings, and the tree nurseries acts as educational tools to promote environmental awareness and conservation.

A list of native trees was established according to the bio-diversity assessment of PKNP (2013, Hayes and al.) and seeds are regularly searched in forested areas of the park to provide for the 3 tree nurseries. Trees are sold by the schools to the reforestation project and the incomes is given back by ADF to each school principal and is divided as following: 30% for the maintenance costs of the tree nurseries, 30% for the maintenance and upgrading of the school facilities and material, 40 % shared by the teachers as personal income and incentive. This system was changed after the meeting hold on the 4th of November 2020 (20% for the maintenance costs of the tree nurseries, 40% for the maintenance and upgrading of the school facilities and material, 40 % shared by the teachers as personal income and incentive).
In October 2019, a report was produced by ADF to summarize activities done since the project inception. The first phase of the project consisted in orientating the village schoolteachers in all aspects of the project and purchasing project recourses, mainly tree seeds and other necessary tree nursery tools. During the year 2019, each tree nurseries were upgraded on a needed basis with proper tools, equipment and gravity-fed water systems, tree seeds were purchased or collected.

In 2019, more than 13,000 trees were grown from 17 indigenous species, and more than 10,400 were sold for reforestation. The Anlong Thom water system was design and set up from March to May 2019. An 800-meter system with buried PVC pipes and reservoirs was set up to provide water system all year long for this tree nursery. Students and teachers were strongly involved as they dug the trench from the angkorian dyke (Thnal Dac) to the tree nursery. The upper part of Sangke Lak water gravity fed water system for the school (and the tree nursery) was rehabilitated in March and April 2019. The PVC pipes were damaged on 600 meters by fires due to illegal slash and burn. 2 additional cement reservoirs were added (funded by SEAF, see above Educational Support). A training was organized in Along Thom on the 24th of January 2019, by a forestry expert, Mr. Neab Keng, from the Ministry of Agriculture, Forests and Fisheries. It was designed for all the teachers of the 3 schools, with a technical then a practical session in Anlong Thom tree nursery where kids participated. The seed preparation and the composition of the soil for the plastic bags were greatly improved thanks to this training.

All children are participating to the activities: regular maintenance, manual weeding, transplanting of very small saplings to plastic bags, mixing components for the plastic bags and planting activities on the plateau. Teachers are leading the activities, with the collaboration of ADF staff, fully dedicated to this project (Mr. Yon Sokchea).

For 2019, 22.9 hectares were planted with 31,179 saplings, 10,500 of them from ADF tree nurseries on 14 hectares (north of Sangke Lak village), and additional areas close to Ta Penh village. 1,100 trees were bought by Kulara Water to reforest their compound around the plant.

In June 2019, Kulara Water received the CSR Award in the "Large Companies" category at the first Eurocham CSR Awards Ceremony, partially thanks to this project. This led to a media delegation on the 30th of October 2019.

As the project ended in August 2020, a final report was submitted to Kulara Cie/Eau Kulen at that date. The initial project duration was twenty-four month. However, and as agreed with Kulara Company, it was agreed in May 2020 that this phase could be extended until the end august 2020, as funds were still available to implement activities, including the 2020 planting activities. The final report narrates the implantation, progress and impact of the of 27-month project, from June 2018 to August 2020.

The successes of this 27 months project are:

- more than 45,700 saplings grown in the 3 tree nurseries (about 9,000 tree saplings were grown in 2018, 13,036 in 2019 and 23,666 up to August 2020.
- The project has contributed to plant 63.3 hectares in PKNP. This equates to 2.3 hectares per every month of the project. In most occasions, the trees produced by ADF tree nurseries were added to additional saplings from other tree nurseries, brought to Kulen, for the reforestation projects sponsored by MoE/PDoE, UNEP or UNDP. Other smaller reforestations operations were also organized by ADF (archaeological sites, sources, watershed…). In some cases, other saplings were sold to other beneficiaries.
    - 2018, 21.4 hectares planted with 73,000 saplings, about 9,000 of them from ADF tree nurseries,
    - 2019, 22.9 hectares planted with 31,179 saplings (lower density per hectare), 10,500 of them from ADF tree nurseries on 14 hectares (north of Sangke Lak village), and additional areas close to Ta Penh village,
    - 2020 (end of august), 19 hectares planted with 20,200 saplings, 11,239 of them from ADF tree nurseries, in numerous locations,
    - TOTAL=63.3 hectares, with 30,739 trees planted from ADF tree nurseries.
    - The difference between the total of trees grown over 3 years (47,500) and the total planted in PKNP (30,739) is explained by 1) the trees grown in 2020 but still to be planted in 2020 (12,400) and 2) the trees sold to other beneficiaries outside PKNP (2561).
- Some trees were provided and planted in the grounds of the Kulen water factory:
    - Prior to the beginning of the project, on the 2nd of April 2018, 500 yeung (*dipterocarpus alatus*) were purchased by Kulara Water Cie from ADF existing tree nurseries.
    - For 2019, 1,100 trees (beng, yeng, koki, kulen, popel, kor koh, tep porou, krahnoung) were bought by Kulara Water Cie to reforest their compound.
    - For 2020, 200 Chan Crassna (*Aquilaria Crassna Pierre*) were delivered to Kulara Water compound. The total for the 3 years is therefore 1800 trees.
- A total of 22 different tree species, proposing an important variety of trees for reforestation, all indigenous from PKNP.
- The project raised environmental awareness for 584 children and 20 teachers from the 3 primary schools, divided as follows: 144 children and 5 teachers in Ta Penh, 113 children and 5 teachers in Sangke Lak and 327 children and 10 teachers in Anlong Thom.
- All children and teachers from these 3 schools were regularly participating to the activities: regular maintenance, manual weeding, transplanting of very small saplings to plastic bags, mixing components for the plastic bags and planting activities on the plateau.
- Pupils, teachers and engaged parents residing on the plateau of Phnom Kulen have learned about the interconnection between a robust and thriving environment and their families' health and wellbeing.
- Teachers of the 3 schools, rangers from PKNP and Kulen Water Company staff have been trained on tree growing techniques, with two 2 days-sessions from a Cambodian forestry expert from the Forestry Administration (Ministry of Agriculture, Forestry and Fisheries), Mr. Neab Keng, in January 2019 and in January 2020.
- The project allowed supplying water to 2 of the 3 primary schools (Sangke Lak and Anlong Thom).
- With the funds raised from the sale of trees (2019= 12,459 trees for a total of 3,240 US$; 2020= 13,338 trees for a total of 2,423,6 US$, saplings cheaper per unit), these 3 schools of Phnom Kulen plateau were able to see both the economic and the environmental benefits. For example, a significant proportion of the money raised by Sangke Lak School in 2019, the principal was able to propose compensation to a neighbour to gain back a portion of land, increasing the school compound area by over one third. A fence, funded through another of ADF project, is now properly enclosing the school's land, ensuring better safety and hygiene. In Ta Penh School, the teachers bought additional furniture (cement benches) in 2020.

- This was a genuinely participatory project, including stakeholders from the private sector (Kulara Water Company), through governmental institutions (Ministry of Environment), implemented by ADF, a non-profit and non-governmental organization with the pupils and teachers of the three schools.
- During the reforestation process, a broader array of partners have been associated to the activity such as the engaged villagers and local authorities from Phnom Kulen (village chief, commune chief, Community protected areas members), district chief or representative, Provincial representatives, police representatives, park rangers, MoE, PDoE staff, Army region n. 2 and 4 representatives, APSARA National Authority staff in Phnom Kulen and representatives, the tourism sector (staff of the Terre Cambodge tour company); students and lecturers of the Paññāsāstra University of Cambodia in Siem Reap, FAO and UNDP representatives, Kulara Water Company representatives and staff, members of the Union of Youth Federation of Cambodia, staff from NGO School for Field Studies and AGRISUD International (ADF partners), Red cross representatives, Scouts members, and of course teachers and students from PKNP schools.
- The TREE project is the first long term project addressing environmental awareness and reforestation in PKNP. Smaller reforestation operations took place from 2015 to 2018 but this project has created a strong dynamic, reinforced by stronger law enforcement from the MoE and the PDoE, in charge of the park. The availability of trees has pushed the authorities to take actions and to take over illegally burned plots for reforestation.
- More generally, the positive benefit that trees have on mitigating climate change is by capturing Carbon Dioxide (CO_2). A typical hardwood tree can absorb as much as 48 pounds of CO_2 per year. This means it will sequester approximately 1 ton of carbon dioxide by the time it reaches 40 years old.
- In June 2019 and in relation with this project, Kulara Water Company received the Corporate Social Responsibility (CSR) Award in the "Large Companies" category, at the first Eurocham CSR Awards Ceremony (European Chamber of Commerce in Cambodia). Numerous local media covered this price by a visit on-site on the 30th of October 2019, to promote the TREE project, ADF activities and the Kulara Water Company in the regeneration of PKNP natural environment.
- With these numerous successes, an extension of the TREE project was submitted to the Kulara Water Company at the end of August 2020. The TREE 2 project, a two (2) year duration, should consolidate the successes of the first TREE project.

Divided per activities, the TREE project unfolded as followed:
Orientation of key stakeholders: The first activity of the project was the presentation of the project's main activities & components to the key stakeholders: the teachers and pupils of the three (3) schools, interested village beneficiaries, key staff in the Ministry of Environment (MoE) and the ADF team. This activity went off smoothly, in accordance with the project's activities plan. Formal and semi-formal meetings were held throughout the duration of the project to all stakeholders. These ensured that all stakeholders were reminded of their respective roles and responsibilities, and kept them fully engaged. The other component of activity 1 was the procurement of all initial materials and equipment. It all mainly remained under the excepted expenses.

Collecting / obtaining indigenous tree seeds; Upgrading the tree nurseries:
The upgrading of the three (3) school tree nurseries was organized with the project's main stakeholders and the ADF team. Their maintenance was maximized so the tree growing capacity was increased over the 27 months duration project: proper gravity-fed water systems were set up (in Anlong Thom and Sangke Lak), better fences and doors were installed and the roof in Anlong Thom and Ta Penh were lowered for an easier maintenance. Strong winds before or during heavy rains were quite often damaging the green shade roof and the tree leaves on the top are easier to remove if they fall on the lowered roof. This activity continued until project funds are depleted. The collection of indigenous tree seeds was slightly more problematic as trees species do not provide seeds at the same period of the year.

The ADF team and the teachers had to learn the different seedling period for each species, as well as the particular techniques to grow each tree seed species.
To follow up the quantity of trees grown up in each tree nursery over the 27 months of the project, the ADF team set up a table summarizing important information. The format of this table has evolved and improved over the course of the project. The last version of this format includes: the number of saplings per tree nursery, per species, the English name, the Khmer name and the scientific name for each species, the seedling period for each species, the average price of seeds per Kg per species, the processing time for each tree seeds species, the average number of seeds per Kg.

