

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales · Charity number 1179460

Details

Other names	STEP TRUST UK
Status	Registered
Legal form	Trust
Registered	2018-08-06
Register	View on the Charity Commission register

Contact

Address 30 Barn Road
Stirling
FK8 1EP

Phone 07773797471

Activities

Objects: THE OBJECTS OF THE CHARITY ('THE OBJECTS') ARE TO CONSERVE AND PROTECT THE AFRICAN ELEPHANT IN TANZANIA AND OTHER AFRICAN WILDLIFE AND HABITATS IN TANZANIA FOR THE PUBLIC BENEFIT.

Activities: The Southern Tanzania Elephant Trust is a UK based charity raising funds for the Southern Tanzania Elephant Program (STEP), which is a conservation organisation based in Tanzania which promotes the protection of the African elephant and the habitats in which they live. Activities of STEP include monitoring and research, working with communities who live alongside elephants, education and advocacy.

Classification

- **How:** Provides Other Finance, Acts As An Umbrella Or Resource Body
- **What:** Environment/conservation/heritage
- **Who:** Other Charities Or Voluntary Bodies

Geography

- Tanzania
- Throughout England And Wales

Finances

Period end	Income	Expenditure	Assets	Employees
2024-12-31	£37,456	£51,913	-	-
2023-12-31	£52,679	£20,688	-	-
2022-12-31	£32,910	£67,370	-	-
2021-12-31	£47,029	£48,971	-	-
2020-12-31	£59,399	£8,668	-	-

Trustees

Name	Role	Appointed
Helen Pearson		2017-12-01
Nat Comber		2017-12-01
Nicholas Charles McWilliam		2017-12-01

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales - Charity number 1179460

Accounts

Charity number: 1179460



**Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2024**

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2024

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2024 through 31 December 2024 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Name and Address of Independent Examiner

Community360
Winsley's House, High Street, Colchester
Essex
Essex
CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021, and again on 21st July 2024. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating

declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlements adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often because of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities.
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2024

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organization in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organization registered on 17th July 2019 under the Non-Governmental Organization (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organization was previously registered as a company limited by guarantee having no share capital (i.e. a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organization (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organization, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organization is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve managed by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

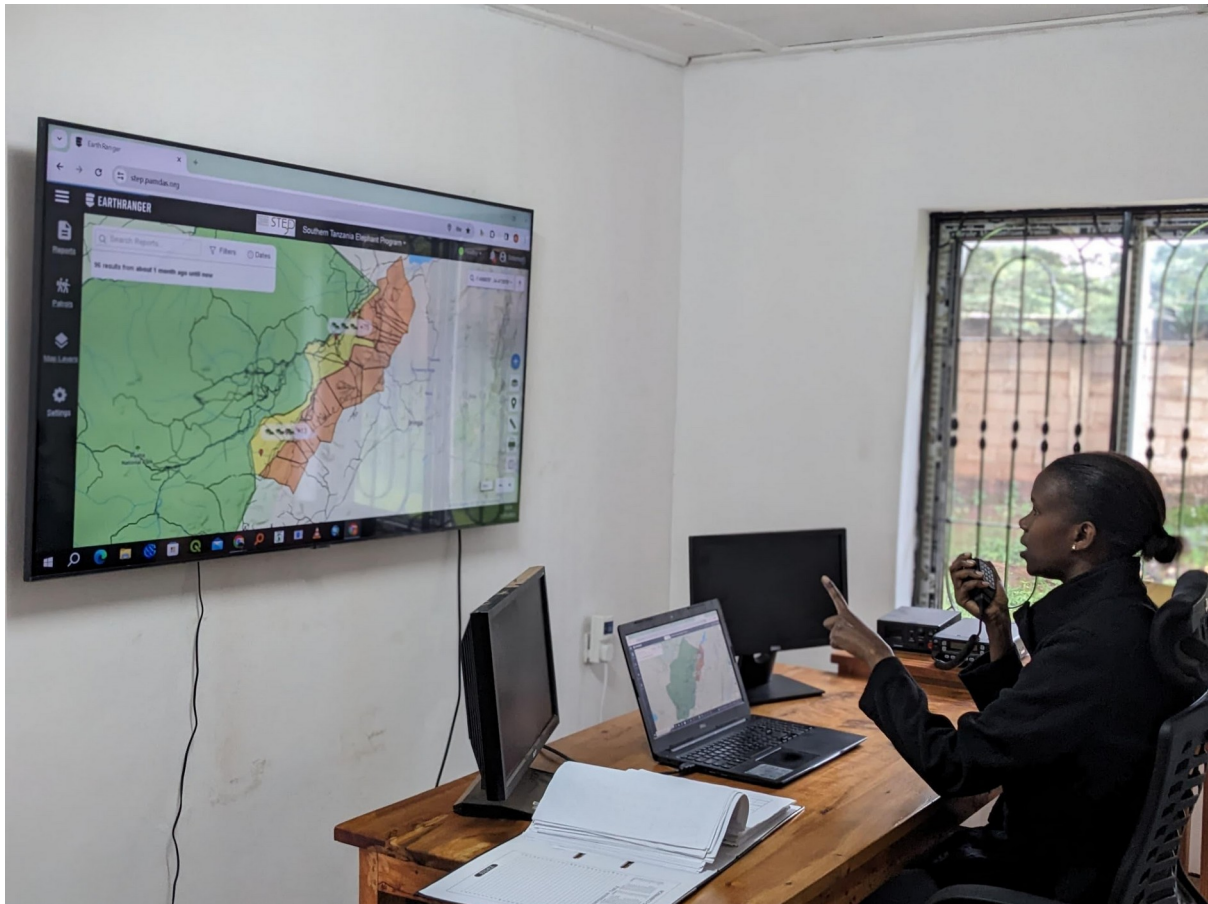
- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2024 marked the seventh year of collaboration between STEP and MBOMIPA WMA. STEP supported teams of Village Game Scouts (VGS) to conduct foot patrols each by supplying scout wages and providing fuel and food supplies. In 2024, scouts covered 7,835 km of patrols on foot and 4,480 km by vehicle. All patrols were logged using GPS units with patrol data collected using a mobile app, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols, and with provision of all necessary fuel. No elephants were poached inside the WMA in 2024, maintaining the trend from 2023.

One of the costs faced by communities living alongside the WMA is crop damage from elephants. To address this challenge, STEP supported the WMA to develop a human-elephant conflict (HEC)

response unit comprising 12 trained village game scouts in 2023. The goal of this unit is to reduce the costs associated with living alongside wildlife and to improve community perceptions of the WMA. MBOMIPA's HEC response unit continued to operate in 2024 with our support, responding to 95 human-elephant conflict incidents in 12 villages, almost double the number of responses made in 2023. The unit successfully prevented elephants from entering crop fields in 22% of cases responded to, and moved elephants out of crop fields in the remaining 78% of cases. These efforts are producing positive outcomes for both people and elephants. While 24% of elephant mortalities since 2018 have been due to conflict, no conflict-related killings occurred in 2024, reflecting the success of these mitigation measures.



Operations in MBOMIPA WMA are monitored in real-time using EarthRanger

1.2 Udzungwa Forest Protection Projects

The Udzungwa Mountains landscape, including the Udzungwa Scarp Forest Nature Reserve (USFNR), Udzungwa Mountains National Park (UMNP), and the Kilombero Nature Forest Reserve (KNFR), is a globally recognised biodiversity hotspot and one of Tanzania's most critical water catchments. These areas harbour exceptional biological richness, supporting Udzungwa endemics and globally threatened vertebrate species (Rovero et al., 2014), including the Sanje mangabey, Udzungwa red colobus, Abbott's duiker, more than 20 endemic and 14 threatened reptiles (Lyakurwa et al., 2019), and 19 endemic and threatened amphibians. Despite the area's ecological importance, it has long been threatened by anthropogenic pressures including wildfire, logging, agricultural encroachment, and illegal hunting (Harrison, 2006; Topp-Jørgensen et al., 2009). Severe population declines have been recorded for several species due to hunting and trapping (Rovero et al., 2015), especially in USFNR. Recognising this urgency, STEP has supported the protection of USFNR since 2017 in collaboration with Wild Planet Trust (formerly Whitley Wildlife Conservation Trust), Bristol Zoo, Chester Zoo, and Association Mazingira. In 2021, with funding from the Aage V. Jensen Charity Foundation through the Natural History Museum of Denmark, this work was extended under the

Kilombero Forest Protection Project (KFPP) to include UMNP and KNFR. These projects fund ground patrols, ranger training, and the provision of essential equipment.

In 2024, significant progress was made under these forest protection programmes. Under the Uzungwa Scarp Protection Project, patrol teams covered 751 km on foot and logged 764 patrol hours, resulting in the removal of 698 snares, closure of 10 poachers' camps, dismantling of 2 illegal farms and 10 logging sites, and the arrest of 3 offenders. STEP also procured vital field gear for Village Game Scouts and rangers, including tents, sleeping equipment, solar lamps, head torches, power banks, rain gear, and cooking utensils. Under the Kilombero Forest Protection Project, patrol teams conducted 544 km of foot patrols, removing 270 snares, closing 20 poachers' camps, dismantling 1 charcoal kiln, clearing 6 illegal farms, and halting 7 logging activities. Equipment support included tents, rucksacks, hydration packs, tarpaulins, handcuffs, chargers, and rechargeable batteries. STEP also assisted in the development of strategic patrol plans, strengthening databases, and reporting systems.

Conservation education was also a key component in 2024. Awareness programmes in six schools (three primary and three secondary) reached 256 participants (223 students, 15 teachers, 13 Village Natural Resource Committee members, and 5 village leaders). Activities included interactive forest hikes, distribution of 80 conservation T-shirts carrying the message "Tutunze Mazingira yakutunze" ("Care for the environment and it will care for you"), 90 calendars, 18 dustbins for school waste management and recycling, 140 tree seedlings, and 400 exercise books.



Patrol team in Kilombero Nature Forest Reserve

1.3 Rungwa-Kizigo-Muhesi Game Reserves, Ruaha National Park and Lunda-Nkwambi Game Controlled Area

2024 marked the 11th year of STEP's aerial program, which has provided >1,250 hours of aerial support to the Ruaha-Rungwa ecosystem since 2014. In 2024, STEP provided 223 hours of aerial support to MBOMIPA Wildlife Management Area, Rungwa, Kizigo, and Muhesi Game Reserves and Ruaha National Park. We also upgraded the aircraft hangar and pilot camp in MBOMIPA WMA, which serves as the base for our aerial operations.

Flights are always done in collaboration with rangers and village game scouts ready to respond to threats observed by the aircraft. In 2024, aerial patrols detected 35 illegal timber harvesting sites, four illegal mining sites, and three charcoal production sites. Follow-up by rangers and village game scouts resulted in authorities apprehending 19 individuals and dismantling 23 poaching camps.

Observations from aerial patrols also help us understand trends in threats to the ecosystem. In 2024, we continued to see a decline in encounter rates of timber cutting sites, poaching camps and elephant

carcasses observed from the air compared to 2022 and 2023, indicating that protection efforts are having a positive impact.



STEP's light aircraft

1.4 Capacity building

As part of the Forest Protection Projects, STEP provided monthly technical support to Reserve staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps the Reserve management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. Patrol teams were also supported with the application of conservation technologies including Survey 123 Data Collector and GIS for patrol data analysis.

In 2024, MBOMIPA WMA recruited 25 new VGS (9 women), for whom STEP facilitated comprehensive training on their roles, responsibilities, human rights, and code of conduct.

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants.
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants.
- Collect data on elephant movements and use this to inform education and trials of crop protection measures.
- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.

- Explore and support establishment of corridors to facilitate safe elephant movement.
- Immersive hands-on training and development opportunities for students and early career Tanzanian conservationists, many of whom go on to work for other organizations.

2.1 Kilombero Valley

The Kilombero Valley, in the Udzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture, and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Udzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups registered as Community-Based Organizations to establish seven beekeeping projects in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. Farmers harvested 281.5 litres of honey in 2024, which was processed and packed at the Honey Collection Centre.

STEP also works with farmers' groups to establish and support the operation of Village Savings and Loan Associations (VSLAs), community-based financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. Our monitoring has shown that VSLAs help members diversify their livelihoods, increase their incomes, and improve household resilience to elephant crop damage. In 2024, STEP supported the formation of six new VSLA groups with a total of 144 farmers (57% women). This brought the total number of VSLA groups to 21, with 554 members (62% women).

A total of 711 loans were taken out by members in 21 VSLA groups with a total value of TZS 167,482,500. Loans were used for agriculture, small businesses such as expanding and opening small shops, and small street food restaurants, and support with school fees. Such access to credit is highly valued by VLSA members in our project area.



Financial literacy training for VSLA members in the Kilombero Valley

2.1.2 Awareness-Raising and Education

STEP supported a total of 12 film nights in 2024, reaching 6,463 adults and 3,320 children – a total of 9,783 community members engaged overall. Local Elephant Monitors also reached 947 farmers with one-to-one training. During these film nights and trainings, the STEP team and LEMs share information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 6-module course on human-elephant coexistence in 31 schools, reaching over 3,200 students. The modules covered elephant behaviour, ecology, and biology, human-elephant coexistence, and wildlife connectivity. STEP also expanded its park visit program for primary and secondary students to national parks as an experiential supplement to educational outreach. 400 students visited Udzungwa Mountains National Park and Mikumi National Park, learned about elephants' lives in the wild and had the opportunity to experience Tanzania's rich natural heritage. STEP also facilitated student-led awareness-raising events with 20 schools reaching 9,692 students and a secondary school elephant-themed football and netball tournament reaching 8,900 students. In 2024, we held the second Tembo Cup – a conservation football tournament - reaching 35,075 community members in 15 villages. The tournament involved school student trainings and small group discussions with match spectators around football grounds.



Primary school students reached through STEP's conservation education program

2.1.3 Corridor Restoration

2024 was another productive year towards our long-term vision of restoring the Nyerere-Udzungwa Wildlife Corridor (previously known as the Kilombero Elephant Corridor) between the Udzungwa Mountains and Nyerere National Parks via the Magombera Nature Forest Reserve. The goal is to peacefully manage the regular movements that elephants make persistently across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. This corridor facilitates connectivity between Tanzania's southern and western elephant populations, a vitally important stronghold for East Africa's population. In Tanzania's National Corridor Assessment and Action Plan, this corridor is ranked 24th out of 61 corridors nationally in 'conservation value', and 2nd out of 61 corridors in 'vulnerability'.

STEP has been facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, the government, and the private sector to restore this ecological connectivity and enhance food and personal security for the local farming population. At the heart of the project are the communities of the three villages of Sole, Mang'ula A, and Kanyenja, who have agreed to setting aside ~7% of village land to enable the corridor.

In 2024, a third round of valuation and compensation by the Government of Tanzania of the remaining plots inside the corridor was carried out, bringing the total number of households fully compensated to 368. We also supported community-led protection of the corridor by facilitating 19 village game scouts (VGS) from the corridor villages to conduct patrols and community outreach. All scouts have received training in code of conduct, human rights, bushwalking, data collection, and safety around dangerous wildlife. Also in 2024, we launched a new on-site corridor education program, allowing community members to learn about key activities like electric fence installation, camera trapping, and habitat restoration while fostering discussions on long-term corridor management and human-wildlife conflict mitigation. Led by trained VGS, the initiative encourages community involvement and ownership. Construction of 10 km of electric fencing along the corridor boundary was completed, and through our partnership with Reforest Africa, 60,000 trees were planted in the corridor for habitat restoration.

For many years, STEP has been carrying out consultations and awareness raising in five villages surrounding the corridor, and we saw the results when, on July 19, 2024, the Ministry of Natural Resources and Tourism (MNRT) issued the Government's notice of intent to designate the wildlife corridor, the first such notice to be announced under the Wildlife Corridor Regulations of 2018. Under the Regulations, there follows a 90-days consultation period for stakeholders to submit claims and

objections to the Government. STEP facilitated village meetings and widespread announcements throughout the area to ensure that everyone in the community was aware of this process. At the end of the 90 days, no objections had been raised and District officials, on behalf of the communities, have formally requested the Ministry to proceed with designation of the Corridor. Formal designation of the corridor was completed in April 2025.



Elephants inside the Nyerere-Udzungwa Wildlife Corridor

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Livelihoods activities and Village Savings and Loans Associations

2024 saw the continued growth of our VSLA work with communities around Rungwa-Kizigo-Muhesi Game Reserves. STEP provided technical assistance to 48 existing Village Savings and Loans Associations (VSLAs) across the Ruaha-Rungwa landscape, benefiting 1,035 community members (51% women). STEP also supported the formation of 12 new VSLAs in this landscape, with a total of 244 farmers (57% women). In 2024, these VSLAs issued a total of 1,794 loans, amounting to a total value of TZS 309,651,332. These loans were used for various purposes, including small-scale business ventures, agricultural activities, and covering educational expenses such as school fees.

In March 2025, STEP conducted a household survey to assess the impact of VSLAs on food security, resilience, ability to meet basic needs, and perceptions of elephants and conservation in villages adjacent to Kizigo and Muhesi Game Reserves and MBOMIPA WMA.

In Kizigo and Muhesi villages, all indicators of food security were better among VSLA members than non-members. For instance, the percentage of households that had experienced a lack of food due to financial and other resource constraints in the previous 12 months was 5% for VSLA members and 15% for non-VSLA members. The average household dietary diversity score was 38.6 VSLA

members and 34.7 for non-members, a difference of 11%. In villages adjacent to MBOMIPA WMA, we compared indicators of food security for VSLA members and non-members in 2023 and 2025, to measure longitudinal change. In MBOMIPA, indicators of food security improved for both VSLA members and non-members between 2023 and 2025 (this may reflect annual or seasonal variation), however, improvements were larger for VSLA members than non-members. For instance, the percentage of households that had experienced a lack of food due to financial and other resource constraints in the previous 12 months declined from 50% to 4% for VSLA members between baseline and endline, and from 41% to 16% for non-VSLA members. The average household dietary diversity score increased from 38.4 to 42.4 (10% increase) for VSLA members, but remained stable for non-members (35.9 in 2023, 35.3 in 2025).

With regards to household resilience, in villages adjacent to Kizigo and Muhesi GRs, there was no difference between VSLA members (67%) and non-members (70%) in the percentage that had experienced financial shocks in the previous 12 months. However, VSLA members were less likely to have sold their crops to cope with the shock (18%) than non-members (31%). Similarly, VSLA members were less likely to have sold livestock to cope with the shock (9%) than non-members (16%). Of VSLA members that had experienced a financial shock in the previous 12 months, 44% took a loan from the VSLA to cope with the shock. In MBOMIPA, there was a small difference between VSLA members (70%) and non-members (75%) in the percentage that had experienced financial shocks in the previous 12 months. VSLA members in MBOMIPA were slightly less likely to have sold their crops to cope with the shock (26%) than non-members (34%), however there was no difference in the percentage that had sold livestock to cope with the shock (7% for VSLA members, 6% for non-members). Of VSLA members that had experienced a financial shock in the previous 12 months, 40% took a loan from the VSLA to cope with the shock.

We also measured contribution to poverty reduction through a Basic Necessities Survey (BNS). BNS is a poverty assessment tool based on a community-articulated assessment of 'basic needs'. We calculated a BNS score by summing, across all items that 90% or more of community members agreed were necessary household items/services, the proportion of households that owned the item. A higher score indicates that a higher proportion of household items are met. In Kizigo and Muhesi villages, the BNS score for VSLA members was 15.2 compared to 13.8 for non-members, a 10% difference. For VSLA members around MBOMIPA WMA, the BNS score increased by 22.8% from 18.3 in 2023 to 22.4 in 2025. During the same period, the BNS score for adjacent households that were not VSLA members increased by only 2.5% from 16.6 to 17.0.