Environmental and tree growing education:
The environmental and tree growing education activity has also been a success, based on the results and verified by the qualitative and quantitative monitoring and evaluation checks. The three primary reasons for the success of this activity are as follows:

- ADF engaged with the Ministry of Agriculture Forestry and Fisheries (MoAFF), and the Forestry Administration (FA), to hire their expert Provincial Tree Nursery Growing trainer (Mr. Neab Keng). The expert tree trainer came to Phnom Kulen and taught the ADF team, schoolteachers and Park rangers the appropriate theoretical and practical practices of growing tropical trees. This worthy and well-valued training occurred on two occasions: Once in the first year of the project, January 2019, and it was followed up by a refresher training on the 9th and 10th of January 2020. This technical session took place at Ta Penh school and was attended by all the teachers of the 3 schools, members of CPAs, Kulara Cie Staff, and PKNPark rangers. It was followed by a practical session in Ta Penh (Anlong Thom in 2019) tree nursery where kids participated. A backup support from the expert trainer was conducted via the Internet and mobile phone.
- The theoretical and practical tree propagation training was equipped and then built upon, by the enthusiasm of the ADF team and other key stakeholders to grow quality trees for the environment. The success of this outcome is based on the evidence, numbers, and project photographs enmeshed in the annexes of this final TREE report.
- The 2 training were completed by a visit to the Forestry Administration Tree nursery in Kantuot village (Kronhung tree nursery) on the 28th February 2020, to the north of Phnom Kulen National Park. 6 ADF staff, ADF partners NGO (1 person from AGRISUD), 9 school teachers (3 per school) and 2 Kulara Water Company staff joined this one-day visit. The objective was that all participants exchanged experience about the management and the development of a tree nursery.
- The tree species selected for growing in the tree nurseries, and subsequently to be planted in the targeted areas, were known and documented tree species that are native to Phnom Kulen and therefore well adapted to the environmental conditions of the National park.

School children have practical lessons in tree cultivation:
It was a logical progression from activity 3; putting into practice the theoretical and practical training disseminated by the tree nursery-growing expert. This activity was about strengthening and amplifying the interest of all beneficiaries. It was especially noted that the majority of participants keenly engaged with the enthusiastic teaching style of the tree trainer and his well practice hands. This activity was the core of the TREE project; replicating tree growing in the tens of thousands (10,000s) with a wide range of quality indigenous trees for the greater benefit of Phnom Kulen National Park (PKNP). Teachers are leading the activities, with the collaboration of ADF staff. One ADF staff is fully dedicated to this project (Mr. Yon Sokchea). Together with ADF team and the teacher's engagement, the combination of the teachings and the practical lessons learned from the expert tree trainer was the principal reason for the success of this project.

Reforestation of target areas:
This was the achievement of the TREE project. The reforestation campaigns started every rainy season (from June to September) by transporting tree sapling from the three (3) schools tree nurseries to the designated target areas. Planting sites were selected by the PDoE, in cooperation with all of the project's stakeholders.
The priority-selected sites were the recent slash & burn plots, the badly degraded areas, and the water catchment areas. The other priority locations were the grounds around the Kulara water company.
In the year 2018, 21.4 hectares planted with 73,000 saplings, 9,000 of them from ADF tree nurseries. In the year 2019, 22.9 hectares planted with 31,179 saplings (lower density per hectare), 10,500 of them from ADF tree nurseries on 14 hectares (north of Sangke Lak village and close to Ta Penh village). In the year 2020 (end of august), 19 hectares were planted with 20,200 saplings, 11,239 of them from ADF tree nurseries. The total corresponds to 63.3 hectares. As the end of the project (August 2020), there was more than 12, 400 saplings in ADF tree nurseries to be planted by the end of the 2020 rainy season.

Main constraints encountered during the implementation of the TREE project:

- After plots have been deforested by illegal slash & burn", the growing plants are often invasive and the most common species is similar to the Pampas grass (*Cortaderiaselloana*), a non-native of S.E. Asia. This grass causes considerable constraints for young native / indigenous saplings to grow and thrive, as the grass absorbs what little moisture remains and cuts out vital sunlight for photosynthesis to occur, making it challenging for indigenous tree saplings to mature. The mitigation solution for this constraint is to hire day labour to cut the weeds around the saplings, to give them the light and moisture they need.
- The Covid-19 pandemic direct constraint for the TREE project was the closure of the schools in March 2020. However, ADF dedicated team ensured the maintenance of the tree nurseries while public gatherings were not allowed (March and April 2020). The teachers and some volunteer students started to help again from May onwards, so that saplings could be ready by the end of June 2020. The dynamic created around the tree nurseries in each school allowed to keep a high level of motivation for the teachers and the students, even during these particular circumstances.
- The other Covid-19 pandemic constraint was the impossibility of having the teachers and some students to visit the Kulara Water Cie factory and reforested area. Equally, it was not possible to invite the Kulara Water team in Phnom Kulen nurseries. This could be possible if the project is extended and if the rules related to the Covid-19 pandemic are more flexible.

At the end of this twenty-seven-month project and based on the successes, concerns, challenges and constraints identified at the conclusion, ADF team have proposed 11 recommendations, as follows:

- To compose another project proposal (TREE 2) to submit to Kulara water Company for a two (2) year time period, to build upon the successes of this project.
- To continue the environmental education and awareness of stakeholders, especially pupils and teachers, building upon the education component of the TREE 1 project.
- To better monitor the revenue of each school, to insure their proper maintenance.
- To introduce a better monitoring system where trees from ADF tree nurseries can be counted and localized within each reforestation activity.
- To introduce a field maintenance component in a future project, employing members of the community as day labour, to cut the weeds around the tree saplings planted in the target areas, enabling them to grow and thrive. This activity can also be done in the previously planted areas. It will help defining the loss rate for each reforested plots and replanting, if necessary.
- The drought faced by the ADF team during 2019 and 2020 dry seasons will very probably occur over the coming years. It is recommended that the new project allocates funds to mitigate against this problem.

- To enhance the monitoring and the evaluation of this project by a better tracking and scheduling of all key events, it is recommended that the TREE 2 has a suitable computer to further improve and amplify success.
- To diversify as much as possible the tree species but only with trees represented and identified within the 2013 PKNP bio-diversity survey. For example, in September 2019, new seed species were grown in the tree nurseries such as Pro Hut, Ta Trao, Tep Porou, Trabek Prey, Chan Crassna.
- To increase as much as possible, depending on the number of saplings produced, the number of reforested areas within PKNP. This also depends on the PDoE capacity of re-taking illegally deforested plots for reforestation. Additional saplings will also be allocated on demand and according to their species to Kulara Cie compound.
- These reforestation activities could be done in 2020 onwards, within a reforestation project, funded by UNDP-Cambodia, in partnership with the Ministry of Environment and the PDoE. This project would help to support the PKNP population facing drought and consequences of the Covid-19 pandemic (lower incomes, returnees from Thailand…).
- It was finally suggested that the remaining funds of 474.4 US$ should be added to the next TREE 2 project.

TREE 2 Project

The fundamentals of this TREE 2 project are very similar to the initial TREE 1 project and therefore, the goal, objectives and activities matrix are similar. However, they reflect the current and the predicted issues of the TREE 2 into the future.

The threats to the water catchment areas are unfortunately worse than they were at the beginning of the initial projects. This is due to two main reasons. Most provinces in Cambodia are enduring drought conditions. Siem Reap province and Phnom Kulen National Park (PKNP) are no exception. This is a serious concern as the National Parks is the main sources of the Siem Reap River. A reduced water volume in the Siem Reap River will severely affects agricultural outputs and people's livelihoods in the entire province. Even though the TREE 1 project produced about 45,700 trees and reforested over 2.3 hectares of indigenous forest per month, this was not enough to rejuvenate the water springs catchment areas of PKNP.
The successes of the TREE 1 project were well defined, with thousands of trees produced and planted in priority areas. The environment practical training and awareness raising was also successful as a significant number of children had a heightened awareness of the linkage between a healthy forest and human well-being. However, positive environmental behaviour change is a process, it is not a singular phenomenal or even and therefore, the TREE 2 project was built upon the heightened awareness and all other successes of the initial TREE project. The TREE 2 project continues to address all of the issues outlined above.
The objectives of the TREE 2 project remain the same:

- To grow and nurture indigenous trees that can be planted in priority areas in and around Phnom Kulen National Park (PKNP).
- To promote the regeneration of the natural forest with indigenous trees of PKNP, restoring the environment and the resources that a thriving environment provides, increasing the amount of surface water.
- To increase environmental awareness and conservation to the pupils and teachers of the three targeted village primary schools (Anlong Thom, Ta Penh and Sangke Lak). The pupils and teachers will be the direct beneficiaries. The pupil's families and the village communities and the MoE Park Rangers will be the successive beneficiaries.

The TREE 2 project starting date was the 1st of September 2020, for a two-years duration. An introduction meeting was held with all stakeholders at Anlong Thom school on the 4th of November 2020. The main changes from the TREE 1 project are that more funds are allocated to maintain and upgrade (where necessary) the water systems to the three tree nurseries, ensuring that the tree saplings are adequately watered, particularly during the dry season.

Additionally, funds are allocated for the maintenance activity of the reforested areas, employing local villagers as day labour, to cut the weeds around the small tree saplings that have been planted out in the target areas, giving them a "fighting" chance to grow and develop into mature forest. It will also allow to better monitoring the reforested areas, the survival rate of the trees, and eventually to replace the dead ones.
An improved monitoring system will also be set up to inform on the exact number of hectares reforested by the ADF tree nurseries within all the reforested areas in PKNP. This respond to the recommendations of the TREE 1 project (see above).

At the end of November 2020, there was 13,675 saplings in the three tree nurseries, covering 14 species.

KEEP Project

The first phase of a large reforestation project was initiated with a project proposal developed for We Forest Organization (The Keep Project). Numerous discussions with this potential new partner were engaged, as well as with the MoE. The project's objectives were to reforest about 5000 hectares in PKNP, thanks to the construction of a large tree nursery for indigenous saplings. The project also included the maintenance of the reforested area in PKNP, a law enforcement component, aiming to support training, material and financial resources to ranger patrols, and an alternative livelihood program, to propose alternative and environmentally friendly solutions to farmers impacted by the project. This would have represented 6,5 million trees planted during the entire project. Due to the C-19 pandemic, the We Forest Organization faced difficulties to fund it. Additionally, the possibility of having to relocate some of the farmers impacted by the project did not play in the favour of funding the project.

Popel CPA project

Reminder: There are 5 Community Protected Area (CPA) in Phnom Kulen National Park. Because of the extension of the cashew nut cultivation, there are now the only remaining forested area in the south part of Kulen plateau. They are meant to be preserved for the benefit of the local population where they can collect non-timber forest products. ADF is helping the Ministry of Environment and the committees to protect, maintain and eventually enlarge these CPA. Since July 2018, ADF worked on the enlargement and the better protection of the Popel CPA, thanks to the financial support of a private donor, Mr. Deroo.

The project started in June 2018 with meetings at local level to introduce the project and by December 2018, the survey of the area was done (October 2018), including the complete inventory of the cashew nut farms, which will be integrated in the new zone. All stakeholders were aware of the project: CPA members, local authorities (Commune and District Chief), the Provincial Department of Environment and the Ministry of Environment.