The survey also found a positive association between VSLA membership and perceptions of protected areas and elephants. In Kizigo and Muhesi villages, tolerance for elephants was higher among VSLA members than non-members (77% of VSLA members wished to see an increase in the elephant population in the Game Reserves, compared to 62% for non-members). VSLA membership and outreach also positively influenced whether community members were aware of benefits from the GRs (64% of VSLA members were aware vs 42% of non-members) and whether it was important for the GRs to continue to exist (89% of VSLA members said GRs should continue to exist vs 83% of non-members). In MBOMIPA WMA, tolerance for elephants was higher among VSLA members than non-members (94% of VSLA members wished to see an increase in the elephant population in MBOMIPA, compared to 81% for non-members) VSLA membership and outreach also positively influenced whether community members said they personally benefited from MBOMIPA WMA (91% of VSLA members said they benefited vs 76% of non-members).

STEP also works to diversify household livelihoods, increase incomes, and enhance farmer resilience to elephant impacts through poultry vaccination trials. Many households in the Ruaha-Rungwa landscape keep chickens as a source of food and income, but face the challenge of chickens dying from disease. Through our poultry vaccination trials, we offer households one year of subsidized access to the vaccine for Newcastle disease, which is a significant cause of chicken mortality, as well as training in poultry management. We focus on households that did not previously vaccinate their chickens with the goal of demonstrating the benefits of vaccination. In 2024, we expanded our trial of poultry vaccination to four villages in MBOMIPA WMA, vaccinating 1,542 chickens with 73 households. Here, chicken mortality due to disease declined from 6% prior to vaccination to 1 and 2% after the second and third round of vaccination. 95% of households said they would recommend the vaccine to other households that keep chickens. In addition, 95% of households said their household

income had increased since vaccinating their chickens, and 90% said they would be willing to pay for the vaccine.

A key challenge that remains, however, is the lack of a reliable local supply chain for the vaccine. Establishing a dependable vaccine supply chain will therefore be a crucial next step in ensuring continued access to vaccination for poultry farmers in this rural and remote area.

2.2.1 Awareness-Raising and Education

In 2024, we continued community outreach and education efforts. In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the fourth instalment of the *Tembo Cup* Football Tournament (Tembo is Swahili for elephant). These tournaments aim to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, spectators attended matches as well as film nights and school outreach events. These events focused on building a culture and norms of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land. Over 38,000 people were reached through these football tournaments and associated events.

Our team of local elephant monitors (LEMs) also conducted awareness-raising with communities outside of these large-scale events. LEMs reached 7,743 community members with one-on-one training and 4,068 with household-level film shows. In these visits, LEMs share information about safety measures around elephants and ways to protect their food stores and farms from elephants.

Our monitoring shows that people engaged by STEP's outreach programs have greater awareness of benefits provided by protected areas, a higher self-reported ability to maintain their safety around elephants, and higher tolerance for elephants compared to those not engaged. Those who participated in outreach activities were more likely to express a desire for elephant populations to increase in adjacent protected areas and in the country, compared to those who were not engaged.

We also found that our human-elephant coexistence film has contributed to more positive attitudes toward elephants. After viewing the film, more people expressed a desire to see an increase in elephant populations compared to before the screening.



A netball being awarded to a women's team participating in the Tembo Cup

2.3 Capacity building

In 2024, two Tanzanian interns participated in human-elephant coexistence activities and learned fieldwork and community engagement methods.

Many VSLA members have expressed a desire for financial skills training to help them make informed financial decisions, maximize the impact of VSLA loans for their livelihoods, and plan for loan repayment. In 2024, we engaged a consultant to provide financial literacy training to 152 VSLA members (68% women) and to capacitate 11 Local Elephant Monitors (3 women) and three STEP officers (1 woman) to become financial literacy trainers themselves. The training focused on three key areas: loan management and repayment, household budgeting, and financial planning. Participants learned strategies to manage and repay loans effectively, helping to prevent debt accumulation and maintain financial stability. Practical approaches to household budgeting were also covered, ensuring participants could track expenses and meet financial goals.

STEP also facilitated customer care and safety during walking safari training for 13 guides and 1 ranger from Udzungwa Mountains National Park.

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa ecosystem and the Kilombero Valley. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour.

- Monitoring elephant distribution and status in the forests of the Udzungwa Mountains.
- Monitoring wildlife corridors.
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions.
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania.

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The Ruaha-Rungwa elephant population declined by over 50% between 2009 and 2015 due to poaching for the ivory trade (Thouless et al., 2016), and STEP's long-term research and monitoring aims to understand the consequences of poaching for elephants in the ecosystem, as well as to study recovery from poaching. Since 2015, STEP has collected data on over 3,200 elephant sightings. Elephant sightings are matched against an elephant ID database of known individuals for Ruaha, which includes over 200 family groups and 400 bulls. In 2024, we documented 368 elephant sightings over 89 monitoring days, identifying 53% of these sightings against our database. Research Assistant Christina Mgonja is compiling detailed histories of 20 known family groups to study births and calf survival for her upcoming MSc thesis at the University of Glasgow. A key outcome of this work will be an article presenting these demographic findings, which will provide important insights into the status of the Ruaha elephant population.



STEP researcher in the field monitoring elephants in Ruaha National Park

3.2 Monitoring elephants in the Kilombero Valley

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Udzungwa-Selous elephant population and to secure long-term connectivity for elephants between Udzungwa and Selous through restoration of the Nyerere-Udzungwa Wildlife Corridor, a historic corridor that spans the Kilombero Valley. Since November 2023, we have been monitoring use of the Nyerere-Selous-Udzungwa corridor by elephants and other wildlife using camera traps. To date, these corridor camera traps have detected 26 mammal species, including elephants, serval, side-striped jackal, honey badger, buffalo, red duiker, suni, bushbuck, and large-spotted genet. We will also identify individual elephants from camera trap images and create a database of elephants that have been detected in the corridor, allowing us to estimate the number of elephants using the corridor. We also conduct monthly foot transects in the corridor to record elephant signs. Encounter rates of elephant dung in the corridor were higher in 2024 than in 2023, suggesting increased use of the corridor by elephants.



Monitoring elephant use of the Nyerere-Udzungwa Wildlife Corridor

3.3. Monitoring human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we continued monitoring of elephant activity and crop losses on village land with a team of community enumerators known as Local Elephant Monitors. Our monitoring data suggest that crop damage levels were stable in 2024 relative to 2023. Our data also helped us to identify key predictors of crop damage, including distance to village centre, human population density, distance to river, and recency of conversion from natural habitat to cropland.

3.4 Trialling farm- and household-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. The development and trialling of elephant deterrents with farmers continued to be an important area of innovation and learning for STEP. In

2024, we continued our work with village governments and farmers groups to maintain existing crop protection fences using solar-powered strobe lights and metal strips in two villages.

In villages around Kizigo and Muhesi Game Reserves, elephants sometimes damage crops stored at the household post-harvest. To address this, we trialed an alternative food store design (originally developed in Zambia) with 20 households, all of which had experienced food store damage in the past year. In 2024, we evaluated the trial and found that the improved food stores effectively protected crops from elephant damage. None of the improved food stores incurred damage, while 30% of nearby control households with traditional food stores experienced damage. Households mentioned multiple benefits to the improved food stores, including protection from insect damage and improved food quality. Following the trial, we built a further 10 food stores with households contributing 20% of the costs, demonstrating demand for this intervention and willingness to contribute financially.



Improved food store to keep crops safe from elephant damage

3.5 Capacity building

One of our key goals is to build research capacity in Tanzania by supporting Master's students in the conservation field. This support includes guidance in designing research projects, mentoring and training in data collection and analysis, and bursaries to assist with fieldwork.

In May 2024, Irene Laizer, one of the first students supported under this program, graduated from the Sokoine University of Agriculture. Later in the year, Grace Mchome submitted her dissertation in October 2024 and was offered further mentorship and coaching through an internship with STEP. Grace was also selected for the Women in Conservation Technology program hosted by Grumeti Fund, WildLabs and Fauna and Flora. Looking ahead, in 2025, Christina Mgonja, a STEP research assistant, secured a scholarship from the Karimjee Foundation to pursue an MSc degree at the University of Glasgow.

STEP Research Associate Dr. Josephine Smit also participated as an instructor in Grumeti Fund's Women in the Field program for the fourth time in August 2024, teaching data analysis and visualization in R statistical software and scientific writing. Nina Akyoo, one of the course participants subsequently joined STEP as an intern. STEP has provided internship or employment opportunities to 11 alumni of the Women in the Field program since its inception in 2019.



Grace Mchome presenting her MSc research findings

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

Attached

Approved by the trustees on 01 September 2025 and signed on their behalf by:

Helen Pearson

A handwritten signature in black ink, appearing to read 'Helen Pearson', written in a cursive style.

Dated: 01/09/2025



CHARITY COMMISSION
FOR ENGLAND AND WALES

Charity Name
Southern Tanzania Elephant Trust

No (if any)
1179640

Receipts and payments accounts

CC16a

For the period from	Period start date 1/1/2024	To	Period end date 12/31/2024
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Section A Receipts and payments

	Unrestricted funds to the nearest £	Restricted funds to the nearest £	Endowment funds to the nearest £	Total funds to the nearest £	Last year to the nearest £
A1 Receipts					
Donations	4,355	33,101	91,295	128,750	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total (Gross income for AR)	4,355	33,101	91,295	128,750	-
A2 Asset and investment sales, (see table).					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-
Total receipts	4,355	33,101	91,295	128,750	-
A3 Payments					
Consultancies	3,898	800	7,302	12,000	-
Insurance	-	-	-	-	-
Bank charges	44	30	-	74	-

Transfer to STEP Tanzania	-		39,039	39,039	-
Independent Examination of Accounts	-	800	-	800	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
Sub total	3,942	1,630	46,341	51,913	-

A4 Asset and investment purchases, (see table)					
	-	-	-	-	-
	-	-	-	-	-
Sub total	-	-	-	-	-

Total payments	3,942	1,630	46,341	51,913	-
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Net of receipts/(payments)	413	31,471	44,954	76,837	-
A5 Transfers between funds	-	-	-	-	-
A6 Cash funds last year end	-	-	-	-	-
Cash funds this year end	413	31,471	44,954	76,837	-

Section B Statement of assets and liabilities at the end of the period

Categories	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B1 Cash funds	Donations	413	31,206	44,954
		-	-	-
		-	-	-
	Total cash funds	413	31,206	44,954
	(agree balances with receipts and payments account(s))	OK	Agreement Error	OK

	Details	Unrestricted funds to nearest £	Restricted funds to nearest £	Endowment funds to nearest £
B2 Other monetary assets		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-
		-	-	-

	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
B3 Investment assets			-	-
			-	-
			-	-
			-	-
			-	-

	Details	Fund to which asset belongs	Cost (optional)	Current value (optional)
B4 Assets retained for the charity's own use			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-

		-	-
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B5 Liabilities

Details	Fund to which liability relates	Amount due (optional)	When due (optional)
		-	
		-	
		-	

Signed by one or two trustees on behalf of all the trustees

Signature	Print Name	Date of approval
<i>Helen Pearson</i>	Helen Pearson	01/09/2025

**SOUTHERN TANZANIA
ELEPHANT TRUST**

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2024**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2024

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE PERIOD ENDED 31 DECEMBER 2024

I report on the accounts of Southern Tanzania Elephant Trust for the period ended 31st December 2024 which are set out on pages three to five.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act;
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act); and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In connection with my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or

I 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.

David Courtier FMAAT AATQB for and on behalf of:
Community360, Winsley's House
High Street, Colchester, Essex



Date 24/10/2025

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2024

	Notes	Unrestricted Fund £	Restricted Fund £	2024 Total £	2023 Total £
Receipts					
Donations, legacies and other similar receipts	2	4,355	33,101	37,456	52,679
Total receipts		<u>4,355</u>	<u>33,101</u>	<u>37,456</u>	<u>52,679</u>
Charitable payments					
Charitable activities	3	11,244	39,869	51,113	20,288
Governance		-	800	800	400
Total payments		<u>11,244</u>	<u>40,669</u>	<u>51,913</u>	<u>20,688</u>
Net of receipts/(payments)		<u>(6,889)</u>	<u>(7,568)</u>	<u>(14,457)</u>	<u>31,991</u>
Cash funds as at 1 December 2023		7,302	83,992	91,294	59,303
Cash funds as at 31 December 2024	4	<u>413</u>	<u>76,424</u>	<u>76,837</u>	<u>91,294</u>

Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

STATEMENT OF ASSET AND LIABILITIES AS AT 31 DECEMBER 2024

	Notes	2024 £	2023 £
<u>Monetary assets</u>			
Cash at bank and in hand:		76,837	91,294
Total monetary assets		76,837	91,294
<u>Funds</u>			
Unrestricted	4	413	7,302
Restricted	4	76,424	83,992
Total Funds		76,837	91,294
<u>Other monetary assets</u>			
<u>Liabilities</u>			
Independent examiner fee	5	400	400
		400	400

These accounts were approved by the Trustees and signed on their behalf by :

Signed: 

Date: 23.10.2025

Helen Pearson - Chair of Trustees

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2024

1. These accounts are prepared on a receipts and payments basis, following best practice as laid down in the Statement of Recommended Practice "Accounting and Reporting by Charities" (SORP 2019) issued in 2019, with all revenue and expenses shown on a cash basis.

Non-monetary Assets and Liabilities are shown as actual values at the end of the year.

Period

These accounts cover a 12 month period from 1st January 2023 to 31st December 2024.

2. Donations, legacies and other similar receipts	Unrestricted Fund £	Restricted Fund £	2024 Total £	2023 Total £
Donations	4,355	33,101	37,456	52,679
	4,355	33,101	37,456	52,679

3. Charitable activities	Unrestricted Fund £	Restricted Fund £	2024 Total £	2023 Total £
Insurance	-	-	-	265
Consultancy	11,200	800	12,000	-
Return of funds	-	-	-	20,000
STEP Tanzania	-	39,039	39,039	-
Bank charges	44	30	74	23
	11,244	39,869	51,113	20,288

4. Cash Funds	Balance at 01/01/24 £	Incoming £	Outgoing £	Balance at 31/12/24 £
Unrestricted				
General fund	7,302	4,355	(11,244)	413
	7,302	4,355	(11,244)	413
Restricted Funds				
Wild Planet Trust	24,787	28,101	(1,130)	51,758
Bristol Chester Zoo	5,000	5,000	-	10,000
Association Mazingira	10,391	-	-	10,391
MBOMIPA Protection Project	3,511	-	-	3,511
Corridor restoration	17,083	-	(17,083)	-
Pro Wildlife	23,221	-	(22,456)	765
Totals	83,992	33,101	(40,669)	76,424

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2023: Nil).

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales - Charity number 1179460

Accounts

Charity number: 1179460



Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2023

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2023

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2023 through 31 December 2023 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Name and Address of Independent Examiner

Community360
Winsley's House, High Street, Colchester
Essex
Essex
CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021, and again on 21st July 2024. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlements adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often because of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities.
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2023

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organization in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organization registered on 17th July 2019 under the Non-Governmental Organization (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organization was previously registered as a company limited by guarantee having no share capital (i.e. a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organization (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the

organization, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organization is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2023 marked the sixth year of the fruitful collaboration between STEP and MBOMIPA WMA. STEP supported teams of Village Game Scouts (VGS) to conduct foot patrols each by supplying scout wages and providing fuel and food supplies. In 2023, VGS covered 11,736.8 km of foot patrols. STEP also facilitated 128.8 hours of aerial support for the WMA. All patrols were logged using GPS units with patrol data collected using a mobile app, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols, and with provision of all necessary fuel.

2023 also saw the development of the WMA's first human-elephant conflict response unit. To develop this unit, STEP trained 12 VGS on effective response to HEC. We provided one vehicle for HEC response, a driver, fuel, HEC toolkits, and vehicle maintenance. This enabled MBOMIPA VGS to respond to 56 incidents of elephants being in village farms and successfully guiding the elephants back to the MWA in each case.



MBOMIPA WMA HEC Response unit and HEC toolkit

1.2 Uzungwa Scarp Protection Project

Uzungwa Scarp Forest Nature Reserve (USFNR) is a biodiversity hotspot that is home Udzungwa endemics and globally threatened vertebrate species (Rovero et al., 2014) including Sanje mangabey, Udzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al., 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USNFR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al., 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al., 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust), Bristol Chester Zoo, and Association Mazingira, STEP has been supporting the protection of Uzungwa Scarp Nature Forest Reserve since late 2017. The Uzungwa Scarp Protection Project supports with funding of ground patrols, training of rangers, and provision of essential equipment. In 2023, mobile camping patrols by Village Scouts, rangers from Tanzania Forestry Services and the Southern Highlands Anti-Poaching Unit covered 891 km. As a result, 584 snares were removed, 17 poachers' camps, one farm, and 31 logging activities were shut down. Patrols were strategically planned and executed, with mapping, analysis and reporting of findings after each patrol.

STEP also facilitated meetings in 19 villages adjacent to Uzungwa Scarp Nature Reserve, bringing together 183 members of the Village Natural Resources Committee, 38 Village Leaders, Chita JKT representatives, and foresters. Participants received training on Participatory Nature Forest Reserve Management and fire management, shared lessons learned, and discussed the way forward in managing the Reserve.

1.3 Rungwa-Kizigo-Muhesi Game Reserves, Ruaha National Park and Lunda-Nkwambi Game Controlled Area

2023 marked the 10th year of STEP's aerial program, which has provided >900 hours of aerial support to the Ruaha-Rungwa ecosystem since 2014. In 2023, aerial operations with the new Savannah S aircraft were scaled up, with a total of 324 hours flown across six protected areas (MBOMIPA WMA, Rungwa, Kizigo, and Muhesi Game Reserves, Lunda-Nkwambi Game Controlled Area and Ruaha National Park). Aerial patrols are always done in collaboration with rangers and village game scouts, who are ready to respond to sightings of threats observed by the aircraft. In 2023, follow-up by ranger and VGS teams resulted in arrests of individuals engaged in ivory poaching, illegal logging and charcoal production, highlighting the vital role of coordinated air-ground patrols in addressing threats to the Ruaha-Rungwa ecosystem.



STEP's light aircraft

1.4 Capacity building

As part of the Uzungwa Scarp Protection Project, STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. Patrol teams were also supported with the application of conservation technologies including Survey 123 Data Collector and GIS for patrol data analysis.

STEP also built capacity among rangers and Village Game Scouts to assist our pilot team as aerial observers. In 2023, we trained eight VGS from MBOMIPA WMA and one ranger from Ruaha National Park in accurate observation, data collection, use of handheld GPS units and cameras, species and carcass identification, and communication protocols.

MBOMIPA WMA Village Game Scouts were trained in camera trapping and the setup of the EarthRanger platform, enabling data collection during foot and vehicle patrols. STEP facilitated eight MBOMIPA WMA VGS to attend a 30-day basic tactical anti-poaching training run by PAMS Foundation, conducted according to International Ranger Federation standards.

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants.
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants.
- Collect data on elephant movements and use this to inform education and trials of crop protection measures.

- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Explore and support establishment of corridors to facilitate safe elephant movement.
- Immersive hands-on training and development opportunities for students and early career Tanzanian conservationists, many of whom go on to work for other organizations.

2.1 Kilombero Valley

The Kilombero Valley, in the Udzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture, and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Udzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups registered as Community-Based Organizations to establish seven beekeeping projects in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. Farmers harvested 235 litres of honey in 2023, which was processed and packed at the Honey Collection Centre.

STEP also works with farmers' groups to establish and support the operation of Village Savings and Loan Associations (VSLAs), community-based financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2023, we supported the establishment of six new Village Savings and Loan Associations (with 183 members, 74% women) and continued to support 14 existing VSLAs. A total of 447 loans were taken out by VSLA members in 2023 with a total value of TZS 92,665,500. Loans were used for agriculture, small businesses such as expanding and opening small shops, and small street food restaurants, and support with school fees. Such access to credit is highly valued by VLSA members in our project area.



VSLA meeting in the Kilombero Valley

2.1.2 Awareness-Raising and Education

In 2023, STEP conducted film nights in 11 villages, reaching 4,181 adults and youth. Local Elephant Monitors also reached 1,346 farmers with one-to-one training. During these film nights and trainings, the STEP team and LEMs share information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 6-module course on human-elephant coexistence in 22 schools, reaching over 2500 students. The modules covered elephant behaviour, ecology, and biology, human-elephant coexistence, and wildlife connectivity. STEP also expanded its park visit program for primary and secondary students to national parks as an experiential supplement to educational outreach. 130 students and 42 teachers visited Udzungwa Mountains National Park and Mikumi National Park, learned about elephants lives in the wild and had the opportunity to experience Tanzania's rich natural heritage.

2.1.3 Corridor Restoration

2023 saw continued progress towards our long-term vision of restoring the Kilombero Elephant Corridor between the Udzungwa Mountains and Nyerere National Parks, via the Magombera Forest Nature Reserve. The goal is to peacefully manage the regular movements that elephants make across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. STEP has been facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, Government and the private sector to restore this ecological connectivity, and enhance food and personal security for the local farming population. At the heart of the corridor project are the communities of the three villages of Sole, Mang'ula A and Kanyenja, who have agreed to setting aside ~7% of the village land to enable the Corridor.

In early 2023, a second round of valuation and compensation by the Government of Tanzania of the remaining plots inside the corridor was carried out, bringing the total number of households fully compensated to 320. In October, 19 Village Game Scouts (VGS) were recruited from the three corridor villages, of whom 42% are female. Following training for one month at Likuyu-Sekamaganga

Ranger College, STEP provided advanced training on human rights and safety around elephants, as well as uniforms and field equipment. Training is continuing to empower the VGS with a diverse range of skills to act as ambassadors for the corridor restoration. Also in 2023, through our partnership with Reforest Africa, the first 40,000 trees were planted under the restoration plan for the corridor.

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Livelihoods activities and Village Savings and Loans Associations

2023 saw the continued growth of our VSLA work with communities around Rungwa-Kizigo-Muhesi Game Reserves. STEP supports 32 VSLAs benefiting 778 community members (43% women). In 2023, these VSLAs issued a total of 598 loans, amounting to a total value of TZS 109,305,000. These loans were used for various purposes, including small-scale business ventures, agricultural activities, and covering educational expenses such as school fees. VSLAs are having tangible outcomes for communities, with over 60% of members reporting that the VSLA helped them to gain a new source of income – most of which were non-agricultural. Furthermore, 83% of members reported an increase in household income since joining the VSLAs.

VSLAs also play a critical role in mitigating the impact of elephant crop damage, by providing a safety net for affected families and enhancing their ability to cope with losses. VSLA members that experienced elephant crop damage said that they had used a loan from the VSLA to purchase food or to invest in another income-generating activity, thereby helping them to be more resilient to crop loss.

Importantly, VSLA members exhibit greater tolerance to elephants, indicating a positive shift in community attitudes and perceptions. Our VSLA projects are, therefore, not only improving livelihoods but also strengthening community capacity for coexistence with elephants.

STEP also works to diversify household livelihoods, increase incomes, and enhance farmer resilience to elephant impacts through poultry vaccination trials. Many households in the Ruaha-Rungwa landscape keep chickens as a source of food and income, but face the challenge of chickens dying from disease. Through our poultry vaccination trials, we offer households one year of subsidized access to the vaccine for Newcastle disease, which is a significant cause of chicken mortality, as well as training in poultry management. We focus on households that did not previously vaccinate their chickens with the goal of demonstrating the benefits of vaccination.

In 2022-2023, STEP vaccinated 15,220 chickens in 215 households across six villages. Vaccination resulted in a substantial reduction in chicken mortality rates due to disease, with 96% of participating households reporting a decrease in chicken mortality and 84% saying they highly recommend the use of the vaccine. Households also reported an increase in the number of chickens, and increased income and access to meat. There was also a positive impact on resilience, as farmers said that keeping chickens helped them to manage the impacts of elephant crop damage, as they sold chickens to purchase food or to meet other household needs.

Notably, 78% of households said that they would be able and willing to pay for vaccination after trial end. A key challenge that remains, however, is the lack of a reliable local supply chain for the vaccine. Establishing a dependable vaccine supply chain will therefore be a crucial next step in ensuring continued access to vaccination for poultry farmers in this rural and remote area.

2.2.1 Awareness-Raising and Education

In 2023, we continued and expanded community outreach and education efforts. In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the fourth instalment of the *Tembo Cup* Football Tournament (Tembo is Swahili for elephant). In partnership with the NGO Lion Landscapes and MBOMIPA WMA, STEP also played a role in organizing the second MBOMIPA Cup football tournament. These tournaments aim to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, spectators attended matches as well as film nights and school outreach events. These events focused on building a culture and norms of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land. Over 74,000 people were reached through these football tournaments and associated events.

Our team of local elephant monitors (LEMs) also conducted awareness-raising with communities outside of these large-scale events. LEMs reached 2,265 community members with one-on-one training and 614 with household-level film shows. In these visits, LEMs share information about safety measures around elephants and ways to protect their food stores and farms from elephants.

2.3 Capacity building

In 2023, two Tanzanian interns participated in human-elephant coexistence activities and learned fieldwork and community engagement methods.

STEP also expanded our efforts to build capacity for timely and effective response to human-elephant conflict incidents by trained and well-equipped rangers. In 2023, STEP facilitated specialized training in human-elephant conflict response for 58 rangers from Rungwa, Kizigo, and Muhesi Game Reserves, significantly enhancing rangers' capabilities to protect both communities and wildlife. This training focused on elephant behaviour and safety around elephants, situational awareness, and the use of an elephant deterrent toolkit (designed by the Honeyguide Foundation), which uses LED torches, air-horns, chili crackers, and roman candles. STEP also rehabilitated a Landcruiser pickup for Kizigo Game Reserve to enhance rapid response to human-elephant conflict incidents and rescues, and provided HEC toolkit supplies to rangers. Elephant rescue training was provided to a further 48 rangers. Training focused on safe removal of elephant calves trapped in wells or mud, rehydration, and safekeeping of elephant calves. These efforts led to nine successful rescues of elephant calves trapped in village wells by rangers from Muhesi Game Reserve, in which calves were reunited with their families.



Training of VGS and rangers in elephant behaviour and safety around elephants, facilitated by KEEP

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa ecosystem and the Kilombero Valley. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour.
- Monitoring elephant distribution and status in the forests of the Udzungwa Mountains.
- Monitoring wildlife corridors.
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions.
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania.

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The Ruaha-Rungwa elephant population declined by over 50% between 2009 and 2015 due to poaching for the ivory trade (Thouless et al., 2016), and STEP's long-term research and monitoring aims to understand the consequences of poaching for elephants in the ecosystem, as well as to study recovery from poaching. Since 2015, STEP has collected data on over 2,900 elephant sightings. Elephant sightings are matched against an elephant ID database of known individuals for Ruaha, which includes over 200 family groups and 400 bulls. In 2023, STEP collected data on 401 elephant sightings over 98 days of monitoring, 51% of which have been identified against our database. We are also in the process of compiling detailed histories for 20 known family groups, so that we can investigate births and calf survival in this population recovering from poaching.

In May 2023, at the invitation of the Tanzania Wildlife Research Institute, STEP was invited to contribute to and provide technical assistance to a 2023 rapid demographic assessment (RDA) of the Ruaha-Rungwa ecosystem elephant population. During this exercise, STEP provided 5 days of training to observers and data collectors and helped to develop data collection tools and protocols for the RDA. STEP also conducted 11 days of data in June 2023, alongside two other teams, and contributed to the survey report.



STEP researcher in the field monitoring elephants in Ruaha National Park

3.2 Monitoring elephants in the Kilombero Valley

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Udzungwa-Selous elephant population and to secure long-term connectivity for elephants between Udzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the Kilombero Valley. In November 2023, STEP deployed a camera trap grid comprising 32 stations along the Kilombero Elephant Corridor to monitor use of the corridor by elephants and other wildlife. This work is a collaboration between STEP, Lion Landscapes, and the Udzungwa Ecological Monitoring Centre. Between November 2023 and January 2024, these corridor camera traps detected 19 mammal species, including elephants, serval, side-striped jackal, honey badger, buffalo, red duiker, bushbuck, and large-spotted genet. STEP will also identify individual elephants from camera trap images and create a database of elephants that have been detected in the corridor, allowing for an estimate of the number of elephants using the corridor.



Bushbuck detected by a camera trap in the corridor

3.3. Monitoring human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we continued monitoring of elephant activity and crop losses on village land with a team of community enumerators known as Local Elephant Monitors. Our monitoring data suggest that crop damage levels were lower in 2023 relative to previous years. Our data also helped us to identify key predictors of crop damage, including distance to village centre, human population density, distance to river, and recency of conversion from natural habitat to cropland.

3.4 Trialling farm- and household-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. The development and trialling of elephant deterrents with farmers continued to be an important area of innovation and learning for STEP. In 2023, we trialled whether combining existing beehive fences with a second deterrent would enhance their efficacy at keeping elephants away from farmland. This trial was done in collaboration with a Tanzanian MSc student (see section 3.5). We also continued our work with village governments and farmer's group to maintain existing crop protection fences using solar-powered strobe lights and metal strips in two villages.

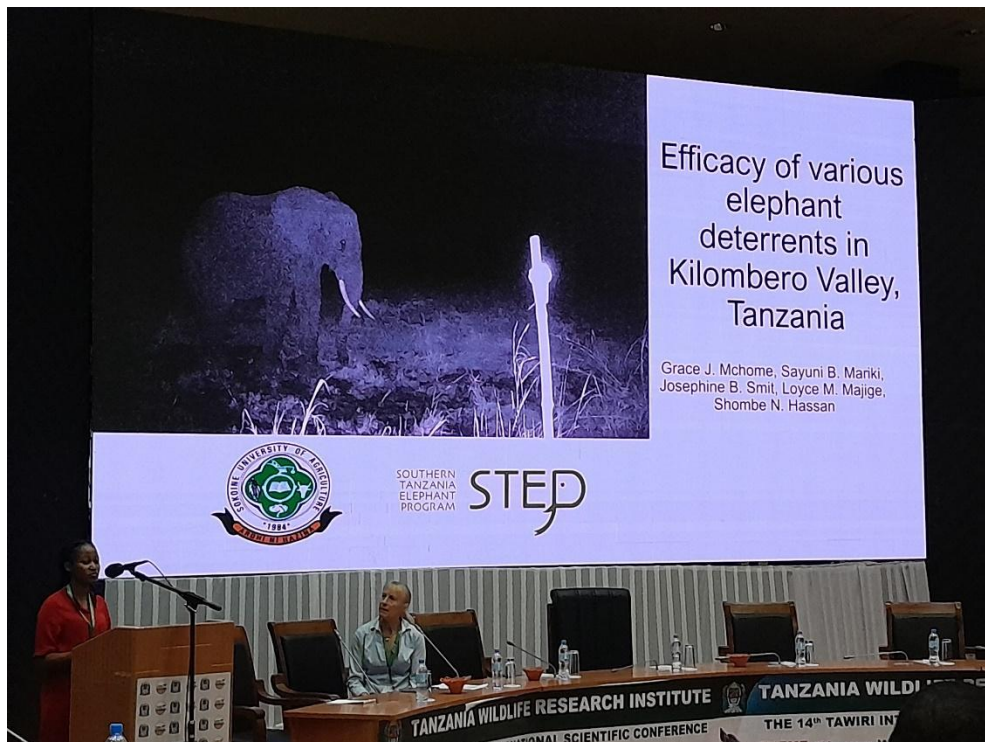
In villages around Rungwa-Kizigo-Muhesi, elephants are known to damage food stores. In 2023, we expanded our trial (begun in 2022) of an alternative food store design (first developed in Zambia) to determine whether it is more effective at protecting crops from elephants. We constructed a further 12 food stores with households participating in the trial and, to date, none of these stores have been damaged by elephants. In the upcoming year, we will interview households to understand their views on these food stores and to gauge whether people in the community are willing to contribute financially to alternative food stores.

3.5 Capacity building

One of our goals is to build capacity for research in Tanzania and, in doing so, facilitate scientific studies that inform our elephant conservation work. In 2023, we supported three Tanzanian Master's students in the conservation field. This support included helping students to design a research project and provision of mentoring and training in data collection methods and data analysis, and a bursary to support fieldwork.

Irene Laizer, one of our first students under this program, submitted her dissertation to the Sokoine University of Agriculture in October 2023 and graduated in May 2024. Irene's MSc study focused on human-elephant interactions around water sources in villages around Rungwa and Kizigo Game Reserves. Her dissertation provides new insights into how elephants and people share water sources in this semi-arid area, as well as concerns that communities have, that can inform efforts to ensure that people have access to safe water supplies and enhance coexistence.

The research project of another student under this program, Grace Mchome, focused on understanding the efficacy - as well as farmers' views of - three types of mitigation fences: solar-powered strobe lights fencing, beehive fencing combined with solar lights, and beehive fencing combined with metal strips. Grace completed her fieldwork in mid-2023, investigating elephant responses to these mitigation fences by observing elephant behaviour using camera traps and ground surveys, and by conducting interviews with farmers to learn more about how farmers view these mitigation methods. This research indicates that elephants approaching farms were deterred by solar-powered strobe lights >60% of the time over a three-year period, and that combining beehives with a second deterrent enhances their efficacy. Grace presented her findings at the TAWIRI Scientific Conference in Arusha, Tanzania in December 2023, and expects to submit her dissertation in mid-2024.



MSc student Grace Mchome presenting at the TAWIRI Scientific Conference in December 2024

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

Accounts in separate document

Approved by the trustees on 12/08/2024 and signed on their behalf by:

Helen Pearson



Dated: 12/08/2024

SOUTHERN TANZANIA ELEPHANT TRUST

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2023**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2023

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2023

I report on the accounts of Southern Tanzania Elephant Trust for the year ended 31st December 2023 which are set out on pages 3 to 5.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act,
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act, and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In the course of my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of the accounts set out in the Charities (Accounts and Reports) Regulations 2008 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.

I 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.

Shelley-Marie Rudling FMAAT AATQB for and on behalf of:
Community360

Winsley's House, High Street, Colchester, Essex



Date 25/09/2024

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2023

	Notes	Unrestricted Fund £	Restricted Fund £	2023 Total £	2022 Total £
Receipts					
Donations, legacies and other similar receipts	2	2,084	50,595	52,679	32,910
Total receipts		<u>2,084</u>	<u>50,595</u>	<u>52,679</u>	<u>32,910</u>
Charitable payments					
Charitable activities	3	-	20,288	20,288	66,970
Governance		-	400	400	400
Total payments		<u>-</u>	<u>20,688</u>	<u>20,688</u>	<u>67,370</u>
Net of receipts/(payments)		<u>2,084</u>	<u>29,907</u>	<u>31,991</u>	<u>(34,460)</u>
Cash funds as at 1 December 2022		5,218	54,085	59,303	93,763
Cash funds as at 31 December 2023	4	<u>7,302</u>	<u>83,992</u>	<u>91,294</u>	<u>59,303</u>

Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

STATEMENT OF ASSET AND LIABILITIES AS AT 31 DECEMBER 2023

	Notes	2023 £	2022 £
<u>Monetary assets</u>			
Cash at bank and in hand:		91,294	59,303
Total monetary assets		91,294	59,303
<u>Funds</u>			
Unrestricted	4	7,302	5,218
Restricted	4	83,992	54,085
Total Funds		91,294	59,303
<u>Other monetary assets</u>			
<u>Liabilities</u>			
Independent examiner fee	5	400	400
		400	400

These accounts were approved by the Trustees and signed on their behalf by :

Signed: 

Date: 25/09/2024

Helen Pearson

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2023

1. These accounts are prepared on a receipts and payments basis, following best practice as laid down in the Statement of Recommended Practice "Accounting and Reporting by Charities" (SORP 2019) issued in 2019, with all revenue and expenses shown on a cash basis.

Non-monetary Assets and Liabilities are shown as actual values at the end of the year.

Period

These accounts cover a 12 month period from 1st January 2023 to 31st December 2023.

2. Donations, legacies and other similar receipts	Unrestricted Fund	Restricted Fund	2023 Total	2022 Total
	£	£	£	£
Donations	2,084	50,595	52,679	32,910
	2,084	50,595	52,679	32,910
3. Charitable activities	Unrestricted Fund	Restricted Fund	2023 Total	2022 Total
	£	£	£	£
Insurance	-	265	265	247
Return of funds	-	20,000	20,000	-
Donation	-	-	-	66,670
Bank charges	-	23	23	53
	-	20,288	20,288	66,970
4. Cash Funds	Balance at 01/01/23	Incoming	Outgoing	Balance at 31/12/23
	£	£	£	£
Unrestricted				
General fund	5,218	2,084	-	7,302
	5,218	2,084	-	7,302
Restricted Funds				
Wild Planet Trust	452	25,000	- 665	24,787
Bristol Chester Zoo	-	5,000	-	5,000
Association Mazingira	-	10,391	-	10,391
MBOMIPA Protection Project	23,534	-	(20,023)	3,511
Corridor restoration	17,083	-	-	17,083
Pro Wildlife	13,017	10,204	-	23,221
Totals	54,086	50,595	(20,688)	83,992

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2022: Nil).

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales - Charity number 1179460

Accounts

Charity number: 1179460



Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2022

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2022

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2022 through 31 December 2022 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Name and Address of Independent Examiner

Community360
Winsley's House, High Street, Colchester
Essex
Essex
CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlement adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often because of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities.
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2022

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organization in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organization registered on 17th July 2019 under the Non-Governmental Organization (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organization was previously registered as a company limited by guarantee having no share capital (i.e. a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organization (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organization, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organization is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintains close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through supporting for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2022 marked the fifth year of the fruitful collaboration between STEP and MBOMIPA WMA. STEP supported teams of Village Game Scouts (VGS) to conduct at least 24 days of foot patrols each per month by supplying scout wages and providing fuel and food supplies. In 2022, VGS covered 10,637 km of foot patrols and 10,893 km of vehicle patrols in the WMA. All patrols were logged using GPS units with patrol data collected using a mobile app, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols, and with provision of all necessary fuel. All VGS received new patrol uniforms including shirts, trousers, t-shirts, caps, military boots, raincoats, and gumboots.

To increase the involvement of women in community protection of MBOMIPA WMA, four female VGS were recruited. We work to ensure safe working conditions for women VGS, including separate accommodation at VGS posts, and flexibility in work schedules to accommodate childcare

responsibilities. Women are also represented in VGS leadership; among the three VGS commanders every month, one is a woman.



VGS on patrol in MBOMIPA WMA

1.2 Uzungwa Scarp Protection Project

Uzungwa Scarp Forest Nature Reserve (USFNR) is a biodiversity hotspot that is home to Uzungwa endemics and globally threatened vertebrate species (Rovero et al., 2014) including Sanje mangabey, Uzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al., 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USFNR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al., 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al., 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust), Bristol Chester Zoo, and Association Mazingira, STEP has been supporting the protection of Uzungwa Scarp Nature Forest Reserve since late 2017. The Uzungwa Scarp Protection Project supports with funding of ground patrols, training of rangers, and provision of essential equipment. In 2022, mobile camping patrols by Village Scouts, rangers from Tanzania Forestry Services and the Southern Highlands Anti-Poaching Unit covered 845 km of the Nature Reserve. Patrols were strategically planned and executed, with mapping, analysis and reporting of findings after each patrol. These patrols resulted in the removal of 331 snares and closure of 15 timber cutting sites.