Originally thought to be extended to the south until Siem Reap River, the Popel CPA committee and villagers have asked to extend the protected area to the north, in order to include the O'Thom river and its various waterfalls, one of the main tributaries of the Siem Reap river, downstream from the main Kulen waterfall. This could bring the new CPA to a total of 800 hectares. The idea is also to develop treks for visitors to generate income for the CPA committee, and in the long term. A map of the proposed extended CPA was produced and about 100 Popel villagers agreed to support the project, with a document baring every signature. An assessment of the project by the MoE Phnom Penh is also planned in early 2019. The project should then have to be approved by the provincial (Governor of Siem Reap Province) and national authorities (Minister of Environment).

In 2019, several meeting with CPA members, villagers, MoE and PDoE representatives were organised to continue this project (27th February and 7th march 2019). During these months, the administrative process of extending a CPA was ongoing, with approved signatures from villagers, village chief, commune chief, district chief, Governor of province and departments of the MoE in Phnom Penh. Surveys were done and maps created to identify the limit of the future CPA.

From May 2019, this project was integrated in the BESD project (see below), funded by UNDP (United Nation Development Program) and SIDA (the Swedish International Development Agency).

In 2020, the last funds due for this project were sent by the donors to ADF in March 2020, and integrated within the UNDP-BESD project (see below), within the ADF's environmental component.

CIRD TREES project

As developed in the Income generation (IG)/alternative livelihood program (Agriculture alternative livelihood) chapter above, ADF was approached by the Cambodia Institute for Research and Rural Development (CIRD) for a collaboration on agriculture alternative livelihood activities at the end of 2020.

CIRD was also interested in funding trees growing from ADF tree nurseries from Anlong Thom, Sangke Lak and Ta Penh primary schools. After several discussion between CIRD and ADF representatives, it was decided that the amount provided by CIRD would be dedicated to grow 3,000 trees, provide tools for the ADF tree nurseries and would cover tree plantation costs.

As the transfer was done at the very end of 2020, all these activities would be undertaken in 2021. The trees seeds will be collected and grown into saplings, from the 1st January to the 31st of June 2021. The trees will be planted during reforestation operations that will take place in PKNP, under the supervision of the Provincial Department of Environment (PDoE). They will be under the responsibility of CIRD. ADF will collaborate to ensure these saplings are planted during the next rainy season from June to September 2021.

Fauna in Focus donation

A Siem Reap-based environmental organisation, which was forced to closed due to financial difficulties, approached ADF in September 2020 to provide tree nursery equipment, seeds and abut 600 saplings (from 4 species, all indigenous from Phnom Kulen: Beng, krahnoung, Neang Nuon, Thnong). They were collected by ADF team at the end of September and progressively brought to Phnom Kulen tree nurseries, until December 2020. Saplings were equally shared between the 3 tree nurseries and will be planted in 2021.

UNDP-BESD Project

Reminder: The UNDP-SIDA (Swedish International Development Agency) funded project entitled "Building an Enabling Environment for Sustainable Development" (BESD) was granted to ADF in May 2019. The duration of the project was originally 1,5 year from 1st May 2019 to 31st December 2020, focusing on two villages of Phnom Kulen National Park (PKNP). In December 2020, it was extended until the 31st of May 2021. Extra funds were added by UNDP in March 2021 and the project was slightly re-oriented.

These two interlinked projects, Khlah Khmum and Popel Projects, seek to address the deforestation issues and contributing to the reforestation and rehabilitation of PKNP by demarcation and zoning, by supporting community based natural resources management through alternative and sustainable livelihood options and by supporting for payment for ecosystem services (PES) by setting up a water system for Popel village, for the benefit of the local population. The overall objectives are to preserve areas of ecological and archaeological significance, to promote community based Natural Resources Management, and to operationalize Payments of Ecosystem Services (PES) scheme for PKNP.

Khlah Khmum Project (within the UNDP-BESD project)

The purpose of the grant was to contribute to the protection of the threatened natural environment and the rich archaeological heritage of the PKNP by designing and demarcating one Archaeological Protected Area (APA) around Prasat Krohom temples, the Angkorian earth mounds, dam and reservoir (Tamnup O' Srae), with visible concrete posts and informative signboards installed at strategic locations, based on a consultative process.
This new protected area should protect the archaeological sites, the natural environment and wildlife, and three local watersheds, tributaries of O'Thom river. It should prevent from deforestation, erosion, poaching; involve and inform the population and the visitors about the protected area and its environmental significance and provide environmental awareness to the local population.

This should be combined with the offering of alternative livelihood options to the Khlah Khmum villagers (292 persons, including 142 women, 60 households; Ministry of Interior, 2017) and the setting up of a water system for Popel village (379 persons, including 190 women, 89 households; Ministry of Interior, 2017). The integration of the ancient reservoir and related local watershed in the APA should ensure the protection of the forest cover, enabling to provide permanent water to the watershed-linked village of Popel.

Results for 2019 and 2020:
Consultation, organisation and surveys

A meeting was held on the 24th of June 2019 at Preah Ang Thom commune office with 18 persons (ADF director, ADF Development Manager, ADF National Manager, Commune chief, Commune council, village chief of Popel and Khlah Khmum, Popel CPA members, rangers, 2 PDoE representatives and a Svay Leu district representative, a Heritage Police representative), to present and launch the project to the local authorities and to present the main objectives (alternative livelihoods, water system for Popel and protected area at Khlah Khmum), and to get their endorsement). All local authorities encouraged and endorsed the project and a consensus was generated to implement the project. Three consultative meetings were also hold during the third week of June at PDoE, then on 5th of July (in Siem Reap, APSARA Angkor Hotel) during the meeting about zoning in PKNP, then on 23rd of August (at Phnom Kulen Ranger station). As a result, the local authorities and the Ministry of Environment globally endorsed the project, requesting for a close collaboration during its implementation, to insure sustainability.

These meetings about the project were held in Khlah Khmum village on the 25 June 2019 and the 6 November 2019 with the village chief, 48 villagers including 28 women, ADF director, ADF National Manager, PKNP rangers, 2 Police representatives, 2 PDoE representatives, 2 commune council representatives. As a result, these all-inclusive and participatory meetings allowed all parties involved to share views on the project and exchange and advantages and inconvenient. All parties have a good knowledge about every aspects of the project and can share information and request more if necessary.

Meetings were also hold with the Popel CPA members and Khlah Khmum villagers and other key stakeholders on the alternative livelihood/ income generation options and APA demarcation. Six group discussions were held with 5 CPA members, 48 villagers and 16 local authorities. Fruit trees and black ginger were selected as agricultural alternative livelihood for Khlah Khmum, as well as eco-tourism for the future protected area. Later on, in November 2019, other beneficiaries were identified to raise pigs and chicken from a meeting in Khlah Khmum village who gathered 54 persons, including 32 women. Discussions were held to ear the propositions of the communities, to submit the project and to get their feedback.

The ADF National Manager implemented the ground coordination of the team and organized the field verifications for the Protected Area in Khlah Khmum. PDoE staff (rangers), APSARA workers, CPA members, chief of 5 CPA, chief of commune, commune council members and village security staff were associated, on several occasions, to ensure the maximum participation of the local authorities and local population on the 26th and 27th July and on the 14th of August 2019. The demarcation was conceived to follow natural boundary (cliff and streams) or anthropogenic boundary (trails), rather than artificial shape. This rule was proven to be more efficient when ADF was previously establishing PA in PKNP. Based on the ground verifications, drone images, GPS coordinates, combined with elevation points, a strategic and logical route for the gravity-fed water system can be identified and clearly marked and demarcation of a water catchment and archaeological protected area (APA) at Khlah Khmum village.

ADF staff (Director, Development Manager, National Manager) and PDoE staff (Director, 8 persons, 3 Rangers in charge) initiated the project with the local authorities and APSARA Authority. The team also organized meetings and consultations with the villagers from both Popel and Khlah Khmum. ADF and PDoE staff monitored the project over the months in a participatory manner and capacity building. A planning and work plan were set up. Rangers and CPA members from Khlah Khmum CPA (Chup Ta Sok) and Popel CPA (Prey Thom Popel), APSARA workers, Khlah Khmum village chief participated to the surveys for the protected area, north of Khlah Khmum villages. Rangers were trained on the use of GPS, as well as demarcation rules and process. Villagers and CPA members were associated to every step. ADF Finance officer continually monitored the project expenditures, in close relation with UNDP finance team. All budget lines were spent accordingly.

MoE and UNDP representatives including the UNDP-SGP program representative visited the Popel water system and the Khlah Khum PA on the 28th of Jan 2020 to clear any misunderstanding, in particular regarding the previous unfinished water system. A meeting was organised with Popel villagers that same day to understand and exchange about all previous and current activities.

UNDP representatives and Swedish Embassy representatives visited the Popel water system and the Khlah Khum PA on the 27th of February 2020. MoE representatives (led by H.E. Sao Sopheap) visited the Popel water system on the 6th of June 2020.

Protected area In Khlah Khmum

The demarcation of a water catchment and archaeological protected area at Khlah Khmum village started on the 09/10/2019. The cement posts were brought on site and a team of rangers and CPA members started to install the post on the ground. The preparation of the track surrounding the protected area was done (4th, 9th, 10th of October) and a total of 101 posts were marked from the 16th to the 19th of October. Every post is geo-referenced and marked with a legend ("Prasat Krohom and O Srae source protected area" in Khmer) and a number. An average of 70 meter separates each post. A clear track is now surrounding the protected area, where posts were placed and red paint marks on the trees were painted. In 2020, 4 informative signboards were set up at the entrance of the zone on the main tracks and one in the village. The next step will be the official ratification of this PA by the Ministry of Environment, within the general zoning of PKNP. ADF and PDoE are closely involved in this process to make sure that this new PA will be included into the protected of the park.

Water system in Popel

ADF and PDoE, jointly with the Popel community members and local authorities have conducted a study on drinking water harvesting and water distribution in Popel village. More than 8 rangers and 3 persons from PDoE, 5 CPA members and 1 village chief participated to these surveys. Popel Water actual situation was surveyed and discussed on several occasions on 25th of June, 25th and 26th July, 9th of September, 12th September, 3rd October, 7th and 9th of October with PDoE representatives, rangers, CPA Popel and Khlah Khmum members, commune council members, ADF director, ADF National Manager, Popel school principal and solar expert.

The existing system was not delivering water to all parts of Popel village and the system built by OOO local NGO (Our Objectives Organization was granted in January 2017 with a Small Grant through the GEF/SGP project to enhance Popel water system), using a solar panel was not functioning because the associated reservoir was broken. ADF's original plan was to bring water from O'Srae dyke, 3 Km northeast of Popel village. However, the surveys conducted by all stakeholders indicated that this point was 10m lower than the village. Numerous other sources were surveyed but all appeared to be higher and the only higher source was dry. Surveys on water sources indicated that the only solution was to pump water to a high location in Popel village (primary school), using an existing solar panel funded by SGP. The water would be then distributed with a network of pipes and water meters per household.