The USPP project also facilitated meetings in 19 villages adjacent to the Uzungwa Scarp Nature Reserve to bring together Village Natural Resources Committees (local institutions entitled to manage access to benefits and jointly manage the Reserve), Village Leaders, Chita JKT representatives, and foresters. In these meetings, participants received training on Participatory Nature Forest Reserve Management and fire management, shared lessons learned, and discussed the way forward on management of the Reserve. STEP also facilitated meetings with TFS USFNR to discuss the feedback and findings of the community benefits assessment conducted in 2021 and to discuss the

way forward. Additional patrol gear (solar lamps, power banks, and camera) were provided to USNFR and major maintenance of the patrol vehicle was facilitated.



Village Game Scouts supported by the Uzungwa Scarp Protection Project

1.3 Rungwa-Kizigo-Muhesi Game Reserves

STEP's new Savannah S aircraft was delivered to Tanzania from South Africa in late 2022, allowing aerial support for the Ruaha-Rungwa ecosystem to resume in December 2022. A total of 17.5 hours of aerial surveillance was completed in MBOMIPA WMA and Lunda-Nkwambi Game Controlled Area in December 2022, resulting in the detection and closing of several poaching camps. STEP's aircraft is planned to operate for many months in both the wet and dry season months of 2023. Furthermore, Rungwa-Kizigo-Muhesi Game Reserves rangers conducted >10,000 km of vehicle patrols with STEP fuel support, thereby helping to detect and respond to threats such as tree cutting, illegal mining, illegal grazing and bushmeat poaching.



STEP's new Savannah S aircraft

1.4 Capacity building

As part of the Uzungwa Scarp Protection Project, STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. Patrol teams were also supported with the application of conservation technologies including Survey 123 Data Collector and GIS for patrol data analysis.

Under the MBOMIPA Protection Project, VGS teams received assistance with creating strategic patrol plans, management of the patrol database, and reporting of patrol findings. In addition, 36 VGS received training in how to respond to poisoning incidents from a trainer from North Carolina Zoo.

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants.
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants.
- Collect data on elephant movements and use this to inform education and trials of crop protection measures.
- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Explore and support establishment of corridors to facilitate safe elephant movement.
- Immersive hands-on training and development opportunities for students and early career Tanzanian conservationists, many of whom go on to work for other organizations.

2.1 Kilombero Valley

The Kilombero Valley, in the Udzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture, and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Udzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups (183 farmers) registered as Community-Based Organizations to establish seven beekeeping projects (6.8km of beehive fences) in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also

continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. Farmers harvested 405 litres of honey in 2022, a 50% increase relative to 2021. The honey was processed and packed at the Honey Collection Centre.

STEP also works with farmers' groups to establish and support the operation of Village Savings and Loan Associations (VSLAs), informal financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2022, we supported the establishment of one new Village Savings and Loan Association and continued to support six existing VSLAs. 250 farmers participated in VSLAs and took out 318 loans with a value of TZS 31,925,500 to build small businesses, improve their farming practices, pay school fees, and to support household cash needs (e.g. payments for medication, food). Such access to credit is highly valued by VSLA members in our project area. Prior to VSLAs, farmers' options for accessing credit either required traveling >50 km to a larger commercial centre and seeking a loan from a formal financial institution, or engaging in 'prospective' rice selling. If members of the VSLA wanted to access credit sizes similar to their total loan size from the VSLA, some would have had to part with six bags of rice or more, representing an enormous loss to future earnings and a significant blow to household food supplies. Therefore, the existence of the VSLA itself is impactful through creation of an alternative source of credit.

2.1.2 Awareness-Raising and Education

In 2022, STEP conducted film nights in 8 villages, reaching 2,936 adults and youth. Local Elephant Monitors also reached 224 farmers with one-to-one training. During these film nights and trainings, the STEP team and LEMs share information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 3-module course on human-elephant coexistence in 19 schools, reaching over 2000 students. The modules covered 1) Elephant Behaviour, Ecology, and Biology 2) Human-Elephant Coexistence, and 3) Wildlife connectivity. STEP also expanded its park visit program a small pilot bringing primary and secondary students to national parks as an experiential supplement to educational outreach. More than 260 students and 32 teachers (compared to 50 students in 2021) visited Udzungwa Mountains National Park and Mikumi National Park, learned about elephants' lives in the wild and had the opportunity to experience Tanzania's rich natural heritage.



Students visiting Udzungwa Mountains National Park as part of STEP's park visits program

2.1.3 Corridor Restoration

2022 saw continued progress towards our long-term vision of restoring the Kilombero Elephant Corridor between the Udzungwa Mountains and Nyerere National Parks, via the Magombera Forest Nature Reserve. The goal is to peacefully manage the regular movements that elephants make across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. STEP has been facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, Government and the private sector to restore this ecological connectivity, and enhance food and personal security for the local farming population. At the heart of the corridor project are the communities of the three villages of Sole, Mang'ula A and Kanyenja, who have agreed to setting aside ~7% of the village land to enable the Corridor. Following a formal valuation process led by the District Government, over 270 small-holder farmers were formally compensated for giving up parcels of land for the corridor in 2022, and further compensation payments are planned for 2023. Financial training was provided to >400 landowners and their spouses, to maximize the benefits of compensation payments. STEP also facilitated landowners to come together to register and operate Village Savings and Loans Associations, which provide a means to save and invest their compensation funds.

STEP's work towards restoring this corridor will carry on in the years to come. STEP will continue to support the Kilombero Elephant Corridor Management Committee, comprising village leaders, District Government, and protected area representatives, to manage the corridor and take the project forward. Next steps include tree planting and other habitat restoration efforts in the corridor and camera trapping to monitor how elephants and other wildlife use the restored corridor. In a further effort to ensure that communities see tangible benefits from conserving elephants and corridors, in 2023, STEP plans to initiate conservation agreements with the corridor villages. Under these agreements, stewardship of the corridor generates monetary benefits based on attainment of certain conservation targets set through a village-wide participatory process. Village assemblies decide how these benefits are allocated toward initiatives to improve healthcare, education, empowerment of women and girls, and the environment.



2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict in villages on the western edge of Rungwa Game Reserve through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Livelihoods activities and Village Savings and Loans Associations

2022 saw significant growth in STEP's work around Rungwa-Kizigo-Muhesi Game Reserves. STEP started 16 new VSLAs across 9 villages, bringing the total number of VSLAs to 24. Across the 24 groups, members took out 267 loans at a total value of TZS 47,321,500. These loans supported establishment of small businesses and agricultural activities. 15 VSLA groups used the CHOMOKA mobile app to keep their weekly records for enhanced transparency and accuracy in record-keeping.

In 2022, we continued to support the 46 farmers who had been given three beehives each in 2020 with beekeeping, and beehives were also distributed to farmers groups operating VSLAs (10 hives per group). A total of 644 litres of honey and 25 kg of beeswax were harvested by the beekeepers supported in 2022, a >50% increase relative to 2021.

2.2.1 Awareness-Raising and Education

In 2022, we continued and expanded community outreach and education efforts. In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the fourth instalment of the *Tembo Cup* Football Tournament (Tembo is Swahili for elephant). The tournament involved villages experiencing human-elephant conflict adjacent to Rungwa-Kizigo-Muhesi Game Reserve. The coverage of the tournament was expanded to three zones: Rungwa, Kizigo and Muhesi. The tournament aimed to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, spectators attended matches as well as film nights and school outreach events. These events focused on building a culture and norms of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land. Over 35,000 people were reached through these football tournaments and associated events. In 2022, in partnership with the NGO Lion Landscapes and MBOMIPA WMA, STEP also held the inaugural MBOMIPA Cup football tournament with 21 villages surrounding MBOMIPA Wildlife Management Area, reaching over 15,000 people.

Our team of local elephant monitors (LEMs) also conducted awareness-raising with communities outside of these large-scale events. LEMs reached 1,092 community members with one-on-one training and 257 with household-level film shows. In these visits, LEMs share information about safety measures around elephant and ways to protect their food stores and farms from elephants.



Scenes from the MBOMIPA Cup football tournament

2.3 Capacity building

In 2022, one Tanzanian student and two Tanzanian interns participated in human-elephant coexistence activities and learned fieldwork and community engagement methods. STEP also facilitated elephant safety and walking around elephants training for 6 local elephant monitors and several Park and STEP staff from experienced walking guide Andrew Molinaro of Kichaka Expeditions Environmental Program.

To support more effective human-wildlife conflict response by protected area management agencies, STEP also provided >10,000 litres of fuel Rungwa-Kizigo-Muhesi Game Reserves, Udzungwa Mountains National Park, and Nyerere National Parks for HWC response. We donated one vehicle to Muhesi Game Reserves and made major repairs of one car for Kizigo Game Reserve. We also rehabilitated a vehicle for human-wildlife conflict response for Udzungwa Mountains National Park.



Safety around elephants training for LEMs, STEP and Park staff



Rehabilitated HWC response vehicle for Udzungwa Mountains National Park

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa and Udzungwa-Selous ecosystems. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour.
- Monitoring elephant distribution and status in the forests of the Udzungwa Mountains.
- Monitoring wildlife corridors.
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions.
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania.

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The Ruaha-Rungwa elephant population declined by over 50% between 2009 and 2015 due to poaching for the ivory trade (Thouless et al., 2016), and STEP's long-term research and monitoring aims to understand the consequences of poaching for elephants in the ecosystem. The elephant monitoring program in Ruaha National Park under STEP's affiliated research project aims to collect long-term data on elephant population structure, tusklessness, distribution and behaviour. In a study published in the *African Journal of Ecology*, STEP researchers showed that in areas of the ecosystem that had experienced higher levels of poaching, elephants were more nocturnal than in areas where elephants had been relatively safe from poaching. Poaching risk also influenced elephant use of roads and water sources as well as grouping patterns, indicating that poaching has important consequences for how elephants use their environment and their associations with other elephants (Smit et al., 2023).

3.2 Monitoring elephants in Udzungwa-Selous

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Udzungwa-Selous elephant population and to secure long-term connectivity for elephants between Udzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the

Kilombero Valley. To monitor our progress toward this objective, we monitor elephant presence and status in Mwanihana and Magombera forest, which form endpoints of the Kilombero Elephant Corridor, as well as elephant presence in the corridor area. We hope to see an increase in elephant use of the forest and corridor area over time because of our conservation efforts. We continued monitoring of elephants in Mwanihana forest (first begun in 2015) and Magombera forest (begun in 2019) to collect data on elephant use of these forests through foot transects throughout 2022. Our monitoring suggests that elephant use of Mwanihana forest in Udzungwa has generally increased over the past seven years – a positive indication that the forest is becoming safer for elephants.

3.3. Studying human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we expanded our monitoring of elephant activity and crop losses on village land. In 2022, we worked with 18 local elephant monitors (LEMs) across 13 villages in the Rungwa-Doroto and Kilombero valley project areas. Each elephant monitor is provided with training and regular performance feedback, a GPS unit. All data collection is done using KoboCollect. These data informed our work in several ways, including 1) to help us select locations for trials of novel elephant deterrents, 2) to assess baseline crop damage to elephants prior to restoration of the Kilombero Elephant Corridor; and 3) to evaluate trials of novel crop protection methods.

3.4 Trialling farm- and household-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. The development and trialling of elephant deterrents with farmers continued to be an important area of innovation and learning for us in 2022. Following consultations with village leaders and residents, we supported farmers in Kanyenja village to register as a community-based organization and to build and manage a 3.5 km linear solar-powered strobe lights fence along village farms. In Magombera village, we entered an agreement with the village leadership to support them to build and manage a 1.5 km double-stranded metal strips fence along village farms. Furthermore, with farmers groups managing beehive fences in Kanyenja and Katurukila villages, we began trialling whether beehive fences can be more effective at preventing elephant incursions into farmland if we combine these fences with solar-powered strobe lights or metal strips. We will monitor elephant responses to all these mitigation methods and assess their efficacy.



Double-stranded metal strips elephant deterrent fence in Magombera village

In villages around Rungwa-Kizigo-Muhesi, elephants are known to damage food stores. In 2022 we began trialling an alternative food store design (first developed in Zambia) to determine whether it is more effective at protecting crops from elephants. We constructed eight food stores with households participating in the trial and, to date, none of these stores have been damaged by elephants. In the upcoming year, we will continue to monitor whether these stores keep crops safe from elephants, as well as interview households to understand their views on these food stores and to gauge whether people in the community are willing to contribute financially to alternative food stores.

3.5 Capacity building

One of our goals is to build capacity for research in Tanzania and, in doing so, facilitate scientific studies that inform our elephant conservation work. In 2022, we supported three Tanzanian Master's students in the conservation field. This support included helping students to design a research project and provision of mentoring and training in data collection methods and data analysis, and a bursary to support fieldwork. In 2022, two students from the Sokoine University of Agriculture who we started working with in 2021 (Irene Laizer and Lowassa Moitiko) completed their fieldwork and were supported to conduct analysis and write-up for their findings, with thesis submission expected in 2023. Through Irene's research, we learned more about human-elephant interactions around water sources on village land. Camera trapping showed that elephants visited village water sources primarily at night, while household surveys indicated that people primarily accessed water sources during the day. While some people feared meeting elephants at water sources, the most common concerns were that elephants damaged water sources (such as by causing soil to fall into wells) and that elephant urine and dung made the water less safe for domestic use. One recommendation from respondents was to provide alternative safe water sources, such as communal taps, for people.

Through Lowassa's research, we learned more about the elephants using the edges of Magombera forest and Mwanihana forest (which form the endpoints of the Kilombero Elephant Corridor). Through camera trapping, we learned that both males and family groups use these areas. Using features of the ears and tusks, we identified 70 different individual elephants using the forest edge over a period of just six months! Once the Kilombero Elephant Corridor is restored, we will continue to use camera traps to estimate the number of elephants using the corridor.

We also welcomed a new student to the program in 2022: Ms. Grace Mchome from the Sokoine University of Agriculture. Grace's research project will assess the efficacy of various mitigation fences by investigating elephant responses to mitigation fences, including by observing elephant behaviour at fences using camera traps, and by conducting interviews with farmers to learn more about their views on these mitigation methods.



MSc student Grace Mchome checking a camera trap used to monitor elephant behaviour at a deterrent fence in farmland.

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Topp-Jørgensen, E., Nielsen, M. R., Marshall, A. R., & Pedersen, U. (2009). Relative densities of mammals in response to different levels of bushmeat hunting in the Udzungwa Mountains, Tanzania. *Tropical Conservation Science*, 2(1), 70-87.

Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

Accounts in separate document

Approved by the trustees on 13.09.2023 and signed on their behalf by:



Helen Pearson

Dated: 13.09.2023

SOUTHERN TANZANIA ELEPHANT TRUST

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2022**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2022

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

I report on the accounts of Southern Tanzania Elephant Trust for the year ended 31st December 2022 which are set out on pages 3 to 5.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act,
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act, and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In the course of my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of the accounts set out in the Charities (Accounts and Reports) Regulations 2008 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.

I 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.

Shelley-Marie Rudling FMAAT AATQB for and on behalf of:

Community360

Winsley's House, High Street, Colchester, Essex



Date

30/10/2023

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2022

	Notes	Unrestricted Fund £	Restricted Fund £	2022 Total £	2021 Total £
Receipts					
Donations, legacies and other similar receipts	2	2,893	30,017	32,910	47,029
Total receipts		<u>2,893</u>	<u>30,017</u>	<u>32,910</u>	<u>47,029</u>
Charitable payments					
Charitable activities	3	-	66,970	66,970	48,571
Governance		-	400	400	400
Total payments		<u>-</u>	<u>67,370</u>	<u>67,370</u>	<u>48,971</u>
Net of receipts/(payments)		<u>2,893</u>	<u>(37,353)</u>	<u>(34,460)</u>	<u>(1,942)</u>
Cash funds as at 1 December 2021		2,325	91,438	93,763	95,705
Cash funds as at 31 December 2022	4	<u>5,218</u>	<u>54,085</u>	<u>59,303</u>	<u>93,763</u>

Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

STATEMENT OF ASSET AND LIABILITIES AS AT 31 DECEMBER 2022

	Notes	2022 £	2021 £
<u>Monetary assets</u>			
Cash at bank and in hand:		59,303	93,763
Total monetary assets		59,303	93,763
<u>Funds</u>			
Unrestricted	4	5,218	2,325
Restricted	4	54,085	91,438
Total Funds		59,303	93,763
<u>Other monetary assets</u>			
<u>Liabilities</u>			
Independent examiner fee	5	400	400
		400	400

These accounts were approved by the Trustees and signed on their behalf by :

Signed: 

Date: 26/10/2023

Helen Pearson

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2022

1. These accounts are prepared on a receipts and payments basis, following best practice as laid down in the Statement of Recommended Practice "Accounting and Reporting by Charities" (SORP 2019) issued in 2019, with all revenue and expenses shown on a cash basis.

Non-monetary Assets and Liabilities are shown as actual values at the end of the year.

Period

These accounts cover a 12 month period from 1st January 2022 to 31st December 2022.

2. Donations, legacies and other similar receipts	Unrestricted Fund £	Restricted Fund £	2022 Total £	2021 Total £
Donations	2,893	30,017	32,910	47,029
	2,893	30,017	32,910	47,029

3. Charitable activities	Unrestricted Fund £	Restricted Fund £	2022 Total £	2021 Total £
Insurance	-	247	247	247
Self employed	-	-	-	4,200
Donation	-	66,670	66,670	44,104
Bank charges	-	53	53	20
	-	66,970	66,970	48,571

4. Cash Funds	Balance at 01/01/22 £	Incoming £	Outgoing £	Transfers £	Balance at 31/12/22 £
Unrestricted					
General fund	2,325	2,893	-	-	5,218
	2,325	2,893	-	-	5,218
Restricted Funds					
Wild Planet Trust	31,582	17,000	(48,130)	-	452
Bristol Chester Zoo	4,650	-	(4,650)	-	-
Association Mazingira	9,554	-	(9,554)	-	-
MBOMIPA Protection Project	23,534	-	-	-	23,534
Corridor restoration	17,083	-	-	-	17,083
Pro Wildlife	5,036	13,017	(5,036)	-	13,017
Totals	91,439	30,017	(67,370)	-	54,085

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2021: Nil).

SOUTHERN TANZANIA ELEPHANT TRUST

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2022**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2022

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
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SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2022

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Respective responsibilities of trustees and examiner

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Shelley-Marie Rudling FMAAT AATQB for and on behalf of:

Community360

Winsley's House, High Street, Colchester, Essex



Date

30/10/2023

SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

STATEMENT OF ASSET AND LIABILITIES AS AT 31 DECEMBER 2022

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<u>Other monetary assets</u>			
<u>Liabilities</u>			
Independent examiner fee	5	400	400
		400	400

These accounts were approved by the Trustees and signed on their behalf by :

Signed: 

Date: 26/10/2023

Helen Pearson

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2022

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	2,325	2,893	-	-	5,218
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5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2021: Nil).

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales - Charity number 1179460

Accounts

Charity number: 1179460



**Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2021**

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2021

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2021 through 31 December 2021 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Names and Addresses of Independent Examiner

Shelley Rudling (FMAAT AATQB)
Community 360,
Winsleys House, High Street, Colchester, CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between

communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlements adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often as a result of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2021

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organisation in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organisation registered on 17th July 2019 under the Non-Governmental Organisation (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organisation was previously registered as a company limited by guarantee having no share capital (i.e., a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organisation (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organisation, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organisation is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

- 1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:
 - a. Increasing resources and/or capacity for law enforcement of elephant range
 - b. Increasing public awareness of the value of elephants and elephant conservation
 - c. Increasing the capacity of rural communities to coexist with elephants
 - d. Improving the welfare of rural communities who coexist with elephants
 - e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. In particular, Lunda Zone in MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2021 marked the fourth year of the fruitful collaboration between STEP and MBOMIPA WMA. Patrol support was expanded to cover the Tungamalenga and Kinyangesi zone and now covers 100% of the WMA. STEP supported three teams of Village Game Scouts (VGS) to conduct at least 21 days of foot patrols each per month by supplying scout wages and providing fuel and food supplies. In 2021, VGS covered 10,621 km of foot patrols and 11,067 km of vehicle patrols in the WMA. 100% of patrols were logged using GPS units, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. To facilitate the transfer to mobile data collection using the Survey123 application, STEP provided three Android Black View 9500 smartphones to VGS, as well four GPS units. Also, in October 2021, STEP installed a radio communication system in MBOMIPA WMA and at the STEP offices. The radio communication has helped to reduce communication barriers among the patrol teams and vehicles as well as with the STEP office in all urgent matters. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols. The WMA was supported with 3,960 litres of fuel.



Mobile data collection using the Survey123 app (left); MBOMIPA VGS on patrol (right)

1.2 Uzungwa Scarp Protection Project

Uzungwa Scarp Forest Nature Reserve (USFNR) is a biodiversity hotspot that is home Uzungwa endemics and globally threatened vertebrate species (Rovero et al. 2014) including Sanje mangabey, Udzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al. 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USNFR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al. 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al. 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust), Bristol Chester Zoo, and Association Mazingira, STEP began supporting the protection of Uzungwa Scarp Nature Forest Reserve in late 2017. The Uzungwa Scarp Protection Project supports with funding of ground patrols, training of rangers, and provision of essential equipment. In 2021, STEP supported 19 mobile camping patrols, each lasting 5 days, by Village Scouts, rangers from Tanzania Forestry Services and Iringa Anti-Poaching Unit in Uzungwa Scarp Nature Forest Reserve. All patrols were strategically planned and executed, with mapping, analysis and reporting of findings subsequent to each patrol. Patrol teams covered 784 km, a >90% increase relative to 2020. These patrols resulted in the removal of 473 snares and closure of 19 timber cutting sites. STEP also conducted its first 'benefit audit' in an attempt to better

understand the perceptions of the communities who live around USNFR with regards to the advantages that they see from the Protected Area.



VGS in USNFR

1.3 Rungwa-Kizigo-Muhesi Game Reserves

In 2021, the STEP pilot team covered 48.5 hours of both anti-poaching and rescue missions in the Rungwa-Kizigo-Muhesi Game Reserves. Nineteen flights were flown to points of interest supplied by the RKM management, covering 3,967 km of linear transects. Thirteen poacher camps and 18 timber cutting sites were identified from aerial patrols. Due to heavy rains, exchange of rangers from the Reserve headquarters to Makwasa Ranger post was challenging. Patrol vehicles could not reach the ranger post due to flooding of both the Makwasa and Nyasigogo Rivers. Game Reserve Management formally requested STEP to help support the four rangers who were at the Makwasa Ranger Post with supplies. The STEP pilot also helped to deploy four additional rangers to the Makwasa ranger post who stayed on duty for February 2021.

Furthermore, Rungwa-Kizigo-Muhesi Game Reserves rangers conducted 12,141 km of vehicle patrols with STEP fuel support, thereby helping to detect and respond to threats such as tree cutting, illegal mining, illegal grazing and bushmeat poaching.



Rungwa-Kizigo-Muhesi Game Reserves from the air during the wet season of 2021

1.4 Capacity building

As part of the Uzungwa Scarp Protection Project, STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. STEP also facilitated two technical training workshops for 214 scouts (32% women) and 17 rangers from the villages around USNFR. Teams were trained in mobile data collection, camera trapping, human rights, and use of GPS to map patrols. STEP also trained 17 TFS staff (14% women) on the use of GPS, mobile data collection (Survey 123), camera trapping, chain of arrest, and human rights. The training aimed to equip foresters with new patrol data collection techniques and refresh their GPS skills, as well as review the chain of arrest procedures and Human Rights. STEP also donated tents, tarps, gumboots, sleeping pads, raincoats, uniforms, cooking utensils, and first aid kit contents to facilitate more effective patrols.

In MBOMIPA WMA, STEP facilitated four technical trainings for 40 VGS which covered deployment of camera traps, mobile data collection using Survey 123, radio communications and a refresher course on data collection on patrol.



TFS rangers during training

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants
- Collect data on elephant movements and use this to inform education and trials of crop protection measures
- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Explore and support establishment of corridors to facilitate safe elephant movement

- Immersive hands-on training and development opportunities for students and early career conservationists from inside and outside of Tanzania, many of whom go on to work for other organisations

2.1 Kilombero Valley

The Kilombero Valley, in the Uzungwa-Selous ecosystem, is a densely populated, fertile matrix of

villages, agriculture and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Uzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups (146 farmers) registered as Community-Based Organisations to establish seven beekeeping projects (6.8km of beehive fences) in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also supported four farmers groups with construction of beehive huts. The aim of these beehive huts is to capture bee colonies and increase honey yields for farmers' groups. The activity includes moving unoccupied hives from the beehive fence to the beehive hut and moving them back to the fence once they are occupied. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. More than 262 litres of honey was harvested in 2021. The honey was processed and packed at the Honey Collection Centre. Beekeeping groups also received training targeted at improving hive occupancy and optimizing occupancy to boost hive yields. Each group was also provided with 10 catch boxes as a new method for increasing beehive occupancy.

STEP also works with farmers' groups to establish Village Savings and Loan Associations (VSLAs), informal financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2021, we supported the establishment of one new Village Savings and Loan Association and continued to support five existing VSLAs. 104 farmers participated in VSLAs and took out 112 loans with a value of TZS 13,996,000/- to build small businesses, improve their farming practices, pay school fees, and to support household cash needs (e.g. payments for medication, food). Such access to credit is highly valued by VLSA members in our project area. Prior to VSLAs, farmers' options for accessing credit either required travelling >50 km to a larger commercial centre and seeking a loan from a formal financial institution, or engaging in 'prospective' rice selling. If members of the VSLA

wanted to access credit sizes similar to their total loan size from the VSLA, some would have had to part with six bags of rice or more, representing an enormous loss to future earnings and a significant blow to household food supplies. Therefore, the existence of the VSLA itself is impactful through creation of an alternative source of credit. In 2021, STEP began trialling a mobile app, CHOMOKA, to increase transparency and efficiency in VSLA record keeping. We plan to move 80% of VSLAs to CHOMOKA in 2022.

2.1.2 Awareness-Raising and Education

In 2021, STEP conducted film nights in 8 villages, reaching 2,213 adults and youth. We also distributed over 1000 copies of flyers containing information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 3-module course on human-elephant coexistence in 11 primary schools and 3 secondary schools, reaching over 1,060 students. The modules covered 1) Elephant Behaviour, Ecology, and Biology 2) Human-Elephant Coexistence, and 3) Wildlife connectivity. STEP also distributed over 2000 booklets to students which contained valuable information about elephants and how to stay safe around elephants. STEP also began a small pilot bringing primary and secondary students to national parks as an experiential supplement to educational outreach. More than 50 students visited Udzungwa Mountains National Park, learned about elephant research and monitoring and had the opportunity to experience Tanzania's rich natural heritage.



Students on park visit to Udzungwa Mountains National Park

2.1.3 Corridor Restoration

2021 saw significant progress towards our long-term vision of restoring the Kilombero Elephant Corridor between the Udzungwa Mountains and Nyerere National Parks, via the Magombera Forest Nature Reserve. The goal is to peacefully manage the regular movements that elephants make across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. STEP has been

facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, Government and the private sector to restore this ecological connectivity, and enhance food and personal security for the local farming population. At the heart of the corridor project are the communities of the three villages of Sole, Mang'ula A and Kanyenja, who have agreed to setting aside ~7% of the village land to enable the corridor. In early 2021, construction of Tanzania's first ever elephant underpass was completed on the Mikumi-Ifakara highway, and will be opened as soon as the corridor is demarcated. Unfortunately, this year, two elephants were killed by a train while they were crossing the railway that also passes through the corridor. Working towards an effective rail underpass is another challenge that we are facing and working on. In September, a major step forward was achieved when the Regional Commissioner of Morogoro inaugurated the Kilombero Elephant Corridor Management Committee. Chaired by the District Commissioner and comprising village and other community leaders, the Committee also has representatives of Tanzania National Parks, the National Land Use Planning Commission, and the Ministry of Natural Resources and Tourism. Throughout 2021, STEP continued the long-term work of building consensus with owners of the farm plots within the 1.81 km² corridor, as well as raising funds to ensure that each of these households who are giving up one or two acres of land are fairly compensated. By the end of the year, 270 farmers had agreed to their land being formally evaluated by the District Government Valuation Team and the final compensation amounts for each parcel were calculated. Following careful review and approval, compensation payments began in early 2022 and are moving rapidly ahead. STEP has invited all 270 households to financial training, and is also organising Village Savings and Loans Association groups for these 'corridor farmers' to further enhance their financial security in the long term. There are also plans, as requested by the farmers, for ongoing tailored trainings including on modern agricultural technologies and methods for improving yields.

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict in villages on the western edge of Rungwa Game Reserve through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Farm-based interventions and Village Savings and Loans Associations

STEP started five new VSLAs in the sub-villages around Rungwa and Doroto, bringing the total number of VSLAs to eight. These are highly mobile and dynamic communities of agro-pastoralists. Across the eight groups, 175 members had access to 144 loans with a value of 29,232,500 TZS (~\$12,500.00). These loans supported establishment of small businesses and agricultural activities. STEP is trialling a mobile app, CHOMOKA, to increase transparency and efficiency in record keeping. Five of eight groups are currently using CHOMOKA.

In 2021, we continued to support the 46 farmers who had been given beehives in 2020 (20 in Rungwa and 26 in Doroto) with beekeeping. Each farmer was given three modern hives and provided with training on modern hives for beekeeping. In 2021, farmers who were given modern beehives by STEP harvested 350 litres of honey, a nine-fold increase when compared to 2020.



VLSA meeting in Doroto village

2.2.1 Awareness-Raising and Education

In 2021, we continued and expanded community outreach and education efforts. In partnership with TAWA and Itigi District Council, STEP conducted a workshop about human-elephant coexistence in May 2021 with 32 participants representing the local communities from 9 villages. The participants came from areas experiencing frequent interactions between humans and elephants along the Rungwa-Kizigo-Muhesi Game Reserve boundary. The workshop aimed to equip participants with an accurate understanding of elephant population dynamics in Tanzania over the last fifty years and their relationship to human population growth in the country over the same period. The workshop also helped us learn which villages and sub-villages were priority areas for elephant monitoring and efforts to enhance human-elephant coexistence.

In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the third instalment of the *Tembo Cup* Football Tournament in November 2020 (Tembo is Swahili for elephant). The tournament involved villages experiencing human-elephant conflict adjacent to Rungwa-Kizigo-Muhesi Game Reserve. The coverage of the tournament was expanded to ten villages in two zones: Rungwa and Muhesi. The tournament aimed to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, 36 matches were played, which were attended by approximately 12,850 people. In addition to football matches, film nights, community training and training at schools were conducted. The training sessions focused on building a culture and norm of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land.

- Over 12,850 people attended football matches, and 300 people attended netball matches
- Over 3,700 students were trained at twenty primary schools and a secondary school
- Over 2,500 children were trained during football matches

- Over 4,500 people attended film nights at which Swahili-language wildlife films were shown
- Over 2,000 people assembled for community training held before or immediately following matches
- For the first time, the Tembo Cup hosted netball matches, a game played by women in Tanzania. Six teams participated and we hope more will join in 2022.



One of STEP's local elephant monitors conducting awareness-raising at the Tembo Cup football tournament



Women's netball team participating in the Tembo Cup netball tournament

2.3 Capacity building

In 2021, one Tanzanian student and two Tanzanian volunteers participated in human-elephant coexistence activities and learned fieldwork and community engagement methods.

STEP hosted nine members of a Rapid Response Task Force formed by the Tanzania Wildlife Management Agency (TAWA) and trained them on our beehive fence model. This unit will be called to support communities as they respond to human-wildlife conflict as part of Tanzania's National Human-Wildlife Conflict Strategy

In December 2021, STEP hosted 18 rangers from protected areas across southern Tanzania, representing TAWA, TANAPA and KDU. These rangers completed a two-week intensive bushwalking course where they learned the foundations of elephant behaviour and how elephants utilise their habitats. The rangers then applied this knowledge to training on a human-elephant conflict mitigation tool kit, developed by Honeyguide Foundation. Teams considered their operating environments, the types of situations in which they encounter human-elephant conflict and new ways to deter elephants, integrating their knowledge on animal behaviour. This multifaceted training helped to address central aspects of Tanzania's Human-Wildlife Conflict Strategy.



Rangers receiving HWC response training

To support more effective human-wildlife conflict response by protected area management agencies, STEP also provided almost 10,000 litres of fuel Rungwa-Kizigo-Muhesi Game Reserves, Uzungwa Mountains National Park, and Nyerere National Parks for HWC response.

Our trained village-based team (Local Elephant Monitors) continued with data collection and training for farmers. While surveying elephant activity, they visit and train farmers affected by elephant damage in their communities. In 2021, over 2,000 farmers were trained in two villages (Rungwa, and Doroto) by this team. The training focused on staying safe, measures to avoid or reduce human activities in areas preferred by wild animals, and ways to protect crops from elephants, such as improving food stores and using chilli.

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa and Uzungwa-Selous ecosystems. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour
- Monitoring elephant distribution and status in the forests of the Uzungwa Mountains
- Monitoring wildlife corridors

- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The elephant monitoring program in Ruaha National Park under STEP's affiliated research project aims to collect long-term data on elephant population structure, tusklessness, distribution and behaviour. In 2021, the research team conducted intensive dry season fieldwork to enable a new demographic assessment for the Ruaha elephant population. The demographic assessment will describe the current age-and-sex structure of the population and will help us understand to what extent the Ruaha elephant population has begun to recover from the effects of the poaching crisis of 2009-2015. In 2021, we welcomed a new Tanzanian researcher, Loyce Majige, to the team. Loyce has a lifelong passion for conservation and elephants and joined STEP while completing her Master's in Conservation Management of African Ecosystems at the University of Glasgow, Scotland. Loyce was also part of the inaugural class of the Grumeti Fund's *Women in the Field Program*, a skills training initiative for Tanzanian women conservationists, and is a role model and source of guidance for other young women interested in a career in conservation.

3.2 Monitoring elephants in Uzungwa-Selous

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Uzungwa-Selous elephant population and to secure long-term connectivity for elephants between Uzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the Kilombero Valley. To monitor our progress toward this objective, we monitor elephant presence and status in Mwanihana and Magombera forest, which form endpoints of the Kilombero Elephant Corridor, as well as elephant presence in the corridor area. We hope to see an increase in elephant use of the forest and corridor area over time as a result of our conservation efforts. In 2021, we continued monitoring of elephants in Mwanihana forest (first begun in 2015) and Magombera forest (begun in 2019) to collect data on elephant use of these forests through foot transects. Our monitoring suggests that elephant use of Mwanihana forest in Uzungwa has increased over the past six years – a positive indication that the forest is becoming safer for elephants.

3.3. Studying human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we continued to monitor elephant activity and crop losses on village land. In 2021, we worked with 12 local elephant monitors (LEMs) across seven villages in the Rungwa-Doroto and Kilombero valley project areas. Each elephant monitor is provided with training and regular performance feedback, and a GPS unit. All data collection is done using KoboCollect. These data informed our work in a number of ways, including 1) to help us select locations for trials of novel elephant deterrents, 2) to assess baseline crop damage to elephants prior to restoration of the Kilombero Elephant Corridor; and 3) to evaluate trials of novel crop protection methods.



Local elephant monitors receiving training in KoboCollect, a mobile data collection app

3.4 Trialling farm-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. STEP is seeking to expand its portfolio of crop protection measures through comprehensive trials of the effectiveness of smelly repellent (a foul-smelling fermented mixture) as an elephant deterrent. Our trials of smelly repellent fencing are the most extensive trials of this method to date, and our rigorous monitoring has given us a clear understanding of efficacy. We learned that the repellent deters elephants attempting to enter farmland more than half of the time, but also that there is a risk of elephants habituating to the repellent. Through interviews, we learned that farmers perceive the repellent to be effective and that there is a broad interest in using this method to protect their crops, but that the primary barrier to farmer uptake is cost; hence, future work will explore ways to lower costs. We presented the results of our smelly repellent trials at the Tanzania Wildlife Research Institute scientific conference and are pleased that our experience and approach have informed trials of smelly repellent fencing in Zambia and Kenya.



Elephant caught on camera trap at the smelly repellent trial fence

3.5 Capacity building

Master's student support

One of our goals is to build capacity for research in Tanzania and, in doing so, facilitate scientific studies that inform our elephant conservation work. To this end, we launched an initiative in 2021 to support Tanzanian Masters students in the conservation field. Through this initiative, we help students to design a research project and provide mentoring and training in data collection methods and data analysis, as well as provide a bursary to support their fieldwork. In 2021, we supported two students from the Sokoine University of Agriculture: Irene Laizer and Lowassa Moitiko. Irene is studying how people and elephants share water sources located on village land adjacent to Rungwa-Kizigo-Muhesi Game Reserves, and Lowassa is studying the age-and-sex structure and activity patterns of elephants at the forest-farm interface in the Kilombero Valley. Through this training opportunity, Irene and Lowassa have gained a valuable skill set and field experience that we hope will serve them well in their conservation journey. Their theses, which are expected in the second half of 2022, will also help inform STEP's conservation work. In 2021, STEP also continued a research collaboration with a student from the University of Newcastle, who completed her Masters' thesis using data from STEP's research data.



Master's student Irene Laizer conducting interviews

Training on human-wildlife interactions

A first step towards managing human-wildlife conflicts is to assess human-wildlife interactions, including developing a better understanding of wildlife impacts and animal behaviour. To better equip practitioners to conduct such assessments, STEP and the Polish Mammal Research Institute facilitated training on methods for assessing human-wildlife interactions, with a special focus on mobile data collection, the use of GIS, and camera traps, as well as their applications to monitoring of human-wildlife interactions. The training was attended by 15 practitioners from a range of institutions, including Tanzania National Parks, Tanzania Wildlife Management Authority, academic institutions, District Government and NGOs. As well as learning a range of new technical skills, participants discussed how to apply what they had learned in each of their daily roles.



Participants learn GIS skills to help them assess human-wildlife conflict hotspots

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

The accounts are provided as a separate document.

Approved by the trustees on 23.10.2022 and signed on their behalf by:

Helen Pearson

A handwritten signature in black ink, enclosed in a thin black rectangular border. The signature is cursive and appears to be the name 'Herke'.

Dated: 23.10.2022

**SOUTHERN TANZANIA
ELEPHANT TRUST**

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2021**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2021

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2021

I report on the accounts of Southern Tanzania Elephant Trust for the year ended 31st December 2021 which are set out on pages 3 to 5.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act,
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act, and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In the course of my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of the accounts set out in the Charities (Accounts and Reports) Regulations 2008 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.

I 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.