This solution is requiring maintenance costs. Consecutively, ADF national Manager and PDoE staff suggested setting up a Popel water management committee, in charge by village chief and CPA chief.

The implementation of a water system for Popel Village started on the 08th October 2019 to mid-December 2019. The topography of the area with the altitudes and the entire system was carefully studied before implementation. After surveys, all sources appear to be lower than the village; therefore, a gravity-fed system was impossible to set up. Items from the existing system including a solar panel and black rigid pipes (from OOO local NGO not functioning system) were reused for this project. A first reservoir (comprising 15 cement ring wells on a slab) was built by a source and filled by gravity. A pump was installed in it, so water can be pumped to a second reservoir. The pump is functioning thanks to the solar panel that was brought from the village to that location and a small hut was built nearby to protect the electric facilities and a generator, used as a secondary device in case of failure of the solar system. The black rigid pipe (unused by the previous project) was used to connect the two reservoirs, 700 meters away from the reservoir n.1 (620 m in straight line). This pipe was buried to protect them from degradation (vandalism, roaming animals…). The second reservoir was built at the highest location in the village, opposite the Popel primary school. There is 20 meters difference of altitude between the reservoir 1 and 2. This second reservoir was built with 14 cement ring wells on a slab. From this reservoir 2, a 49 mm diameter PVC pipe was installed and buried in the village on 831 m section, going through Popel village. This pipe is fed by gravity, as the reservoir 2 is on the highest location of the village. Villagers can connect to this pipe by requiring a water meter to the village chief. Villagers will pay for the pipes leading to their house, if they want to connect to the water system. A water management committee was set up and in charge of collecting the money and to insure its proper maintenance. The objective is to manage the system when it is operational, and to collect the fee from households to maintain the system. Fee was set up at 1500 riels per cubic meter (1000 riels/0,375 US$ for the first 3 months). On the total amount collected, it was agreed that 20 % is allocated for the maintenance the water system, 20 % for committee, and 60% incentive for committee members.

In 2020, the Popel Village water system installed was functioning. An additional donation from Dr. Lisa Arensen family and friends of USD $ 960 was made on the 19th of May 2020 to increase the capacity of the recently built water holding tanks at Popel village, opposite the primary school. 13 additional ring wells were installed in June 2020 (6 at the lower reservoir and 7 at the higher one). This represents a total of 14,700 litres for each of the two reservoirs, with a total of 29,400 litres for both reservoirs. As in December 2020, the Popel water system was providing water to 27 families (130 population, 66 Female) and the primary school (93 students, including 43 girls plus 4 teachers, temporary closed due to Covid 19 pandemic). Another 10 families are also collecting water from the reservoir n.2, bringing their own water container. The total of these families is therefore 37, including 88 females and 3 widows.

During the last phase of this UNDP-BESD project (Dec. 2020 to May 2021), ADF plans to connect a maximum number of families in Popel village (92 households), by mobilising the water committee and encouraging families to connect their houses to the main pipe. The school will also be better connected as ADF will start a hygiene and sanitation program in this school in January 2021 (WISH 2 project).

Alternative livelihood

Additional agricultural alternative livelihood directly funded by the UNDP-BESD were built upon this ADF project. To prepare this phase, a second meeting hold on the 6th of November 2019 has identified a total of additional 25 families where 17 have expressed the will to raise pigs, and 8 have expressed the will to raise chicken. On the 8th of January 2020, an additional meeting was organised to exchange with the villagers and from the 9th to the 11th of March 2020, a training was organised by ADF and AGRISUD where only 13 families were finally interested in implementing these two activities. As of December 2020, 2 families were raising chickens and 11 are raising pigs. Out of these 13 families, 8 women (including 5 widows) are in charge of these raising activities, all of them raising pigs.
This represents a total 95 persons (50 of them female) and more than 33% of the household village population (303 persons) affected by the new protected area.

After the initial training, AGRISUD and ADF team are providing a continuous follow up on these activities. A contract has been drafted and signed for each family. It stipulates that every beneficiary must follow the guidelines related to the training, must cooperate and work closely according to the planning with ADF/AGRISUD, must record their expenses and incomes, must follow additional training, must take care of their animals, and allow visit when required.

From June 2019, ADF proposed and offered alternative livelihood options to 19 families from Khlah Khmum village, together with AGRISUD International, on our joint project: 3 families growing fruit trees, 16 families growing black ginger out of a total of 60 households (see above, agriculture alternative livelihoods).

The total number of beneficiaries in Khlah Khmum village (UNDP-BESD and ADF-AGRISUD projects) is therefore 32 households including 18 females. This represents 50 % of the households in Khlah Khmum village as there are 64 families for a total of 307 persons, including 154 females (Commune data, 9th of June 2020).

ADF and AGRISUD team is monitoring these households on a weekly basis. The beneficiaries have been trained to take care of the piglets and pigs and are followed up by ADF and AGRISUD teams. In case of sickness, the team provided medicine to cure the pigs. 3 female pigs had piglets, bringing extra incomes for each family, 8 were still waiting for piglets. Gestation of pigs usually 115 days (3 months and 25 days).

For the chicken beneficiaries, the exact number of chickens raised and sold should be accounted. These alternative livelihoods activities represent complementary incomes for the families. Results are obtained in a slow process, making sure the beneficiaries are trained well enough and are able to be self-sufficient.

Popel Project (within the UNDP-BESD project)

The purpose of the grant is to contribute to the protection of the threatened natural environment and the rich archaeological heritage of the PKNP by proposing livelihood options pertaining to the expansion of Prey Thom Popel CPA within Govt partners, CPA members, relevant stakeholders and Popel villagers (379 persons, 89 households; Ministry of Interior, 2017).
After an appraisal on environment friendly sustainable livelihood and eco-tourism, income generation options, a study on drinking water and water distribution in Popel village should be undertaken. It should include the finalization of the extension of the Prey Thom Popel CPA demarcation (see Popel CPA project, above), to include O'Thom River, one of the main tributaries of Siem Reap River on the Phnom Kulen plateau, as its secondary waterfalls represent great assets for the development of eco-tourism in this CPA. It should also reinforce the capacities of CPA members, PKNP rangers and other key stakeholders for the management of the Prey Thom Popel CPA.

The last phase is to develop alternative livelihood options, based on eco-tourism services, and to finalize the gravity-fed water system for Popel village, which is facing water distribution issues.

The integration of the ancient reservoir and related local watershed in the protected area (Khlah Khmum project) should insure the protection of the forest cover, enabling to provide permanent water to the watershed-linked village of Popel.

Results for 2019 and 2020:
Consultation, organisation and surveys

This CPA extension project was started in 2018 with funds from an ADF private donor (see Popel CPA project above). This UNDP project allows reinforcing this first initiative, adding an alternative livelihood component and the setting up of a water system for Popel village.
A meeting was held on the 24th of June 2019 at Preah Ang Thom commune office with 18 persons: ADF director, ADF Development Manager, ADF National Manager, Commune chief, Commune council, village chief of Popel and Khlah Khmum, Popel CPA members, rangers, 2 PDoE representative and Svay Leu district representative, Heritage Police representative, to present and launch the project to the local authorities and to present the main objectives (alternative livelihoods, water system for Popel and protected area at Khlah Khmum), and to get their endorsement). These consultations were also hold during the third week of June 2019 at PDoE, then on the 5th of July 2019 (in Siem Reap, APSARA Angkor Hotel) during the meeting about zoning in PKNP, then on the 23rd of August 2019 (at Phnom Kulen Ranger station).
The official request for the expansion of Popel CPA was followed up by ADF National Manager at every administrative level (Commune, District, Province, Ministry) from June 2018 to December 2019 and is waiting for the approval of the Minister of Environment.

A participatory consultation meeting with the affected farmers for the expansion of Prey Thom Popel CPA; seeking sustainable livelihood options such as eco-tourism, income generation activities was held in Popel village on the 24th of June 2019 with village chief, villagers, ADF director, ADF National Manager, ADF National Manager, rangers, PDoE representative.
After meetings with 47 villagers from Popel population, it appears that an eco-tourism through a community-based organization was largely preferred as alternative livelihood / income generation activity. Previous inquiries and meeting organized by ADF in late 2018 (within the Popel CPA project, see above) have received the support of 96 villagers (out of 219 persons over 18 years old from Popel), to support the enlargement of the existing CPA and the alternative livelihood options with an eco-tourism orientation.

The large majority of the Popel villagers and CPA members has approved the idea of benefiting from tourism through the setting up of tracks, facilities and a community-based organization for the extended CPA. The extended CPA could include non-visited waterfalls. This requires the setting up of tracks, rest hut and home stays, managed by a newly created community-based tourism organization, comprising the CPA committee. These activities were undertaken within this project, from January 2020.

The map of the extended CPA was finalized, and all 66 cashew nut famers identified. The result shows that 45% of them are living in Preah Ang Thom, 41% are living in Popel. The population from Preah Ang Thom is mostly living from tourism at the waterfall site, and is not originally from Phnom Kulen. This proposed extended CPA zone is consistent with the Phnom Kulen Management plan and the Phnom Kulen Action plan, seeking alternatives to deforestation with incomes generated activities through eco-tourism, and the demarcation of protected areas within the boundaries of the park. It is also in line with the Cambodian PA laws, as the process of extending the Popel CPA, has been strictly complying with the CPA guidelines issued by the MoE.

ADF staff (Director, Development Manager, National Manager) and PDoE staff (Director, 8 persons, 3 Rangers in charge) initiated the project with the local authorities and APSARA Authority. The team also organized meetings and consultations with the villagers from both Popel and Khlah Khmum (see above, Khlah Khmum project). ADF and PDoE staff monitored the project over the months in a participatory manner and capacity building. A planning and workplan were set up.

Rangers and CPA members from Khlah Khmum CPA (Chup Ta Sok) and Popel CPA (Prey Thom Popel), APSARA workers and Khlah Khmum village chief participated to the surveys for the protected area, north of Khlah Khmum villages. Rangers were trained on the use of GPS, as well as demarcation rules and process. During all ongoing aspects of the projects the key stakeholders and particularly the Popel villagers and Popel CPA members were actively consulted. ADF's Finance officer continually monitored project expenditures, in close relation with UNDP finance team. All budget lines were spent accordingly.

MoE and UNDP representatives including the UNDP-SGP program representative met the Popel CPA members and village chief on the 28th of January 2020. A meeting was organised with Popel villagers that same day to understand and exchange about all previous and current activities. UNDP representatives and Swedish Embassy and SIDA representatives visited the Popel village and the stakeholders of the project on the 27th of February 2020. MoE representatives (led by H.E. Sao Sopheap) visited the Popel village and stakeholders of the project on the 6th of June 2020. Later on, the C-19 pandemic has forced to cancelled all field visit from UNDP to the field.