Shelley-Marie Rudling FMAAT AATQB for and on behalf of:

Community360

Winsley's House, High Street, Colchester, Essex



Date

31.10.2022

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2021

	Notes	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Receipts					
Donations, legacies and other similar receipts	2	4,993	42,036	47,029	59,399
Total receipts		<u>4,993</u>	<u>42,036</u>	<u>47,029</u>	<u>59,399</u>
Charitable payments					
Charitable activities	3	3,277	45,294	48,571	8,668
Governance		400	-	400	-
Total payments		<u>3,677</u>	<u>45,294</u>	<u>48,971</u>	<u>8,668</u>
Net of receipts/(payments)		<u>1,316</u>	<u>(3,258)</u>	<u>(1,942)</u>	<u>50,731</u>
Cash funds as at 1 December 2020		1,009	94,696	95,705	44,974
Cash funds as at 31 December 2021	4	<u>2,325</u>	<u>91,438</u>	<u>93,763</u>	<u>95,705</u>

Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2021

1. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement on 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)- (Charities SORP (FRS 102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

The accounts are prepared under receipts and payments basis.

Period

These accounts cover a 12 month period from 1st January 2021 to 31st December 2021.

2. Donations, legacies and other similar receipts	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Donations	4,993	42,036	47,029	59,399
	4,993	42,036	47,029	55,444

3. Charitable activities	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Insurance	247	-	247	268
Self employed	3,010	1,190	4,200	8,400
Donation	-	44,104	44,104	-
Bank charges	20	-	20	-
	3,277	45,294	48,571	8,668

4. Cash Funds	Balance at 01/01/21 £	Incoming £	Outgoing £	Transfers £	Balance at 31/12/21 £
Unrestricted					
General fund	1,009	4,993	(3,677)	-	2,325
	1,009	4,993	(3,677)	-	2,325
Restricted Funds					
Wild Planet Trust	44,720	17,000	(30,139)	-	31,582
Bristol Chester Zoo	9,525	-	(4,875)	-	4,650
Association Mazingira	19,834	-	(10,280)	-	9,554
MBOMIPA Protection Project	3,534	20,000	-	-	23,534
Corridor restoration	17,083	-	-	-	17,083
Pro Wildlife	-	5,036	-	-	5,036
Totals	94,696	42,036	(45,294)	-	91,439

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2020: Nil).

Charity number: 1179460



**Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2021**

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2021

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2021 through 31 December 2021 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Names and Addresses of Independent Examiner

Shelley Rudling (FMAAT AATQB)
Community 360,
Winsleys House, High Street, Colchester, CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlements adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often as a result of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2021

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organisation in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organisation registered on 17th July 2019 under the Non-Governmental Organisation (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organisation was previously registered as a company limited by guarantee having no share capital (i.e., a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organisation (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organisation, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organisation is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. In particular, Lunda Zone in MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2021 marked the fourth year of the fruitful collaboration between STEP and MBOMIPA WMA. Patrol support was expanded to cover the Tungamalenga and Kinyangesi zone and now covers 100% of the WMA. STEP supported three teams of Village Game Scouts (VGS) to conduct at least 21 days of foot patrols each per month by supplying scout wages and providing fuel and food supplies. In 2021, VGS covered 10,621 km of foot patrols and 11,067 km of vehicle patrols in the WMA. 100% of patrols were logged using GPS units, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. To facilitate the transfer to mobile data collection using the Survey123 application, STEP provided three Android Black View 9500 smartphones to VGS, as well four GPS units. Also, in October 2021, STEP installed a radio communication system in MBOMIPA WMA and at the STEP offices. The radio communication has helped to reduce communication barriers among the patrol teams and vehicles as well as with the STEP office in all urgent matters. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols. The WMA was supported with 3,960 litres of fuel.



Mobile data collection using the Survey123 app (left); MBOMIPA VGS on patrol (right)

1.2 Uzungwa Scarp Protection Project

Uzungwa Scarp Forest Nature Reserve (USNFR) is a biodiversity hotspot that is home Uzungwa endemics and globally threatened vertebrate species (Rovero et al. 2014) including Sanje mangabey, Uzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al. 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USNFR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al. 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al. 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust), Bristol Chester Zoo, and Association Mazingira, STEP began supporting the protection of Uzungwa Scarp Nature Forest Reserve in late 2017. The Uzungwa Scarp Protection Project supports with funding of ground patrols, training of rangers, and provision of essential equipment. In 2021, STEP supported 19 mobile camping patrols, each lasting 5 days, by Village Scouts, rangers from Tanzania Forestry Services and Iringa Anti-Poaching Unit in Uzungwa Scarp Nature Forest Reserve. All patrols were strategically planned and executed, with mapping, analysis and reporting of findings subsequent to each patrol. Patrol teams covered 784 km, a >90% increase relative to 2020. These patrols resulted in the removal of 473 snares and closure of 19 timber cutting sites. STEP also conducted its first 'benefit audit' in an attempt to better understand the perceptions of the communities who live around USNFR with regards to the advantages that they see from the Protected Area.



VGS in USNFR

1.3 Rungwa-Kizigo-Muhesi Game Reserves

In 2021, the STEP pilot team covered 48.5 hours of both anti-poaching and rescue missions in the Rungwa-Kizigo-Muhesi Game Reserves. Nineteen flights were flown to points of interest supplied by the RKM management, covering 3,967 km of linear transects. Thirteen poacher camps and 18 timber cutting sites were identified from aerial patrols. Due to heavy rains, exchange of rangers from the Reserve headquarters to Makwasa Ranger post was challenging. Patrol vehicles could not reach the ranger post due to flooding of both the Makwasa and Nyasigogo Rivers. Game Reserve Management formally requested STEP to help support the four rangers who were at the Makwasa Ranger Post with supplies. The STEP pilot also helped to deploy four additional rangers to the Makwasa ranger post who stayed on duty for February 2021.

Furthermore, Rungwa-Kizigo-Muhesi Game Reserves rangers conducted 12,141 km of vehicle patrols with STEP fuel support, thereby helping to detect and respond to threats such as tree cutting, illegal mining, illegal grazing and bushmeat poaching.



Rungwa-Kizigo-Muhesi Game Reserves from the air during the wet season of 2021

1.4 Capacity building

As part of the Uzungwa Scarp Protection Project, STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. STEP also facilitated two technical training workshops for 214 scouts (32% women) and 17 rangers from the villages around USNFR. Teams were trained in mobile data collection, camera trapping, human rights, and use of GPS to map patrols. STEP also trained 17 TFS staff (14% women) on the use of GPS, mobile data collection (Survey 123), camera trapping, chain of arrest, and human rights. The training aimed to equip foresters with new patrol data collection techniques and refresh their GPS skills, as well as review the chain of arrest procedures and Human Rights. STEP also donated tents, tarps, gumboots, sleeping pads, raincoats, uniforms, cooking utensils, and first aid kit contents to facilitate more effective patrols.

In MBOMIPA WMA, STEP facilitated four technical trainings for 40 VGS which covered deployment of camera traps, mobile data collection using Survey 123, radio communications and a refresher course on data collection on patrol.



TFS rangers during training

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants
- Collect data on elephant movements and use this to inform education and trials of crop protection measures
- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Explore and support establishment of corridors to facilitate safe elephant movement
- Immersive hands-on training and development opportunities for students and early career conservationists from inside and outside of Tanzania, many of whom go on to work for other organisations

2.1 Kilombero Valley

The Kilombero Valley, in the Uzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Uzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups (146 farmers) registered as Community-Based Organisations to establish seven beekeeping projects (6.8km of beehive fences) in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also supported four farmers groups with construction of beehive huts. The aim of these beehive huts is to capture bee colonies and increase honey yields for farmers' groups. The activity includes moving unoccupied hives from the beehive fence to the beehive hut and moving them back to the fence once they are occupied. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. More than 262 litres of honey was harvested in 2021. The honey was processed and packed at the Honey Collection Centre. Beekeeping groups also received training targeted at improving hive occupancy and optimizing occupancy to boost hive yields. Each group was also provided with 10 catch boxes as a new method for increasing beehive occupancy.

STEP also works with farmers' groups to establish Village Savings and Loan Associations (VSLAs), informal financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2021, we supported the establishment of one new Village Savings and Loan Association and continued to support five existing VSLAs. 104 farmers participated in VSLAs and took out 112 loans with a value of TZS 13,996,000/- to build small businesses, improve their farming practices, pay school fees, and to support household cash needs (e.g. payments for medication, food). Such access to credit is highly valued by VLSA members in our project area. Prior to VSLAs, farmers' options for accessing credit either required travelling >50 km to a larger commercial centre and seeking a loan from a formal financial institution, or engaging in 'prospective' rice selling. If members of the VSLA wanted to access credit sizes similar to their total loan size from the VSLA, some would have had to part with six bags of rice or more, representing an enormous loss to future earnings and a significant blow to household food supplies. Therefore, the existence of the VSLA itself is impactful through creation of an alternative source of credit. In 2021, STEP began trialling a mobile app, CHOMOKA, to increase transparency and efficiency in VSLA record keeping. We plan to move 80% of VSLAs to CHOMOKA in 2022.

2.1.2 Awareness-Raising and Education

In 2021, STEP conducted film nights in 8 villages, reaching 2,213 adults and youth. We also distributed over 1000 copies of flyers containing information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 3-module course on human-elephant coexistence in 11 primary schools and 3 secondary schools, reaching over 1,060 students. The modules covered 1) Elephant Behaviour, Ecology, and Biology 2) Human-Elephant Coexistence, and 3) Wildlife connectivity. STEP also distributed over 2000 booklets to students which contained valuable information about elephants and how to stay safe around elephants. STEP also began a small pilot bringing primary and secondary students to national parks as an experiential supplement to educational outreach. More than 50 students visited Udzungwa Mountains National Park, learned about elephant research and monitoring and had the opportunity to experience Tanzania's rich natural heritage.



Students on park visit to Udzungwa Mountains National Park

2.1.3 Corridor Restoration

2021 saw significant progress towards our long-term vision of restoring the Kilombero Elephant Corridor between the Udzungwa Mountains and Nyerere National Parks, via the Magombera Forest Nature Reserve. The goal is to peacefully manage the regular movements that elephants make across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. STEP has been facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, Government and the private sector to restore this ecological connectivity, and enhance food and personal security for the local farming population. At the heart of the corridor project are the communities of the three villages of Sole, Mang'ula A and Kanyenja, who have agreed to setting aside ~7% of the village land to enable the corridor. In early 2021, construction of Tanzania's first ever elephant underpass was completed on the Mikumi-Ifakara highway, and will be opened as soon as the corridor is demarcated. Unfortunately, this year, two elephants were killed by a train while they were crossing the railway that also passes through the corridor. Working towards an effective rail underpass is another challenge that we are facing and working on. In September, a major step forward was achieved when the Regional Commissioner of Morogoro inaugurated the Kilombero Elephant Corridor Management Committee. Chaired by the District Commissioner and comprising village and other community leaders, the Committee also has representatives of Tanzania National Parks, the National Land Use Planning Commission, and the Ministry of Natural Resources and Tourism. Throughout 2021, STEP continued the long-term work of building consensus with owners of the farm plots within the 1.81 km² corridor, as well as raising funds to ensure that each of these households who are giving up one or two acres of land are fairly compensated. By the end of the year, 270 farmers had agreed to their land being formally evaluated by the District Government Valuation Team and the final compensation amounts for each parcel were calculated. Following careful review and approval, compensation payments began in early 2022 and are moving rapidly ahead. STEP has invited all 270 households to financial training, and is also organising Village Savings and Loans Association groups for these 'corridor farmers' to further enhance their financial security in the long term. There are also plans, as requested by the farmers, for ongoing tailored trainings including on modern agricultural technologies and methods for improving yields.

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict in villages on the western edge of Rungwa Game Reserve through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Farm-based interventions and Village Savings and Loans Associations

STEP started five new VSLAs in the sub-villages around Rungwa and Doroto, bringing the total number of VSLAs to eight. These are highly mobile and dynamic communities of agro-pastoralists. Across the eight groups, 175 members had access to 144 loans with a value of 29,232,500 TZS (~\$12,500.00). These loans supported establishment of small businesses and agricultural activities. STEP is trialling a mobile app, CHOMOKA, to increase transparency and efficiency in record keeping. Five of eight groups are currently using CHOMOKA.

In 2021, we continued to support the 46 farmers who had been given beehives in 2020 (20 in Rungwa and 26 in Doroto) with beekeeping. Each farmer was given three modern hives and provided with training on modern hives for beekeeping. In 2021, farmers who were given modern beehives by STEP harvested 350 litres of honey, a nine-fold increase when compared to 2020.



VLSA meeting in Doroto village

2.2.1 Awareness-Raising and Education

In 2021, we continued and expanded community outreach and education efforts. In partnership with TAWA and Itigi District Council, STEP conducted a workshop about human-elephant coexistence in May 2021 with 32 participants representing the local communities from 9 villages. The participants

came from areas experiencing frequent interactions between humans and elephants along the Rungwa-Kizigo-Muhesi Game Reserve boundary. The workshop aimed to equip participants with an accurate understanding of elephant population dynamics in Tanzania over the last fifty years and their relationship to human population growth in the country over the same period. The workshop also helped us learn which villages and sub-villages were priority areas for elephant monitoring and efforts to enhance human-elephant coexistence.

In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the third instalment of the *Tembo Cup* Football Tournament in November 2020 (Tembo is Swahili for elephant). The tournament involved villages experiencing human-elephant conflict adjacent to Rungwa-Kizigo-Muhesi Game Reserve. The coverage of the tournament was expanded to ten villages in two zones: Rungwa and Muhesi. The tournament aimed to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, 36 matches were played, which were attended by approximately 12,850 people. In addition to football matches, film nights, community training and training at schools were conducted. The training sessions focused on building a culture and norm of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land.

- Over 12,850 people attended football matches, and 300 people attended netball matches
- Over 3,700 students were trained at twenty primary schools and a secondary school
- Over 2,500 children were trained during football matches
- Over 4,500 people attended film nights at which Swahili-language wildlife films were shown
- Over 2,000 people assembled for community training held before or immediately following matches
- For the first time, the Tembo Cup hosted netball matches, a game played by women in Tanzania. Six teams participated and we hope more will join in 2022.



One of STEP's local elephant monitors conducting awareness-raising at the Tembo Cup football tournament



Women's netball team participating in the Tembo Cup netball tournament

2.3 Capacity building

In 2021, one Tanzanian student and two Tanzanian volunteers participated in human-elephant coexistence activities and learned fieldwork and community engagement methods.

STEP hosted nine members of a Rapid Response Task Force formed by the Tanzania Wildlife Management Agency (TAWA) and trained them on our beehive fence model. This unit will be called to support communities as they respond to human-wildlife conflict as part of Tanzania's National Human-Wildlife Conflict Strategy

In December 2021, STEP hosted 18 rangers from protected areas across southern Tanzania, representing TAWA, TANAPA and KDU. These rangers completed a two-week intensive bushwalking course where they learned the foundations of elephant behaviour and how elephants utilise their habitats. The rangers then applied this knowledge to training on a human-elephant conflict mitigation tool kit, developed by Honeyguide Foundation. Teams considered their operating environments, the types of situations in which they encounter human-elephant conflict and new ways to deter elephants, integrating their knowledge on animal behaviour. This multifaceted training helped to address central aspects of Tanzania's Human-Wildlife Conflict Strategy.



Rangers receiving HWC response training

To support more effective human-wildlife conflict response by protected area management agencies, STEP also provided almost 10,000 litres of fuel Rungwa-Kizigo-Muhesi Game Reserves, Uzungwa Mountains National Park, and Nyerere National Parks for HWC response.

Our trained village-based team (Local Elephant Monitors) continued with data collection and training for farmers. While surveying elephant activity, they visit and train farmers affected by elephant damage in their communities. In 2021, over 2,000 farmers were trained in two villages (Rungwa, and Doroto) by this team. The training focused on staying safe, measures to avoid or reduce human activities in areas preferred by wild animals, and ways to protect crops from elephants, such as improving food stores and using chilli.

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa and Uzungwa-Selous ecosystems. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour
- Monitoring elephant distribution and status in the forests of the Uzungwa Mountains
- Monitoring wildlife corridors
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The elephant monitoring program in Ruaha National Park under STEP's affiliated research project aims to collect long-term data on elephant population structure, tusklessness, distribution and behaviour. In 2021, the research team conducted intensive dry season fieldwork to enable a new demographic assessment for the Ruaha elephant population. The demographic assessment will describe the current age-and-sex structure of the population and will help us understand to what extent the Ruaha elephant population has begun to recover from the effects of the poaching crisis of 2009-2015. In 2021, we welcomed a new Tanzanian researcher, Loyce Majige, to the team. Loyce has a lifelong passion for conservation and elephants and joined STEP while completing her Master's in Conservation Management of African Ecosystems at the University of Glasgow, Scotland. Loyce was also part of the inaugural class of the Grumeti Fund's *Women in the Field Program*, a skills training initiative for Tanzanian women conservationists, and is a role model and source of guidance for other young women interested in a career in conservation.

3.2 Monitoring elephants in Uzungwa-Selous

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Uzungwa-Selous elephant population and to secure long-term connectivity for elephants between Uzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the Kilombero Valley. To monitor our progress toward this objective, we monitor elephant presence and status in Mwanihana and Magombera forest, which form endpoints of the Kilombero Elephant Corridor, as well as elephant presence in the corridor area. We hope to see an increase in elephant use of the forest and corridor area over time as a result of our conservation efforts. In 2021, we continued monitoring of elephants in Mwanihana forest (first begun in 2015) and Magombera forest (begun in 2019) to collect data on elephant use of these forests through foot transects. Our monitoring suggests that elephant use of Mwanihana forest in Uzungwa has increased over the past six years – a positive indication that the forest is becoming safer for elephants.

3.3. Studying human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we continued to monitor elephant activity and crop losses on village land. In 2021, we worked with 12 local elephant monitors (LEMs) across seven villages in the Rungwa-Doroto and Kilombero valley project areas. Each elephant monitor is provided with training and regular performance feedback, and a GPS unit. All data collection is done using KoboCollect. These data informed our work in a number of ways, including 1) to help us select locations for trials of novel elephant deterrents, 2) to assess baseline crop damage to elephants prior to restoration of the Kilombero Elephant Corridor; and 3) to evaluate trials of novel crop protection methods.



Local elephant monitors receiving training in KoboCollect, a mobile data collection app

3.4 Trialling farm-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. STEP is seeking to expand its portfolio of crop protection measures through comprehensive trials of the effectiveness of smelly repellent (a foul-smelling fermented mixture) as an elephant deterrent. Our trials of smelly repellent fencing are the most extensive trials of this method to date, and our rigorous monitoring has given us a clear understanding of efficacy. We learned that the repellent deters elephants attempting to enter farmland more than half of the time, but also that there is a risk of elephants habituating to the repellent. Through interviews, we learned that farmers perceive the repellent to be effective and that there is a broad interest in using this method to protect their crops, but that the primary barrier to farmer uptake is cost; hence, future work will explore ways to lower costs. We presented the results of our smelly repellent trials at the Tanzania Wildlife Research Institute scientific conference and are pleased that our experience and approach have informed trials of smelly repellent fencing in Zambia and Kenya.



Elephant caught on camera trap at the smelly repellent trial fence

3.5 Capacity building

Master's student support

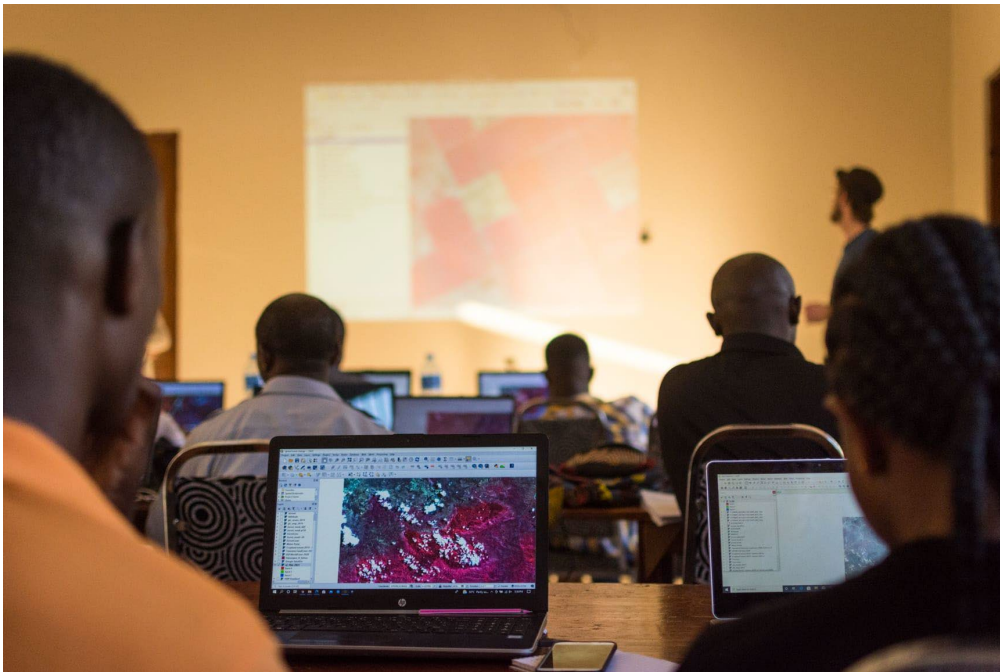
One of our goals is to build capacity for research in Tanzania and, in doing so, facilitate scientific studies that inform our elephant conservation work. To this end, we launched an initiative in 2021 to support Tanzanian Masters students in the conservation field. Through this initiative, we help students to design a research project and provide mentoring and training in data collection methods and data analysis, as well as provide a bursary to support their fieldwork. In 2021, we supported two students from the Sokoine University of Agriculture: Irene Laizer and Lowassa Moitiko. Irene is studying how people and elephants share water sources located on village land adjacent to Rungwa-Kizigo-Muhesi Game Reserves, and Lowassa is studying the age-and-sex structure and activity patterns of elephants at the forest-farm interface in the Kilombero Valley. Through this training opportunity, Irene and Lowassa have gained a valuable skill set and field experience that we hope will serve them well in their conservation journey. Their theses, which are expected in the second half of 2022, will also help inform STEP's conservation work. In 2021, STEP also continued a research collaboration with a student from the University of Newcastle, who completed her Masters' thesis using data from STEP's research data.



Master's student Irene Laizer conducting interviews

Training on human-wildlife interactions

A first step towards managing human-wildlife conflicts is to assess human-wildlife interactions, including developing a better understanding of wildlife impacts and animal behaviour. To better equip practitioners to conduct such assessments, STEP and the Polish Mammal Research Institute facilitated training on methods for assessing human-wildlife interactions, with a special focus on mobile data collection, the use of GIS, and camera traps, as well as their applications to monitoring of human-wildlife interactions. The training was attended by 15 practitioners from a range of institutions, including Tanzania National Parks, Tanzania Wildlife Management Authority, academic institutions, District Government and NGOs. As well as learning a range of new technical skills, participants discussed how to apply what they had learned in each of their daily roles.



Participants learn GIS skills to help them assess human-wildlife conflict hotspots

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Topp-Jørgensen, E., Nielsen, M. R., Marshall, A. R., & Pedersen, U. (2009). Relative densities of mammals in response to different levels of bushmeat hunting in the Uzungwa Mountains, Tanzania. *Tropical Conservation Science*, 2(1), 70-87.

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

The accounts are provided as a separate document.

Approved by the trustees on 23.10.2022 and signed on their behalf by:

Helen Pearson

A rectangular box containing a handwritten signature in black ink, which appears to be 'Helen Pearson'.

Dated: 23.10.2022

**SOUTHERN TANZANIA
ELEPHANT TRUST**

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2021**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2021

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2021

I report on the accounts of Southern Tanzania Elephant Trust for the year ended 31st December 2021 which are set out on pages 3 to 5.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act,
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act, and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In the course of my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of the accounts set out in the Charities (Accounts and Reports) Regulations 2008 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.

I 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.

Shelley-Marie Rudling FMAAT AATQB for and on behalf of:

Community360

Winsley's House, High Street, Colchester, Essex



Date

31.10.2022

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2021

	Notes	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Receipts					
Donations, legacies and other similar receipts	2	4,993	42,036	47,029	59,399
Total receipts		<u>4,993</u>	<u>42,036</u>	<u>47,029</u>	<u>59,399</u>
Charitable payments					
Charitable activities	3	3,277	45,294	48,571	8,668
Governance		400	-	400	-
Total payments		<u>3,677</u>	<u>45,294</u>	<u>48,971</u>	<u>8,668</u>
Net of receipts/(payments)		<u>1,316</u>	<u>(3,258)</u>	<u>(1,942)</u>	<u>50,731</u>
Cash funds as at 1 December 2020		1,009	94,696	95,705	44,974
Cash funds as at 31 December 2021	4	<u>2,325</u>	<u>91,438</u>	<u>93,763</u>	<u>95,705</u>

Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2021

1. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement on 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)- (Charities SORP (FRS 102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

The accounts are prepared under receipts and payments basis.

Period

These accounts cover a 12 month period from 1st January 2021 to 31st December 2021.

2. Donations, legacies and other similar receipts	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Donations	4,993	42,036	47,029	59,399
	4,993	42,036	47,029	55,444

3. Charitable activities	Unrestricted Fund £	Restricted Fund £	2021 Total £	2020 Total £
Insurance	247	-	247	268
Self employed	3,010	1,190	4,200	8,400
Donation	-	44,104	44,104	-
Bank charges	20	-	20	-
	3,277	45,294	48,571	8,668

4. Cash Funds	Balance at 01/01/21 £	Incoming £	Outgoing £	Transfers £	Balance at 31/12/21 £
Unrestricted					
General fund	1,009	4,993	(3,677)	-	2,325
	1,009	4,993	(3,677)	-	2,325
Restricted Funds					
Wild Planet Trust	44,720	17,000	(30,139)	-	31,582
Bristol Chester Zoo	9,525	-	(4,875)	-	4,650
Association Mazingira	19,834	-	(10,280)	-	9,554
MBOMIPA Protection Project	3,534	20,000	-	-	23,534
Corridor restoration	17,083	-	-	-	17,083
Pro Wildlife	-	5,036	-	-	5,036
Totals	94,696	42,036	(45,294)	-	91,439

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.
9. During the year, there were Nil employees (2020: Nil).

Charity number: 1179460



**Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2021**

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2021

Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2021 through 31 December 2021 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Names and Addresses of Independent Examiner

Shelley Rudling (FMAAT AATQB)
Community 360,
Winsleys House, High Street, Colchester, CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity. The Trustees were reappointed for another three-year term on 21st July 2021. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge, and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trusts' objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation. Elephant conservation in the region faces two main challenges:

Securing elephant populations and habitat: The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.

Human-elephant coexistence: Farms and settlements adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often as a result of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.

Impact for the Year End 31st December 2021

The main activities during the year were increasing protection for elephants through support to wildlife rangers (Section 1), increasing community capacity for human-elephant coexistence through farm-based interventions, supporting farmer livelihoods activities, education and awareness-raising, and corridor restoration (Section 2), and research and monitoring of elephants and human-elephant interactions (Section 3). Capacity building was carried out in a number of ways through these activities.

All activities in Tanzania are carried out by our affiliate organisation in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organisation registered on 17th July 2019 under the Non-Governmental Organisation (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organisation was previously registered as a company limited by guarantee having no share capital (i.e., a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments) (No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organisation (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organisation, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organisation is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. In particular, Lunda Zone in MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. 2021 marked the fourth year of the fruitful collaboration between STEP and MBOMIPA WMA. Patrol support was expanded to cover the Tungamalenga and Kinyangesi zone and now covers 100% of the WMA. STEP supported three teams of Village Game Scouts (VGS) to conduct at least 21 days of foot patrols each per month by supplying scout wages and providing fuel and food supplies. In 2021, VGS covered 10,621 km of foot patrols and 11,067 km of vehicle patrols in the WMA. 100% of patrols were logged using GPS units, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. To facilitate the transfer to mobile data collection using the Survey123 application, STEP provided three Android Black View 9500 smartphones to VGS, as well four GPS units. Also, in October 2021, STEP installed a radio communication system in MBOMIPA WMA and at the STEP offices. The radio communication has helped to reduce communication barriers among the patrol teams and vehicles as well as with the STEP office in all urgent matters. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols. The WMA was supported with 3,960 litres of fuel.



Mobile data collection using the Survey123 app (left); MBOMIPA VGS on patrol (right)

1.2 Uzungwa Scarp Protection Project

Uzungwa Scarp Forest Nature Reserve (USNFR) is a biodiversity hotspot that is home Uzungwa endemics and globally threatened vertebrate species (Rovero et al. 2014) including Sanje mangabey, Uzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al. 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USNFR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al. 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al. 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust), Bristol Chester Zoo, and Association Mazingira, STEP began supporting the protection of Uzungwa Scarp Nature Forest Reserve in late 2017. The Uzungwa Scarp Protection Project supports with funding of ground patrols, training of rangers, and provision of essential equipment. In 2021, STEP supported 19 mobile camping patrols, each lasting 5 days, by Village Scouts, rangers from Tanzania Forestry Services and Iringa Anti-Poaching Unit in Uzungwa Scarp Nature Forest Reserve. All patrols were strategically planned and executed, with mapping, analysis and reporting of findings subsequent to each patrol. Patrol teams covered 784 km, a >90% increase relative to 2020. These patrols resulted in the removal of 473 snares and closure of 19 timber cutting sites. STEP also conducted its first 'benefit audit' in an attempt to better understand the perceptions of the communities who live around USNFR with regards to the advantages that they see from the Protected Area.



VGS in USNFR

1.3 Rungwa-Kizigo-Muhesi Game Reserves

In 2021, the STEP pilot team covered 48.5 hours of both anti-poaching and rescue missions in the Rungwa-Kizigo-Muhesi Game Reserves. Nineteen flights were flown to points of interest supplied by the RKM management, covering 3,967 km of linear transects. Thirteen poacher camps and 18 timber cutting sites were identified from aerial patrols. Due to heavy rains, exchange of rangers from the Reserve headquarters to Makwasa Ranger post was challenging. Patrol vehicles could not reach the ranger post due to flooding of both the Makwasa and Nyasigogo Rivers. Game Reserve Management formally requested STEP to help support the four rangers who were at the Makwasa Ranger Post with supplies. The STEP pilot also helped to deploy four additional rangers to the Makwasa ranger post who stayed on duty for February 2021.

Furthermore, Rungwa-Kizigo-Muhesi Game Reserves rangers conducted 12,141 km of vehicle patrols with STEP fuel support, thereby helping to detect and respond to threats such as tree cutting, illegal mining, illegal grazing and bushmeat poaching.



Rungwa-Kizigo-Muhesi Game Reserves from the air during the wet season of 2021

1.4 Capacity building

As part of the Uzungwa Scarp Protection Project, STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports. STEP also facilitated two technical training workshops for 214 scouts (32% women) and 17 rangers from the villages around USNFR. Teams were trained in mobile data collection, camera trapping, human rights, and use of GPS to map patrols. STEP also trained 17 TFS staff (14% women) on the use of GPS, mobile data collection (Survey 123), camera trapping, chain of arrest, and human rights. The training aimed to equip foresters with new patrol data collection techniques and refresh their GPS skills, as well as review the chain of arrest procedures and Human Rights. STEP also donated tents, tarps, gumboots, sleeping pads, raincoats, uniforms, cooking utensils, and first aid kit contents to facilitate more effective patrols.

In MBOMIPA WMA, STEP facilitated four technical trainings for 40 VGS which covered deployment of camera traps, mobile data collection using Survey 123, radio communications and a refresher course on data collection on patrol.



TFS rangers during training

2. Enhancing human-elephant coexistence in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants
- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants
- Collect data on elephant movements and use this to inform education and trials of crop protection measures
- Work with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Explore and support establishment of corridors to facilitate safe elephant movement
- Immersive hands-on training and development opportunities for students and early career conservationists from inside and outside of Tanzania, many of whom go on to work for other organisations

2.1 Kilombero Valley

The Kilombero Valley, in the Uzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Uzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups (146 farmers) registered as Community-Based Organisations to establish seven beekeeping projects (6.8km of beehive fences) in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also supported four farmers groups with construction of beehive huts. The aim of these beehive huts is to capture bee colonies and increase honey yields for farmers' groups. The activity includes moving unoccupied hives from the beehive fence to the beehive hut and moving them back to the fence once they are occupied. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences. More than 262 litres of honey was harvested in 2021. The honey was processed and packed at the Honey Collection Centre. Beekeeping groups also received training targeted at improving hive occupancy and optimizing occupancy to boost hive yields. Each group was also provided with 10 catch boxes as a new method for increasing beehive occupancy.

STEP also works with farmers' groups to establish Village Savings and Loan Associations (VSLAs), informal financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2021, we supported the establishment of one new Village Savings and Loan Association and continued to support five existing VSLAs. 104 farmers participated in VSLAs and took out 112 loans with a value of TZS 13,996,000/- to build small businesses, improve their farming practices, pay school fees, and to support household cash needs (e.g. payments for medication, food). Such access to credit is highly valued by VLSA members in our project area. Prior to VSLAs, farmers' options for accessing credit either required travelling >50 km to a larger commercial centre and seeking a loan from a formal financial institution, or engaging in 'prospective' rice selling. If members of the VSLA wanted to access credit sizes similar to their total loan size from the VSLA, some would have had to part with six bags of rice or more, representing an enormous loss to future earnings and a significant blow to household food supplies. Therefore, the existence of the VSLA itself is impactful through creation of an alternative source of credit. In 2021, STEP began trialling a mobile app, CHOMOKA, to increase transparency and efficiency in VSLA record keeping. We plan to move 80% of VSLAs to CHOMOKA in 2022.

2.1.2 Awareness-Raising and Education

In 2021, STEP conducted film nights in 8 villages, reaching 2,213 adults and youth. We also distributed over 1000 copies of flyers containing information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. STEP also taught a 3-module course on human-elephant coexistence in 11 primary schools and 3 secondary schools, reaching over 1,060 students. The modules covered 1) Elephant Behaviour, Ecology, and Biology 2) Human-Elephant Coexistence, and 3) Wildlife connectivity. STEP also distributed over 2000 booklets to students which contained valuable information about elephants and how to stay safe around elephants. STEP also began a small pilot bringing primary and secondary students to national parks as an experiential supplement to educational outreach. More than 50 students visited Udzungwa Mountains National Park, learned about elephant research and monitoring and had the opportunity to experience Tanzania's rich natural heritage.



Students on park visit to Udzungwa Mountains National Park

2.1.3 Corridor Restoration

2021 saw significant progress towards our long-term vision of restoring the Kilombero Elephant Corridor between the Udzungwa Mountains and Nyerere National Parks, via the Magombera Forest Nature Reserve. The goal is to peacefully manage the regular movements that elephants make across the Kilombero Valley, even though their once forested routes have been turned into farmland over the last 50 years. STEP has been facilitating this multi-stakeholder restoration project since 2018, involving communities, civil society, Government and the private sector to restore this ecological connectivity, and enhance food and personal security for the local farming population. At the heart of the corridor project are the communities of the three villages of Sole, Mang'ula A and Kanyenja, who have agreed to setting aside ~7% of the village land to enable the corridor. In early 2021, construction of Tanzania's first ever elephant underpass was completed on the Mikumi-Ifakara highway, and will be opened as soon as the corridor is demarcated. Unfortunately, this year, two elephants were killed by a train while they were crossing the railway that also passes through the corridor. Working towards an effective rail underpass is another challenge that we are facing and working on. In September, a major step forward was achieved when the Regional Commissioner of Morogoro inaugurated the Kilombero Elephant Corridor Management Committee. Chaired by the District Commissioner and comprising village and other community leaders, the Committee also has representatives of Tanzania National Parks, the National Land Use Planning Commission, and the Ministry of Natural Resources and Tourism. Throughout 2021, STEP continued the long-term work of building consensus with owners of the farm plots within the 1.81 km² corridor, as well as raising funds to ensure that each of these households who are giving up one or two acres of land are fairly compensated. By the end of the year, 270 farmers had agreed to their land being formally evaluated by the District Government Valuation Team and the final compensation amounts for each parcel were calculated. Following careful review and approval, compensation payments began in early 2022 and are moving rapidly ahead. STEP has invited all 270 households to financial training, and is also organising Village Savings and Loans Association groups for these 'corridor farmers' to further enhance their financial security in the long term. There are also plans, as requested by the farmers, for ongoing tailored trainings including on modern agricultural technologies and methods for improving yields.

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict in villages on the western edge of Rungwa Game Reserve through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Farm-based interventions and Village Savings and Loans Associations

STEP started five new VSLAs in the sub-villages around Rungwa and Doroto, bringing the total number of VSLAs to eight. These are highly mobile and dynamic communities of agro-pastoralists. Across the eight groups, 175 members had access to 144 loans with a value of 29,232,500 TZS (~\$12,500.00). These loans supported establishment of small businesses and agricultural activities. STEP is trialling a mobile app, CHOMOKA, to increase transparency and efficiency in record keeping. Five of eight groups are currently using CHOMOKA.

In 2021, we continued to support the 46 farmers who had been given beehives in 2020 (20 in Rungwa and 26 in Doroto) with beekeeping. Each farmer was given three modern hives and provided with training on modern hives for beekeeping. In 2021, farmers who were given modern beehives by STEP harvested 350 litres of honey, a nine-fold increase when compared to 2020.



VLSA meeting in Doroto village

2.2.1 Awareness-Raising and Education

In 2021, we continued and expanded community outreach and education efforts. In partnership with TAWA and Itigi District Council, STEP conducted a workshop about human-elephant coexistence in May 2021 with 32 participants representing the local communities from 9 villages. The participants

came from areas experiencing frequent interactions between humans and elephants along the Rungwa-Kizigo-Muhesi Game Reserve boundary. The workshop aimed to equip participants with an accurate understanding of elephant population dynamics in Tanzania over the last fifty years and their relationship to human population growth in the country over the same period. The workshop also helped us learn which villages and sub-villages were priority areas for elephant monitoring and efforts to enhance human-elephant coexistence.

In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the third instalment of the *Tembo Cup* Football Tournament in November 2020 (Tembo is Swahili for elephant). The tournament involved villages experiencing human-elephant conflict adjacent to Rungwa-Kizigo-Muhesi Game Reserve. The coverage of the tournament was expanded to ten villages in two zones: Rungwa and Muhesi. The tournament aimed to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. During the tournament, 36 matches were played, which were attended by approximately 12,850 people. In addition to football matches, film nights, community training and training at schools were conducted. The training sessions focused on building a culture and norm of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land.

- Over 12,850 people attended football matches, and 300 people attended netball matches
- Over 3,700 students were trained at twenty primary schools and a secondary school
- Over 2,500 children were trained during football matches
- Over 4,500 people attended film nights at which Swahili-language wildlife films were shown
- Over 2,000 people assembled for community training held before or immediately following matches
- For the first time, the Tembo Cup hosted netball matches, a game played by women in Tanzania. Six teams participated and we hope more will join in 2022.



One of STEP's local elephant monitors conducting awareness-raising at the Tembo Cup football tournament



Women's netball team participating in the Tembo Cup netball tournament

2.3 Capacity building

In 2021, one Tanzanian student and two Tanzanian volunteers participated in human-elephant coexistence activities and learned fieldwork and community engagement methods.