Extension and demarcation of Popel CPA

The expansion of Popel CPA was approved by the Minister of Environment and other representatives, in a new parka on the 19th of October 2020. The ADF and PDoE teams organised the demarcation in the following days. The first steps were the setting up on a surrounding track of the 170 geo-referenced and marked cement posts. This was done from November 2nd to November 23rd 2020. The team was formed the Popel CPA members, under the supervision of 2 rangers and ADF national manager. The result is an enlarged CPA of 798 ha. The last step was the design and setting up of 3 informative signboards. They were placed at strategic locations. The removal of the old CPA signboards and previous cement posts should finalise it.

Water system for Popel

The UNDP-BESD Popel project has also a component to improve the Popel water system. To avoid repetition, it was described above in the Khlah Khmum project.

Alternative livelihoods

During the early phase of the project (under the sole Popel project funded by Mr. Deroo, see above), the local community (CPA members and villagers) requested eco-tourism options as an alternative livelihood, when the demarcation of the CPA was considered. The Popel CPA ("Prey Thom") and the 4 non-visited secondary waterfalls could be encompassed into an enlarged Prey Thom Popel CPA and were identified as sources of incomes via eco-tourism services. The combined UNDP-BESD and Popel project allowed to implement this with a clear demarcation of the CPA and capacity building of CPA members.
Surveys with ADF team and CPA members to identify potential areas for eco-tourism facilities (boulders, forest, secondary waterfalls) were undertaken from April to December 2020, inside the existing Prey Thom Popel CPA but also in areas encompassed into the enlarged Popel CPA.

Eco-tourism facilities were defined between CPA members, ADF and PDoE and set up: a Community-Based Tourism Centre (CBTC) at Popel village (with maps, signboards and tourism offer); rest-stop facilities near Anlong Run waterfall (3 wooden rest huts, in August 2020), 2 toilets (with 2 units with a septic tank and a water reservoir hidden in the forested area nearby, in December 2020), trekking route traced (max 1 m width) from one waterfall to the other and according to the defined tours, linked to the existing "Nature trails" established in 2015 by the PDoE and the Popel CPA. The Popel CBTC was built on a land donated by the Popel village chief, along the main road of Popel village. The construction started from August until December 2020 but was slow down by the heavy rains in October. It was completed by a water reservoir in early December 2020. A kitchen will complete it 2021.

All informative material to be presented in this centre were designed by ADF team from August to October 2020. They were printed and set up after the centre was fully completed (January 2021).

They are similar to the ones in Anlong Thom CBTC; minor modifications were made (pictures) and the texts were adapted for the Popel context.

As for the Anlong Thom CBTC, they are divided as followed:

- 4 signboards both in Khmer and English presenting general information about PKNP on 1) history, archaeology and heritage conservation; 2) geography, landscapes and hydrology; 3) fauna, flora and environmental protection; 4) Local life and handicrafts.
- Popel CPA rules for visitors
- Popel CPA centre context and actors.
- A Large map of the Phnom Kulen area.

The design of the tracks, the eco-tourism facilities and the future tours were discussed between all stakeholders (ADF team, PDoE, CPA members, village chief), taking into account the options for a viable system. The CBCT should charge visitors to ensure the maintenance of the facilities (centre, rest-stop areas) and to prevent and act against the dissemination of garbage in this part of the forest. ADF is being advised (at no costs so far for this UNDP-BESD funded project) by its private sector partner, Terre Cambodge tour company (TC) to set up the Community centre organisation and centre, the tracks and the future services provided, with the half-time position of Ms Chhun Phirom. Together with the CPA members, ADF and TC will set up of the tours and define the tourism offer for the Popel CPA team, from January to May 2021.

UNDP-BESD Lessons learnt

- The setting up of a water system is definitely a plus for Popel village. Its management is under the authority of the Popel Water committee members, under the supervision and authority of the local authorities (Commune, Police) in case of conflicts. Such a system could also be integrated in the Commune and District Development plan, and developed and replicated to other PKNP villages, if any similar projects are considered.
- Existing water systems are never maintained and inevitably break, unless beneficiaries are charges for water and a committee is managing it. Charging for water a low price allows the committee to take ownership and responsibilities of such water system, whereas free water systems do not belong to anyone and malevolent persons tend to connect themselves between the source and the main reservoirs, depriving water beneficiaries below the distribution reservoir.
- Capacity and knowledge building with key stakeholders have greatly increased, for example using drone and GPS technology has amplified the project partner's ability to better manage the PA (PKNP rangers, CAP members). This has helped the implementation of the BESD / UNDP project. However, further capacity building in future projects, particularly to the CPA members, is recommended.
- More environmental projects, linking the benefit of forest protection/regeneration and villager's general health and income (build on the success of this BESD project), would be extremely beneficial to maintain the key stakeholder's enthusiasm and to maintain the bonds between the implementation partners.
- An extension of the BESD project duration may be required due to the unforeseen global pandemic of COVID 19, which has slightly delayed some of the project's activities, particularly in March and April 2020, when large meetings were not permitted.
- Communities in PKNP can benefit from alternative livelihood options that are environmentally friendly such as eco-tourism for Popel CPA. However, they are still farmers, and cashew nut is still their main source of income. To minimize this, ADF is precisely and in the framework of this project, proposing eco-friendly agriculture options such as black ginger, fruit trees, pig and chicken raising in Khlah Khmum village. Changing destructive agricultures practices to new behaviour is the most challenging aspect of this project as the process is very long. Bringing in the PES concept would be a way to change the villager's behaviour.

- A global approach, combining environmentally friendly alternative livelihoods and demarcation/ law enforcement, is required to stop the trend of deforestation and better protect PKNP forest, as well as to build environmental awareness and enhance the economic development for the benefit of the local population.

UNDP-C.19 project

Another project was granted from UNDP to ADF 2020: "Reforesting & building COVID-19 resilience for Phnom Kulen National Park's population and Chankran Roy Biodiversity Corridor".

The purpose of the grant is to reforest and to build COVID-19 resilience for Phnom Kulen National Park's population and Chankran Roy Biodiversity Corridor in Siem Reap Province, Cambodia. PKNP has one of the few remaining evergreen forest areas in the northern region of Cambodia, with a majority of forest cover consisting of evergreen and semi evergreen forest, combined with small patches of deciduous dipterocarp forest. In 2017, the UNDP land use study of the park estimated that its forest cover could be estimated to 20 to 23%, (from 7300 to 8500 ha). The deforestation of PKNP is mostly due to the extension of the cashew nut cultivation on the Kulen plateau, population growth and encroachments in the lowlands. In the remaining part of forest, large to middle size tree are subject to illegal logging. PKNP has an essential hydrological significance, at the source of the regional watershed.

The Ministry of Environment and the PDoE in charge of the park, have still insufficient financial and human resources to monitor, manage and to enforce the environmental laws that govern and protect the national park. The local population has limited to no knowledge of the environmental laws and the importance forest protection, environmental preservation, and the effects of deforestation on water catchment and climate change. The Covid 19 crisis has a serious impact to the low-income communities of PKNP. This project would bring additional cash to these struggling populations.

The absence of well-defined and cohesive park management, zoning and demarcation and law enforcement has contributed to the destruction of the forest. The approved Phnom Kulen National Park Management Program and Action Plan, (2018-2022), under the leadership of the Ministry of Environment (MoE), are aiming to tackle the identified issues. This project (BESD 2) is in direct line with these milestones' documents.

The project objectives are to:

- Plant about 36,000 trees corresponding to 48 to 55 hectares reforested with indigenous trees (with an average of 750 trees per hectare) during the 2020 rainy season, within water catchment and protected areas of the PKNP: Prasat Krohom PA, 5 CPAs, Chankran Roy Corridor and other degraded water catchment areas of PKNP.
- Using practical facilities (tree nursery) in Khlah Khmum village with trained local staff.
- Maintenance of the reforested areas, ensuring that trees are properly growing.
- Patrolling to a maximum of 60 times the reforested areas by PKNP rangers and communities
- At least 50% of the project budget is set aside for cash-for-work income for PKNP low-income and returnee population, during the hard time of the Covid 19 crisis.
- Provide emergency response to 690 COVID-19 and vulnerable villagers (at 50% women) through the tree planting and expected results need to be updated
- Build environmental awareness for the local communities (villagers, CPA members) and local authorities (village and commune chief, PDoE rangers) by involving them in all aspects.
- Enhance key stakeholders' knowledge (local population, PKNP rangers, PDoE staff, MoE), regarding the reforestation process and the importance of a protected natural environment in PKNP, linked with the importance of water for health, in the context of the COVID-19 pandemic.
- Rehabilitate the PKNP and Chankran Roy Corridor forest, with the following effect of a restored natural environment and resources, notably rainwater, biodiversity.

To achieve the above objectives, the following expected results are:

- 48 to 55 hectares in PKNP and Chankran Roy Corridor should be restored, which is divided as follow:
- Reforestation of selected areas [to be determined after field verification and risks assessment] within the 5 CPAs by GDANCP.
- Reforestation of selected areas within the PA north of Khlah Khmum village (Prasat Krohom water catchment area) by ADF [to be determined after field verification and risks assessment
- Reforestation of selected areas within Chankran Roy Corridor by ADF [to be determined after field verification and risks assessment].
- A tree nursery at Khlah Khmum village for indigenous saplings (seedling, preparation) strengthened
- A maintenance program to protect the tree growth from invasive species (grass and shrubs) developed
- A law enforcement component, aiming to support training, material and financial resources to ranger patrols of the reforested areas.
- 690 COVID-19 and vulnerable villagers (aiming to reach 50% of women) selected and benefiting from the tree planting and maintenance of planted trees.

Implemented activities

Site assessments

Several site assessments were undertaken for the 2 selected sites for this project (Phnom Kulen National Park {PKNP} and Chankran Roy Biodiversity Corridor {CRBC) (or Community Forestry, {CF}), through observation of recent satellites images and field visits. These assessments were done in August and September 2020, prior to the reception of the funds into ADF/Environment account (on the 25th of September 2020) and continued in PKNP in October. They were done by the ADF national manager and the PDoE staff, including rangers of PKNP.

In PKNP, the field verification and risks assessment on biodiversity focused on degraded plots of young forest, illegally cut and burn in 2018 and 2019 by local farmers. Since 2019, the PDoE and the PKNP authorities have warned the population that slash and burn agriculture is no longer permitted and that every plot illegally deforested using this technique should be seized for reforestation.

The deforestation of PKNP is due to this slash and burn practice for cashew nut faming, usually corresponding to one of two hectares per plot. Large surfaces for reforestation are usually not existing but fragmented into several of these illegally farmed areas. This means the surveys are longer, the access to these plots are often problematic as they are disseminated in multiples areas with small access tracks and the transportation of saplings requires several rounds trips.

After observation of satellite images and additional field verification by PKNP staff and rangers, a selection of these recently deforested plots was established, prioritizing the local watersheds (streams and river banks) and water sources. The reforestation of these areas will mitigate the soil erosion and flash floods, and will help to maintain surface water and regenerate the aquifer. The area selected for reforestation are completely deforested and only present high grasses growing.

In CRBC, the field assessment was done in conjunction with the Community Forestry leader, CF members and PKNP rangers, selecting two separated area on 11.5 and 17.1 hectares within the CRBC. These two areas appeared as forested on the recent satellite images. However, they were recommended by the CF team as they were previously burn a few years ago (2016, 2017). As a result, the large trees died and field assessments and field verification indicated that they were covered with grass and low vegetation. A third area of 10.2 hectares was selected after a meeting hold between CF members, ADF and PdoE staff and PKNP rangers.

Beneficiaries selection and arrangement:
The beneficiary's selection was done after several meetings.
For PKNP, two meetings were organized on the 24th of September and on the 6th of October 2020, at the Phnom Kulen Preah Ang Thom ranger station. On the 10th of October, another meeting was organized at the Phnom Kulen Preah Ang Thom ranger station to comfort the beneficiary list. A field survey was done afterwards until nighttime to assess the selected areas to reforest. A last meeting was organized on the day after (Sunday 11th of October) to finalize the findings of the previous meetings and surveys and set up the action plan.
For CBRC, two meetings were organized on the 2nd of October at the Varin District hall and on the 9th October 2020, at the Srey Noy commune hall. In both occasions, the deputy governor of Varin district, Mr. Both Vibol was the chairman).
All meetings were following UNDP criteria for this project. These meeting gathered the ADF Director and National Manager, the PDoE Director and staff, rangers of PKNP, the local authorities (Districts deputies of Varin and Svay Leu districts, commune chiefs and village chiefs), the CF chief and members of CRBC and the Community Protected Areas (CPA) chief and members in PKNP.
The entire project involved the populations from one commune in Svay Leu district (Khnong Phnom) and 5 communes in Varin district (Lovea Krang, Srey Noy, Svay Saa, Prasat, Varin).
These meetings presented the project to all parties involved and helped to determine the respective roles and responsibilities. For the PKNP area, it was decided that the national park rangers would survey the areas and that the village chiefs would provide the list of people corresponding to the project criteria. For CRBC, it was decided that the local authorities would help to determine the identity of the beneficiaries corresponding to the project criteria and that the CF team would determine the area to select for reforestation.

In both target areas, a draft list of beneficiaries was requested from the local authorities taking into account the level of vulnerability and the criteria for engaging workers in the cash for work project: people who lost their jobs in cities and neighbouring countries due to the ongoing COVID-19 crises, local people who directly or indirectly impacted by the COVID-19 through losing of jobs or income in the tourism sector, households that have returnees, including local migrant members, local people who are classified as poor members in the village or commune with holding ID poor 1 and 2 labels, members of CPA or Community Forest communities, women headed households, an additional criterion was added by the commune chief = the poor villagers with no ID label yet, but sanctioned by the commune chief.

For the criteria concerning the local people who are classified as poor members with holding ID poor 1 and 2 labels, ADF and PDoE could not always quantify this parameter as: some beneficiaries have "poor ID cards" 1 and 2, as indicated in the payment forms, some beneficiaries are poor without "poor ID card" yet but came and got paid, some beneficiaries have "poor ID cards" but did not come (even if we announced this opportunity) as they have no transportation ways to reach the plantation areas. These problems happened in both target areas: PKNP and CRBC and for both reforestation and maintenance operations.

For the C-19 affected criteria, the people from these rural areas have seasonal employments, when they have one, and are most of the time farmers. Therefore, it was not possible to quantify these criteria, in the limited amount of time we had. Due to time constraint, ADF was not able to record the women headed household criteria. However, the difference of sex was recorded for each beneficiary during the project.

These lists of payment were signed and stamped by the two commune chiefs involved for PKNP and CRBC, the representative of PDoE or ADF, and the Director of the Provincial Department of Environment.

ADF, in collaboration with the local authorities, has organized village meetings in Popel village on the 6th of October 2020 inviting people in the draft list and key community people to participate. Due to time constraint, no other meeting was organized in PKNP/Khnong Phnom commune.

For the CRBC, meetings were organized by the Varin District and the commune chiefs, notably at the Srey Noy commune hall, and at the CF station by the FC team to inform the population about the project. Villagers were briefed about the project objectives and activities including payments they can receive and they were explained about selection criteria as listed above for selecting cash for work participants.

Due to time constraint, ADF/PDoE was not able to send the final list and submit it to UNDP for review and endorsement prior to kick off the field activity implementation. The funds were received 3 weeks after the official starting date of the project (1st of September 2020), on the 25th of September. Due to this delay, the land preparation had to be done quickly and workers for this task were selected according the UNDP criteria.

Dissemination and awareness raising on reforestation/ Signboards setting up and mapping of the reforested areas:

These meetings were also giving the occasion to disseminate and bring awareness on reforestation. Every reforested area has been mapped and each map is presented on each signboard. The signboards for each reforested area were designed and set up from the 26th of November to the 3rd of December 2020. Each signboard presents a title in Khmer ("Reforestation" + the name of the project), the map of the reforested area, the UTM coordinates of the area, and the logo of all stakeholders. For PKNP, 5 signboards were set up: 1 at each location (4) and 1 general (presenting all 4 areas), close to the "Halo Trust" bridge, close to the first location and on the main road from Preah Ang Tom to Anlong Thom village. For CRBC, 6 signboards were set up: 1 at each location (3) and 3 general (presenting all 3 areas), at the difference entrances of the area.

Tree purchasing

The saplings from ADF 3 tree nurseries (in Sangke Lak, Ta Penh and Anlong Thom tree nurseries, PKNP) were too small to be planted within this project. The saplings from Chup Ta Sok CPA tree nursery in Khlah Khmum village (PKNP) were counted and only 3600 Beng (*Afzelia xylocarpa (Kruz.)* were available. They were not used for this project yet as this village is difficult to access and it would have raised the transportation costs. They may be used for future reforestation activities in PKNP, if a selected area is located in the vicinity of this tree nursery. A quotation from each potential tree provider was done comparing the prices of purchasing saplings and transportation. The private tree nursery in Kompong Thom, located in the same province had sufficient saplings to reach the project target (36,000). However, transportation costs were too high to respect the project budget constraint.

Most of the trees (24,200) were therefore purchased from the Forestry Administration (FA, Ministry of Agriculture, Forestry and Fisheries) tree nursery ("Khna nursery") in Phum Khna Krew, Svay Leu district, Kantuot commune, Siem Reap province. From early October to the 6th of November, 36,0000 saplings were purchased and transported in 3 different occasions to the selected areas. On the 6th of November, 6000 last saplings were purchased to finalize the reforestation area in CRBC and transported the following day.

11,000 were purchased in Siem Reap from 3 different places.

Sapling available for reforestation from this tree nursery were Beng (*Afzelia xylocarpa (Kruz.)* Craib), Koki (*Hopea helferi*), Yeng (*Dipterocarpus alatus*), Kronghoung (*Dalbergia cochinchinensis Pierre*) and Thnong (*Pterocarpus Macrocarpus Kurz*). These species were selected as they are already present in CRBC and PKNP (Hayes and al 2013, and Mould and al 2014).

Site preparation, seedlings transportation:

The plantation of the different areas could only start when they were cleared from high grass or small bushes. The cash for work planting budget line (2.2 of the deliverable of this project; "Undertake reforestation activities") was partially used to implement this task.

In CRBC, 27 ha were identified in 2 separated areas (17.1 and 11.5 hectares). For the first area, the land preparation has started from 8th October and it was ready to plant on the 26th of October 2020. For both areas, the trees (5 species above) were transported from Kantuot commune tree nursery between the 23rd and the 25th of October to the two areas to reforested. The main challenge for the reforestation of the CRBC was the access to the area. It was extremely difficult because of the access road conditions. The hand tractors transporting the saplings got stuck many times in the muddy track and could barely cross a river. They had to be pulled quite often by a tractor. It took 3 days for 5 hand tractors and 2 trucks to bring saplings on site. On the 6th of November, 10 additional hectares started to be cleared for planting at Phnom Chan Krohom.
In PKNP, the land preparation was done during October and November, previously or simultaneously to the area to be reforested. As mentioned above, this required more time and organization because of the fragmentation of areas to reforest and the small size of each plot (1 to 2 hectares in general). The access to the areas to reforest in PKNP was blocked for trucks transporting the saplings due to heavy rains.
The Siem Reap River could not always be crossed at "Spien Halo", as the main bridge was not finished. ADF/PDoE had to wait several days until the river could be crossed by truck to bring the saplings to resume the reforestation activities. At the time of the writing of this report, the new "Spien Halo" bridge is now open for cars and trucks. In all cases, the high grass on each selected plot had to be cut by workers using brush cutters. They were selected according to the UNDP.

Tree planting:

- In CRBC:
    - 28.6 hectares were planted on the 27th and 28th of October 2020 (in only two day) with 18,000 saplings (FA Kantuot tree nursery). This represents an average of 81 tree planted per person and 630 trees planted per hectares.
    - From the 6th to the 10th of November, 10.2 additional hectares were planted with 6,000 trees at Phnom Chan Krohom.
    - These planting operations, including the preparation of the lands, some maintenance and patrolling, benefited to 405 persons (including 190 women).
- In PKNP, several areas were planted on different dates.
    - 3.2 hectares (2600 trees) were planted next to Phum Thmey, on the 06th of October 2020.
    - 4.7 hectares (3600 trees) were planted on the trail from Anlong Thom to Sangke Lak village on the 14th of October 2020.
    - 4.5 hectares (3400 trees) were planted next to Sangke Lak village (O'Ong) on the 28th of October 2020.
    - 3 hectares (2400 trees) were planted on the north of Thnal Dac (east of Anlong Thom village) on the 5th of November.
    - Total planted for PKNP=15.4 hectares, 12,000 trees planted by 326 persons, including 184 women (142 male), including the preparation of the lands and some maintenance.
    - 9 additional hectares were identified in PKNP and the administrative procedures are proceeded by PDoE. However, some plots still pose problem as their retribution to the PKNP was not acknowledged and signed by the farmers. In order to avoid social issues and conflicts, it was therefore decided to complete and reach the target's project with the 10 additional hectares in CRBC.
- The TOTAL for the 2 selected zones (PKNP and CRBC) is therefore 15.4 hectares for PKNP + 38.8 hectares for CRBC = 54.2 hectares planted.

- Planting technique: workers were divided in groups corresponding to tasks. In PKNP, one group was pulling ropes on the ground with makers every 5 meters (a red string) to indicate the space between the trees to be planted, one group was digging holes at the location of these markers and last one group was planting trees in these holes. Lines were set up parallelly, in order to facilitate the future maintenance of these reforested areas. In other occasions, saplings were planted without using these ropes but respecting lines. In CRBC, a wood stick was added next to each planted tree to facilitate its location for the maintenance operation. No fertilizer or nutrient were applied in the holes as there is no budget nor time for this. However, PDoE and ADF previous experiences of reforestation in PKNP have shown that this is not necessary to ensure the normal growth of the trees.
- The project involved 731 persons including 374 women: 405 persons (including 190 women) in CBRC and 326 persons (including 184 women) in PKNP. The objective of 690 persons (300 for PKNP and 390 for CRBC) was therefore reached and exceeded. The total of women involved is 51.16%.

Payment Method and next steps

As indicated by the LVGA, "the payment for the selected beneficiaries should be done in mobile transfer where the technology is contextually available at the village. If impossible to use those means of transfer the grantee must have a clear evidence of justifying to change of means of payments in consultation with UNDP team". ADF and PDoE could not guarantee that the payment could be done by mobile transfer as not all the beneficiaries have mobile phone. It was also decided to proceed to a cash payment as the local people specifically requested it, arguing that they would have difficulties to reach any withdrawal office (*Wing*…) next to their home.
These kind of facilities are not always available in PKNP or in Varin District. The payment by cash was therefore preferred to ensure transparency and actual payment of each worker present on the day of the planting. Each worker was usually paid at the end of each planting day, according to the activities. Please refer to the financial performances and report as well as the payment lists with thumbprints and signatures provided when signed and stamped by the various commune chiefs.

As requested by UNDP, ADF and PDoE continued the reforestation activities until the 15th November 2020 as the rain have stopped. The objective of ADF/MoE/PDoE is to reforest 48 to 55 hectares in total. At the time of the writing of this report, 54.2 hectares were planted with 36,000 saplings. ADF and PDoE consider that the objectives are reached and that the remaining funds should be allocated to implement the maintenance operations for the reforested areas, during the coming month.

If a non-cost extension is possible, maintenance of the planted areas by weeding could be undertaken until May 2021.

Weeding of reforested areas

Due to the late start of this project, this activity started in December 2020 until June 2021, if a non-cost extension is approved by UNDP. C-19 affected workers and CF members should be hired on a regular basis to clear grass re-growing around each tree, insuring a better survival rate. Regular surveys and patrols of the reforested areas should be implemented by ADF and PDoE staff together with the PKNP rangers and the CF members. However, due to the high numbers of trees planted in a limited amount of days (for example, 18,000 trees planted in only two days in CRBC), the tree planting cash for work funds were not fully spent. Maintenance operations started from the 1st of November 2020 in CRBC.

In CRBC, a wood stick was installed next to each planted tree and grass cleared (29-30th of October 2020). This is facilitating the future clearing of grass as trees will be easily visible with these markers. Maintenance started on the 12th of November in PKNP and continued on the 17th, 21st, 22nd, 23rd, 24th, 25th, 26th, 30th and 1st of December, in both target area, with a large number of participants. Due to the Covid-19 pandemic risks, the maintenance had to stop after this date.

The maintenance operations consisted in placing a wood stick next to each planted tree (to spot easily the tree in the grown grass during the next maintenance phase), weeding, watering if water was available closely and, in some cases, digging around the tree, to set up a circular dike to retain water.

Regular monitoring & forest fire prevention

Patrolling were started in CRBC only. Regular surveys of the different reforested areas will be implemented by ADF and PDoE staff, together with the PKNP rangers and the CF members. This will ensure that the reforested areas are well maintained. The weeding of these areas will also prevent fire to destroy these newly reforested areas.

Coordination with GDANCP and between PDoE, ADF, local authorities and CF

The GDANCP staff was supposed to oversight the planting activities. However, and due to time constraints, ADF and PDoE had to start the reforestation activities urgently. ADF and PDoE will require their visit during the maintenance operations, in order to present the entire project in both areas (PKNP and CRBC).

The PDoE staff coordination and support was ensured by one staff from PDoE, with the help of the Park director and the deputy park director (mostly for meetings, surveys and logistic), and involved more than 40 rangers.

The ADF staff coordination and support was done by the ADF Director and ADF National Manager who attended launching meetings in PKNP, Varin and CRBC. ADF National Manager is in charge of the implementation of the project together with the staff from PDoE. ADF Accounting and Administration officer was in charge of recording every expense, making sure all budget lines were not overspent and finalizing the financial reports.

The UNDP-C.19 project, originally scheduled to end on the 31st of December 2020, was extended until the 31st of May 2021 with the weeding of the reforested areas and regular monitoring and forest fire prevention. This delay with no additional funds was mostly due to the late transfer of the funds and the heavy rains in October 2020, slowing down all activities.

Reforestation activities

Reminder: In 2019, ADF participated and facilitated several activities related to tree planting activities in PKNP: selection of the area to be planted, organisation and logistic on the field, design of signboards, plantation, mobilisation of person to plant.

In 2019, 23 hectares were planted with 31,200 saplings in 4 different areas within PKNP. Three of these plantations were undertaken within the framework on the UNEP-Adaptation Fund project ("Enhancing Climate Change Resilience of Rural Communities living in Protected Areas of Cambodia"). ADF also combined the list of all replanted area from 2015 to 2019 in PKNP. The total of saplings planted reaches 241,500 for 97.5 hectares during this 5-year period.

In 2020, this total figure was largely expended due to the UNDP-C.19 project (see above). The total number of reforested hectares, including the ones form the UNDP-C.19 project, reached almost 90 hectares. 87,100 trees were planted in 32 different locations. These combined figures include projects in which ADF was the main actor, and projects were PDoE was the main implementing partner. A large majority of these projects have been supported by UNDP.

Additional Support to PDoE/ Ranger patrol support funded by Terre Cambodge

Due to the financial difficulties encountered by the donor, this project was not continued in 2020. ADF continued to support the Provincial Department of Environment (PDoE) with mapping for specific projects such as around Phnom Hop area (Orchid centre), or the PKNP general zoning.

Road construction project across PKNP

As per the previous years, ADF has participated and advised PDoE and APSARA about the road construction project across the national Park. ADF also advised the APSARA Authority and the UNESCO-ICC sustainable development experts in June and December 2020.

On the 9th of January 2020, ADF finalized and signed the renewal of the Memorandum of

Understanding (MoU) with the APSARA National Authority. Started in 2008, this is fifth renewal of this partnership. It formalizes all responsibilities of the two parties. It was signed for an additional 3-years period, from January 2020 to January 2023.

In preparing this report, the trustees have taken advantage of the small company exemptions provided by section 415A of the Companies Act 2006

This report was approved by the Trustees and signed on their behalf by:

Vincent Chevance
Trustee

Date: 30 September 2021

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

INDEPENDENT EXAMINER'S REPORT

FOR THE YEAR ENDED 31 DECEMBER 2020

Independent Examiner's Report to the Trustee of Archaeology and Development Foundation ('the Charity')

I report to the charity Trustee on my examination of the accounts of the Charity for the year ended 31 December 2020.

Responsibilities and Basis of Report

As the Trustee of the Charity (and its directors for the purposes of company law) you are responsible for the preparation of the accounts in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the accounts of the Charity are not required to be audited under Part 16 of the 2006 Act and are eligible for independent examination, I report in respect of my examination of the Charity's accounts carried out under section 145 of the Charities Act 2011 ('the 2011 Act'). In carrying out my examination I have followed the Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

Independent Examiner's Statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe:

1. accounting records were not kept in respect of the Charity as required by section 386 of the 2006 Act; or
2. the accounts do not accord with those records; or
3. the accounts do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the accounts give a 'true and fair' view which is not a matter considered as part of an independent examination; or
4. the accounts have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities [applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102)].

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the accounts to be reached.

This report is made solely to the Charity's Trustee in accordance with Part 4 of the Charities (Accounts and Reports) Regulations 2008. My work has been undertaken so that I might state to the Charity's Trustee those matters I am required to state to them in an Independent Examiner's Report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustee for my work or for this report.

Signed: Lee Facey Dated: 30 September 2021

Lee Facey

Lubbock Fine LLP
Chartered Accountants & Statutory Auditors
Paternoster House
65 St Paul's Churchyard
London
EC4M 8AB

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee)

STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2020

	Note	Unrestricted funds 2020 $	Restricted funds 2020 $	Total funds 2020 $	Total funds 2019 $
Income from:					
Donations	3	11,313	150,300	161,613	244,724
Investments	4	9	179	188	-
Total income		11,322	150,479	161,801	244,724
Expenditure on:					
Charitable activities	5	68,987	193,846	262,833	196,505
Total expenditure		68,987	193,846	262,833	196,505
Net (expenditure)/income		(57,665)	(43,367)	(101,032)	48,219
Transfers between funds	13	(3,817)	3,817	-	-
Net movement in funds		(61,482)	(39,550)	(101,032)	48,219
Reconciliation of funds:					
Total funds brought forward		41,714	128,426	170,140	121,921
Net movement in funds		(61,482)	(39,550)	(101,032)	48,219
Total funds carried forward		(19,768)	88,876	69,108	170,140

The Statement of Financial Activities includes all gains and losses recognised in the year.

The notes on pages 59 to 69 form part of these financial statements.

ARCHAEOLOGY AND DEVELOPMENT FOUNDATION
(A Company Limited by Guarantee) **REGISTERED NUMBER: 06429421**

BALANCE SHEET

AS AT 31 DECEMBER 2020

	Note	2020 $	2020 $	2019 $	2019 $
Fixed assets					
Tangible assets	10		9,944		13,590
Current assets					
Debtors	11	10,001		80,233	
Cash at bank and in hand		52,440		82,687	
		62,441		162,920	
Creditors: amounts falling due within one year	12	(3,277)		(6,370)	
Net current assets			59,164		156,550
Total net assets			69,108		170,140
Charity funds					
Restricted funds	13		88,876		128,426
Unrestricted funds	13		(19,768)		41,714
Total funds			69,108		170,140

The Charity was entitled to exemption from audit under section 477 of the Companies Act 2006.

The members have not required the company to obtain an audit for the year in question in accordance with section 476 of Companies Act 2006.

The Trustee acknowledge their responsibilities for complying with the requirements of the Act with respect to accounting records and preparation of financial statements.

The financial statements have been prepared in accordance with the provisions applicable to entities subject to the small companies regime.

The financial statements were approved and authorised for issue by the Trustee and signed on their behalf by:

Vincent Chevance
Trustee
Date: 30 September 2021

The notes on pages 59 to 69 form part of these financial statements.

1. General information

Archaeology and Development Foundation is a charitable company limited by guarantee incorporated in England and Wales. Its registered office address and place of business is 25 Brooks Mews, London, W1K 4DZ.

2. Accounting policies

2.1 Basis of preparation of financial statements

The financial statements have been prepared in accordance with the Charities SORP (FRS 102) - Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

Archaeology and Development Foundation meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historical cost or transaction value unless otherwise stated in the relevant accounting policy.

2.2 Going concern

The Charity is in the main reliant on donations and the support of related parties to meet its running costs. Due to the nature of its activities, the majority of the Charity's expenditure is incurred directly on charitable projects and so the Charity is able to control its direct charitable expenditure based upon the level of donation income that it has received and the anticipated ongoing support of related parties.

The Trustee considers it appropriate to prepare the financial statements on a going concern basis on the assumption that sufficient incoming resources will be generated to meet the Charity's running costs. The financial statements do not include any adjustment which would result if there were insufficient funds available in respect of the Charity's operations. In forming this conclusion, the Trustee has taken into account the impact of Covid-19.

2.3 Donations and gifts

All income is recognised once the Charity has entitlement to the income, it is probable that the income will be received and the amount of income receivable can be measured reliably.

Donations and gifts are included in full in the Statement of Financial Activities when receivable.

2.4 Expenditure

Expenditure is recognised once there is a legal or constructive obligation to transfer economic benefit to a third party, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is classified by activity. The costs of each activity are made up of the total of direct costs and shared costs, including support costs involved in undertaking each activity. Direct costs attributable to a single activity are allocated directly to that activity. Shared costs which contribute to more than one activity and support costs which are not attributable to a single activity are apportioned between those activities on a basis consistent with the use of resources. Central staff costs are allocated on the basis of time spent, and depreciation charges allocated on the portion of the asset’s use.

Expenditure on charitable activities is incurred on directly undertaking the activities which further the Charity's objectives, as well as any associated support costs.

2. Accounting policies (continued)

2.4 Expenditure (continued)

All expenditure is inclusive of irrecoverable VAT.

2.5 Interest receivable

Interest on funds held on deposit is included when receivable and the amount can be measured reliably by the Charity; this is normally upon notification of the interest paid or payable by the institution with whom the funds are deposited.

2.6 Foreign currencies

Monetary assets and liabilities denominated in foreign currencies are translated into dollars at rates of exchange ruling at the reporting date.

Transactions in foreign currencies are translated into dollars at the rate ruling on the date of the transaction.

Exchange gains and losses are recognised in the Statement of Financial Activities.

2.7 Tangible fixed assets and depreciation

Tangible fixed assets costing $200 or more are capitalised and recognised when future economic benefits are probable and the cost or value of the asset can be measured reliably.

Tangible fixed assets are initially recognised at cost. After recognition, under the cost model, tangible fixed assets are measured at cost less accumulated depreciation and any accumulated impairment losses. All costs incurred to bring a tangible fixed asset into its intended working condition should be included in the measurement of cost.

Depreciation is charged so as to allocate the cost of tangible fixed assets less their residual value over their estimated useful lives, using the straight-line method.

Depreciation is provided on the following bases:

Freehold property	- over 10 years straight line
Motor vehicles	- 25% straight line
Office equipment	- 33.33% straight line

2.8 Debtors

Trade and other debtors are recognised at the settlement amount after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due.

2.9 Cash at bank and in hand

Cash at bank and in hand includes cash and short-term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

2. Accounting policies (continued)

2.10 Liabilities and provisions

Liabilities are recognised when there is an obligation at the Balance Sheet date as a result of a past event, it is probable that a transfer of economic benefit will be required in settlement, and the amount of the settlement can be estimated reliably.

Liabilities are recognised at the amount that the Charity anticipates it will pay to settle the debt or the amount it has received as advanced payments for the goods or services it must provide.

2.11 Financial instruments

The Charity only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value with the exception of bank loans which are subsequently measured at amortised cost using the effective interest method.

2.12 Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the Trustee in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The costs of raising and administering such funds are charged against the specific fund. The aim and use of each restricted fund is set out in the notes to the financial statements.

Investment income, gains and losses are allocated to the appropriate fund.

3. Income from donations

	Unrestricted funds 2020 $	Restricted funds 2020 $	Total funds 2020 $
Donations	11,313	150,300	161,613

	Unrestricted funds 2019 $	Restricted funds 2019 $	Total funds 2019 $
Donations	83,771	160,953	244,724

4. Investment income

	Unrestricted funds 2020 $	Restricted funds 2020 $	Total funds 2020 $	Total funds 2019 $
Bank interest	9	179	188	-

5. Analysis of expenditure on charitable activities

Summary by fund type

	Unrestricted funds 2020 $	Restricted funds 2020 $	Total funds 2020 $
Charitable costs	68,987	193,846	262,833

	Unrestricted funds 2019 $	Restricted funds 2019 $	Total funds 2019 $
Charitable costs	63,068	133,437	196,505

6. Analysis of expenditure by activities

	Activities undertaken directly 2020 $	Support costs 2020 $	Total funds 2020 $
Charitable costs	255,668	7,165	262,833

	Activities undertaken directly 2019 $	Support costs 2019 $	Total funds 2019 $
Charitable costs	193,094	3,411	196,505

6. Analysis of expenditure by activities (continued)

Analysis of support costs

	Charitable costs 2020 $	Total funds 2020 $
Accountancy fees	2,513	2,513
Independent examination fees (governance)	750	750
Foreign currency loss	2,256	2,256
Bank charges and interest	1,646	1,646
	7,165	7,165

	Charitable costs 2019 $	Total funds 2019 $
Accountancy fees	2,373	2,373
Independent examination fees (governance)	750	750
Foreign currency gain	(923)	(923)
Bank charges and interest	1,211	1,211
	3,411	3,411

7. Staff costs

	2020 $	2019 $
Wages and salaries	69,850	73,948
	69,850	73,948

The average number of persons employed by the Charity during the year was as follows:

	2020 No.	2019 No.
Average number of employees	12	12

No employee received remuneration amounting to more than $60,000 in either year.

8. Trustee's remuneration and expenses

During the year, no Trustees received any remuneration or other benefits (2019 - $NIL).

During the year ended 31 December 2020, no Trustee expenses have been incurred (2019 - $NIL).

9. Taxation

The company is a registered charity with the Charity Comissioners for England and Wales. It is not liable to corporation tax on any surplus arising from its charitable activites.

10. Tangible fixed assets

	Freehold property $	Motor vehicles $	Office equipment $	Total $
Cost				
At 1 January 2020	28,288	18,640	21,348	68,276
Additions	-	950	480	1,430
At 31 December 2020	28,288	19,590	21,828	69,706
Depreciation				
At 1 January 2020	19,585	17,133	17,968	54,686
Charge for the year	2,828	644	1,604	5,076
At 31 December 2020	22,413	17,777	19,572	59,762
Net book value				
At 31 December 2020	5,875	1,813	2,256	9,944
At 31 December 2019	8,703	1,507	3,380	13,590

11. Debtors

	2020 $	2019 $
Due within one year		
Other debtors	-	515
Prepayments and accrued income	10,001	79,718
	10,001	80,233

12. Creditors: Amounts falling due within one year

	2020 $	2019 $
Accruals and deferred income	3,277	6,370

13. Statement of funds

Statement of funds - current year

	Balance at 1 January 2020 $	Income $	Expenditure $	Transfers in/out $	Balance at 31 December 2020 $
Unrestricted funds					
General Funds	41,714	11,322	(68,987)	(3,817)	(19,768)
Restricted funds					
Hygiene and sanitation project	24,154	593	(22,131)	-	2,616
Income Generation project	48,926	6,703	(28,966)	-	26,663
Environment Reforestation	(3,817)	-	-	3,817	-
TREE project	9,795	23,120	(12,570)	-	20,345
Popel project	5,347	-	-	(5,347)	-
UNDP	44,021	120,063	(130,179)	5,347	39,252
	128,426	150,479	(193,846)	3,817	88,876
Total of funds	170,140	161,801	(262,833)	-	69,108

13. Statement of funds (continued)

Statement of funds - prior year

	Balance at 1 January 2019 $	Income $	Expenditure $	Transfers in/out $	Balance at 31 December 2019 $
Unrestricted funds					
General Funds	16,728	83,771	(63,068)	4,283	41,714
Restricted funds					
Hygiene and sanitation project	40,452	34,308	(50,423)	(183)	24,154
Income Generation project	30,788	36,935	(27,447)	8,650	48,926
Educational support	(183)	-	-	183	-
Environment Reforestation	(3,817)	-	-	-	(3,817)
CAR project	8,650	-	-	(8,650)	-
TREE project	18,005	-	(5,911)	(2,299)	9,795
Popel project	11,298	(290)	(5,661)	-	5,347
UNDP	-	90,000	(43,995)	(1,984)	44,021
	105,193	160,953	(133,437)	(4,283)	128,426
Total of funds	121,921	244,724	(196,505)	-	170,140

Statement of funds (continued)

Hygiene and sanitation project - Project to develop accessibility to water, sanitation and hygiene, combined with environmental awareness, in two primary schools of Phnom Kulen.

Income Generation project - Provision of technical and other assistance to farmers to replace destructive farming practices. This fund also covers the CAR project which is to develop a community based tourism centre to develop incomes from the local community. The separate CAR project fund was reallocated to the Income Generation project to combine projects with concurrent aims. This also includes the rangers patrol project.

Educational support - Projects to support education through infrastructure improvements in schools. The separate educational support project fund was reallocated to the hygiene and sanitation project to combine projects with concurrent aims.

Environment Reforestation - Projects to reinforce ADF activities towards the reforestation of the Phnom Kulen National Park.

CAR project - To construct a durable, welcoming, community owned and operating tourist visitor center that will act as a platform from which paid community guided tours would bring tourists to see the historical and environmental sites of Phnom Kulen National Park (PKNP). This will distribute the revenues from the predicted influx of tourism that the new road will bring in to the communities of Thmor Chrougn and Anlong Thom villages. The separate CAR project fund was reallocated to the income generation project to combine projects with concurrent aims.

TREE project - This relates to a participatory tree growing project to be implemented in three village schools on the plateau of Phnom Kulen National Park.

Popel project - This relates to the expansion of a Community Protected area within Phnom Kulen National Park, to protect the remaining forest from the expansion of the illegal cashew nut farming.

UNDP - This relates to a project to demarcate and enlarge forest areas, to set up a water system and to propse alternative livelihoods to villagers through agriculture and a community based tourism centre.

Transfers
During the year a transfer was made from general funds to the restricted Environment Reforestation project totalling $3,817 to cover underspend.

During the year a transfer was made from the restricted Popel project to the UNDP project totalling $5,347 to represent the end of the first phase of the Popel project and the start of the UNDP project, projects with concurrent aims.

14. Analysis of net assets between funds

Analysis of net assets between funds - current period

	Unrestricted funds 2020 $	Restricted funds 2020 $	Total funds 2020 $
Tangible fixed assets	9,944	-	9,944
Current assets	(26,435)	88,876	62,441
Creditors due within one year	(3,277)	-	(3,277)
Total	(19,768)	88,876	69,108

Analysis of net assets between funds - prior period

	Unrestricted funds 2019 $	Restricted funds 2019 $	Total funds 2019 $
Tangible fixed assets	13,590	-	13,590
Current assets	34,494	128,426	162,920
Creditors due within one year	(6,370)	-	(6,370)
Total	41,714	128,426	170,140

15. Members' liability

Each member of the charitable company undertakes to contribute to the assets of the company in the event of it being wound up while he/she is a member, or within one year after he/she ceases to be a member, such amount as may be required, not exceeding £10 for the debts and liabilities contracted before he/she ceases to be a member.

16. Related party transactions

Included within incoming resources is an amount of $4,575 (2019 - $nil) which was donated by a related party.

17. Post balance sheet events

At the time of preparing these financial statements, the Covid pandemic was ongoing. Whilst the full impact on the charity's finances and operations will not be known with certainty for some time, since the year end there have been delays to projects as a result of lack of international tourism, modifications to projects due to school closures and no costs extensions where projects cannot be completed in the agreed timeframes. Management have been in close contact with existing and new donors to raise funds to cover this period of uncertainty. The Trustee is monitoring the situation and will take the necessary steps to mitigate against any adverse impacts of Covid.