STEP hosted nine members of a Rapid Response Task Force formed by the Tanzania Wildlife Management Agency (TAWA) and trained them on our beehive fence model. This unit will be called to support communities as they respond to human-wildlife conflict as part of Tanzania's National Human-Wildlife Conflict Strategy

In December 2021, STEP hosted 18 rangers from protected areas across southern Tanzania, representing TAWA, TANAPA and KDU. These rangers completed a two-week intensive bushwalking course where they learned the foundations of elephant behaviour and how elephants utilise their habitats. The rangers then applied this knowledge to training on a human-elephant conflict mitigation tool kit, developed by Honeyguide Foundation. Teams considered their operating environments, the types of situations in which they encounter human-elephant conflict and new ways to deter elephants, integrating their knowledge on animal behaviour. This multifaceted training helped to address central aspects of Tanzania's Human-Wildlife Conflict Strategy.



Rangers receiving HWC response training

To support more effective human-wildlife conflict response by protected area management agencies, STEP also provided almost 10,000 litres of fuel Rungwa-Kizigo-Muhesi Game Reserves, Uzungwa Mountains National Park, and Nyerere National Parks for HWC response.

Our trained village-based team (Local Elephant Monitors) continued with data collection and training for farmers. While surveying elephant activity, they visit and train farmers affected by elephant damage in their communities. In 2021, over 2,000 farmers were trained in two villages (Rungwa, and Doroto) by this team. The training focused on staying safe, measures to avoid or reduce human activities in areas preferred by wild animals, and ways to protect crops from elephants, such as improving food stores and using chilli.

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa and Uzungwa-Selous ecosystems. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour
- Monitoring elephant distribution and status in the forests of the Uzungwa Mountains
- Monitoring wildlife corridors
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

The elephant monitoring program in Ruaha National Park under STEP's affiliated research project aims to collect long-term data on elephant population structure, tusklessness, distribution and behaviour. In 2021, the research team conducted intensive dry season fieldwork to enable a new demographic assessment for the Ruaha elephant population. The demographic assessment will describe the current age-and-sex structure of the population and will help us understand to what extent the Ruaha elephant population has begun to recover from the effects of the poaching crisis of 2009-2015. In 2021, we welcomed a new Tanzanian researcher, Loyce Majige, to the team. Loyce has a lifelong passion for conservation and elephants and joined STEP while completing her Master's in Conservation Management of African Ecosystems at the University of Glasgow, Scotland. Loyce was also part of the inaugural class of the Grumeti Fund's *Women in the Field Program*, a skills training initiative for Tanzanian women conservationists, and is a role model and source of guidance for other young women interested in a career in conservation.

3.2 Monitoring elephants in Uzungwa-Selous

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Uzungwa-Selous elephant population and to secure long-term connectivity for elephants between Uzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the Kilombero Valley. To monitor our progress toward this objective, we monitor elephant presence and status in Mwanihana and Magombera forest, which form endpoints of the Kilombero Elephant Corridor, as well as elephant presence in the corridor area. We hope to see an increase in elephant use of the forest and corridor area over time as a result of our conservation efforts. In 2021, we continued monitoring of elephants in Mwanihana forest (first begun in 2015) and Magombera forest (begun in 2019) to collect data on elephant use of these forests through foot transects. Our monitoring suggests that elephant use of Mwanihana forest in Uzungwa has increased over the past six years – a positive indication that the forest is becoming safer for elephants.

3.3. Studying human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we continued to monitor elephant activity and crop losses on village land. In 2021, we worked with 12 local elephant monitors (LEMs) across seven villages in the Rungwa-Doroto and Kilombero valley project areas. Each elephant monitor is provided with training and regular performance feedback, and a GPS unit. All data collection is done using KoboCollect. These data informed our work in a number of ways, including 1) to help us select locations for trials of novel elephant deterrents, 2) to assess baseline crop damage to elephants prior to restoration of the Kilombero Elephant Corridor; and 3) to evaluate trials of novel crop protection methods.



Local elephant monitors receiving training in KoboCollect, a mobile data collection app

3.4 Trialling farm-based interventions

Finding affordable and effective ways to protect farms from elephants is one way that we aim to enhance coexistence between people and elephants. STEP is seeking to expand its portfolio of crop protection measures through comprehensive trials of the effectiveness of smelly repellent (a foul-smelling fermented mixture) as an elephant deterrent. Our trials of smelly repellent fencing are the most extensive trials of this method to date, and our rigorous monitoring has given us a clear understanding of efficacy. We learned that the repellent deters elephants attempting to enter farmland more than half of the time, but also that there is a risk of elephants habituating to the repellent. Through interviews, we learned that farmers perceive the repellent to be effective and that there is a broad interest in using this method to protect their crops, but that the primary barrier to farmer uptake is cost; hence, future work will explore ways to lower costs. We presented the results of our smelly repellent trials at the Tanzania Wildlife Research Institute scientific conference and are pleased that our experience and approach have informed trials of smelly repellent fencing in Zambia and Kenya.



Elephant caught on camera trap at the smelly repellent trial fence

3.5 Capacity building

Master's student support

One of our goals is to build capacity for research in Tanzania and, in doing so, facilitate scientific studies that inform our elephant conservation work. To this end, we launched an initiative in 2021 to support Tanzanian Masters students in the conservation field. Through this initiative, we help students to design a research project and provide mentoring and training in data collection methods and data analysis, as well as provide a bursary to support their fieldwork. In 2021, we supported two students from the Sokoine University of Agriculture: Irene Laizer and Lowassa Moitiko. Irene is studying how people and elephants share water sources located on village land adjacent to Rungwa-Kizigo-Muhesi Game Reserves, and Lowassa is studying the age-and-sex structure and activity patterns of elephants at the forest-farm interface in the Kilombero Valley. Through this training opportunity, Irene and Lowassa have gained a valuable skill set and field experience that we hope will serve them well in their conservation journey. Their theses, which are expected in the second half of 2022, will also help inform STEP's conservation work. In 2021, STEP also continued a research collaboration with a student from the University of Newcastle, who completed her Masters' thesis using data from STEP's research data.



Master's student Irene Laizer conducting interviews

Training on human-wildlife interactions

A first step towards managing human-wildlife conflicts is to assess human-wildlife interactions, including developing a better understanding of wildlife impacts and animal behaviour. To better equip practitioners to conduct such assessments, STEP and the Polish Mammal Research Institute facilitated training on methods for assessing human-wildlife interactions, with a special focus on mobile data collection, the use of GIS, and camera traps, as well as their applications to monitoring of human-wildlife interactions. The training was attended by 15 practitioners from a range of institutions, including Tanzania National Parks, Tanzania Wildlife Management Authority, academic institutions, District Government and NGOs. As well as learning a range of new technical skills, participants discussed how to apply what they had learned in each of their daily roles.



Participants learn GIS skills to help them assess human-wildlife conflict hotspots

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

The accounts are provided as a separate document.

Approved by the trustees on 23.10.2022 and signed on their behalf by:

Helen Pearson

A rectangular box containing a handwritten signature in black ink, which appears to be 'Helen Pearson'.

Dated: 23.10.2022

SOUTHERN TANZANIA ELEPHANT TRUST

England & Wales - Charity number 1179460

Accounts

Charity number: 1179460



Southern Tanzania Elephant Trust
Annual Report and Accounts for the Year ended
31st December 2020

Charity Name: Southern Tanzania Elephant Trust

Registered Charity Number: 1179460

Principal Address:

30 Barn Road
Stirling
FK8 1EP
United Kingdom

Trustees Report for the year ended 31st December 2020

The Trustees of Southern Tanzania Elephant Trust present their annual report and audited accounts for the period 1st January 2020 through 31 December 2020 and confirm they comply with the requirements of the Charities Act 2011, the Trust Deed and the Charities SORP (FRS 102).

Charity Trustees

Helen Pearson
Nathaniel Comber
Nick McWilliam

Names and Addresses of Independent Examiner

Community360
Winsley's House, High Street, Colchester
Essex
Essex
CO1 1UG

Governing document

The Charity was registered as a Trust on the 6th August 2018 and is governed by a Trust Deed dated 1st August 2018.

Trustee selection method

The first Trustees of the Charity were appointed for a term of three years at the time of registering the Charity and are eligible for reappointment. The current trustees may appoint new trustees by approaching individuals whom the trustees believe would bring necessary skills, knowledge and experience to the Organization. If the individual is willing to put themselves forward, their appointment is put to the current Trustees for approval.

Objects of the Charity

The objects of the charity are to conserve and protect the African elephant in Tanzania and other African wildlife and habitats in Tanzania for the public benefit.

The trustees identified Southern Tanzania Elephant (STEP) in Tanzania as the organisation whose work the Trust is aiming to support, in accordance with the Trust's objects, to facilitate the delivery of the UK Charity's objectives.

Vision

Creating a long and peaceful future for elephants in southern Tanzania and for the ecosystems and communities on which they inter-depend.

Mission

To secure a future for elephants in southern Tanzania by, directly and through partnerships, supporting elephant protection, enhancing coexistence between communities and elephants, strengthening community livelihoods, conducting research and monitoring, and awareness-raising.

Principal Activities

Background and rationale

Southern Tanzania is a globally important region for elephant conservation, with elephant populations numbering some 30,000 individuals in 2015, and approximately 70,000 in 2009 before devastating declines from poaching for the ivory trade (Thouless et al. 2016). The region holds 35% of East Africa's elephants, and 7% of Africa's elephants (Thouless et al. 2016). The Ruaha-Rungwa and Udzungwa-Selous ecosystems of Southern Tanzania are some of the few elephant strongholds and wilderness areas for large mammals left in the world. The ecosystems and elephant populations of southern Tanzania are a global treasure, requiring global support for their conservation.

Threats facing elephants in Southern Tanzania

Elephant conservation in the region faces two main challenges:

- **Securing elephant populations and habitat:** The combined efforts of the Tanzanian government, civil society and international community have greatly reduced the threat of poaching to elephants compared to previous years. However, ongoing protection efforts are needed to secure these important gains and ensure long-term recovery of southern Tanzania's elephant populations. In addition, protecting the integrity of the ecosystems that comprise elephant range is vital to the long-term survival of the elephant populations of this region.
- **Human-elephant coexistence:** Farms and settlement adjacent to protected areas and in elephant corridors and dispersal areas are at risk of elephant damage, as some elephants learn to use crops as a 'high-risk, high-reward' food source. As more land comes under cultivation, elephant habitat and corridors outside of protected areas are also increasingly at risk. Every year people are killed by elephants, often as a result of accidental encounters. This is a complex challenge that requires long-term vision and a multi-faceted approach.

Activities

We work to conserve the elephant metapopulation of southern Tanzania through a landscape level approach. The charity's principal activities include:

1. **Supporting elephant protection in critical habitats:** supporting ground and air patrols and providing technical support to under-resourced protected areas in important elephant range, as well as building ranger capacity to map and analyse patrols and outcomes and monitor spatial and temporal trends in illegal activities
2. **Enhancing human-elephant coexistence in communities living with elephants:** working with farmers' groups to protect farms and improve livelihoods through beehive fence projects which deter elephants from farmland and produce elephant-friendly honey; trialling novel crop protection strategies with farmers; providing farmers with access to financial services and improving household resilience through membership and training in Village Savings and Loans Associations; restoration of a critical wildlife corridor between the Udzungwa and Selous ecosystems; and awareness-raising and education activities.
3. **Conducting elephant research to inform conservation efforts:** monitoring elephants in the Ruaha-Rungwa and Udzungwa-Selous ecosystem; assessing spatial and temporal trends in human-elephant interactions and evaluating solutions; and monitoring of wildlife corridors.
4. **Capacity building for elephant conservation:** through training, internships, and provision of technical support.

All activities in Tanzania are carried out by our affiliate organization in Tanzania, Southern Tanzania Elephant (abbreviated and referred to from here on as STEP), a non-governmental organization registered on 17th July 2019 under the Non-Governmental Organization (NGO) Act, 2002 Section 12(2) of Act No. 24 of 2002, with registration number I-NGO/R2/00077. The Tanzanian affiliate Organization was previously registered as a company limited by guarantee having no share capital (i.e. a not-for-profit company). With the passing of The Written Laws (Miscellaneous Amendments)

(No.3) Act, 2019 on 30th June 2019, all companies limited by guarantee having no share capital were required to register under the Non-Governmental Organization (NGO) Act, 2002 by August 30th 2019.

The Board of Trustees of Southern Tanzania Elephant Trust in the UK (from here on referred to as STET UK) and the Board of STEP Tanzania are responsible for overall management of the organization, including setting and reviewing strategic plans and budgets, financial matters, reviewing the performance of management, and ensuring adherence to internal control policies and sound governance. and for compliance with sound governance principles. The organization is committed to the principles of effective governance, integrity, transparency and accountability. STET UK and STEP Tanzania agree on the yearly strategy and budget together. The Trustees of STET UK exercise their discretion when selecting which activities to support by having regard to the Charity Commission's public benefit guidance as well as the following internal criteria:

1) The activity contributes to the conservation of the African elephant in Tanzania through any of the following:

- a. Increasing resources and/or capacity for law enforcement of elephant range
- b. Increasing public awareness of the value of elephants and elephant conservation
- c. Increasing the capacity of rural communities to coexist with elephants
- d. Improving the welfare of rural communities who coexist with elephants
- e. Increasing the availability of research and scientific outputs to inform elephant conservation

(2) It has been demonstrated that the activity provides good value for money

STET UK and STEP Tanzania maintain close contact with regards to implementation of activities. Each Board meets at a minimum twice per year.

Impact for the Year End 31st December 2020: Achievements and Performance

1. Supporting elephant protection in critical habitats

The goal of this programmatic area is to enhance protection efforts of rangers and village game scouts through support for ground and air patrols, provision of training and resources, and data optimization. Targeted support is provided to three protected areas selected for their importance to elephants, their biodiversity value, and funding and resource gaps assessed with respective wildlife management authorities. These include MBOMIPA Wildlife Management Area (WMA), a community-managed wildlife area; Uzungwa Scarp Nature Forest Reserve (USNFR), a forest reserve by Tanzania Forestry Services Agency (TFS); and Rungwa-Kizigo-Muhesi Game Reserves (RKM GR), managed by Tanzania Wildlife Management Authority (TAWA). The means by which we provide support include:

- Building the capacity of rangers and Village Game Scouts through training and equipment
- Supporting ground and air patrols
- Mapping and analysing patrol outcomes for strategic patrol planning

1.1 MBOMIPA Protection Project

STEP first began to work with the community-owned MBOMIPA Wildlife Management Area in 2018. In particular, Lunda Zone in MBOMIPA WMA is a critical part of the Ruaha-Rungwa ecosystem and especially important for elephants, as well as other endangered species such as wild dogs and lions. In 2020, we continued to support three teams of Village Game Scouts (VGS) to conduct at least 21 days of foot patrols each per month by supplying scout wages and providing fuel and food supplies. In 2020, VGS covered 6,484 km of foot patrols and 4,756 km of vehicle patrols in the Lunda zone of the WMA. 100% of patrols were logged using GPS units, with patrol coverage and outcomes mapped every month and analysed by STEP to enhance patrol effectiveness. STEP also continued with maintenance and operation of a field vehicle for the WMA to enable monthly rotation of VGS and vehicle patrols. In addition, STEP conducted 17 hours of aerial support for MBOMIPA WMA and Ruaha National Park. The WMA was supported with 4,230 litres of fuel.

In 2020, STEP expanded protection efforts by recruiting eight new VGS in November, including three women. This work has greatly increased the security of the WMA. We continued to see an increase in the number of wildlife encounters recorded by VGS on patrol, indicating that the area is becoming safer for wildlife. STEP intends to continue supporting the protection of MBOMIPA WMA in 2021.

As additional support during the COVID-19 pandemic, STEP provided 42 handwashing stations to the 21 villages surrounding MBOMIPA WMA.

With the permission of MBOMIPA WMA, STEP built an aircraft hangar in the Lunda area to facilitate parking for its light aircraft. The small light aircraft is used for aerial surveillance to assist rangers' patrols in the Ruaha-Rungwa ecosystem. The hangar was completed and inaugurated by the Iringa District Commissioner, Hon. Richard Kasesela, in June 2020.



Hon. District Commissioner Richard Kasesela at the opening of the aircraft hangar in MBOMIPA WMA, with village game scouts, STEP Protection Team, and Kichaka Expeditions Environmental Program

1.2 Uzungwa Scarp Nature Forest Reserve

Uzungwa Scarp Forest Nature Reserve (USFNR) is a biodiversity hotspot that is home to Uzungwa endemics and globally threatened vertebrate species (Rovero et al. 2014) including Sanje mangabey, Uzungwa red colobus, Abbott's duiker, 20 endemic and 14 threatened reptiles (Lyakurwa et al. 2019), and 19 endemic and threatened amphibians. The Reserve also serves as a critical water catchment. USFNR has been under threat from anthropogenic activities (Harrison 2006) such as wildfire, logging, forest encroachment for agriculture, and illegal hunting (Topp-Jørgensen et al. 2009). Severe population declines have been documented for several threatened species, attributed to hunting and trapping (Rovero et al. 2015).

With support from and in collaboration with Wild Planet Trust (WPT, formerly Whitley Wildlife Conservation Trust) and Museo delle Scienze (MUSE), STEP began supporting the protection of Uzungwa Scarp Nature Forest Reserve in late 2017 through funding of ground patrols, training of rangers, and provision of essential equipment. In 2020, STEP supported ten mobile camping patrols, each lasting 5 days, by Village Scouts, rangers from Tanzania Forestry Services and Iringa Anti-Poaching Unit in Uzungwa Scarp Nature Forest Reserve. All patrols were strategically planned and executed, with mapping, analysis and reporting of findings subsequent to each patrol. Patrol teams covered 329 km of the steep slopes of the Scarp. Patrols resulted in removal of 127 snares and closing of 10 timber cutting sites. The Reserve has experienced significant budget cuts due to the impact of COVID-19. As such, STEP intends to continue supporting the protection of Uzungwa Scarp Nature Forest Reserve in 2021.

1.3 Rungwa-Kizigo-Muhesi Game Reserves

In 2020, STEP conducted 37 hours of wet-season aerial support for Rungwa-Kizigo-Muhesi Game Reserves, in close coordination with ranger teams, braving the challenges of the rainy season to keep

these important areas secure. We also supported Rungwa-Kizigo-Muhesi Game Reserves with 5,133 litres of fuel, enabling 8,478 km of vehicle patrols.



Elephants photographed from the air during STEP aerial support missions

1.4 Capacity building

STEP provided monthly technical support to USNFR's staff and VGS in collection, storage, analysis, mapping, and reporting of patrol data. This support helps USNFR management to plan patrols in a strategic manner and to produce monthly patrol reports and annual reports.

STEP also built capacity for MBOMIPA WMA through a training program dedicated to enhancing safety for VGS during patrols. In collaboration with Kichaka Expeditions Environmental Program (KEEP), 24 VGS were trained on advanced bushwalking and patrol skills. The course provided detailed theoretical and practical background on bushcraft and survival skills, dangerous animal behaviour, orientation skills, and data collection using SMART technology.

2. Enhancing human-elephant coexistence (HEC) in communities living with elephants

The goal of this programmatic area is to enhance coexistence between people and elephants in communities living in and alongside elephant range. We support communities to coexist with elephants in two project areas, the Kilombero Valley in Morogoro region, and the western boundary of Rungwa-Kizigo-Muhesi Game Reserves in Singida region. These areas are hotspots of elephant impact, with regular movement of elephants onto village land and frequent crop damage. The means by which we build capacity for coexistence include:

- Supporting farmers to implement farm-based mitigation methods to reduce crop losses to elephants

- Conducting education and awareness-raising events in villages affected by human-elephant conflict to explain elephant behaviour, provide context for human-elephant interactions and provide advice on how to stay safe around elephants
- Collecting data on elephant movements and use this to inform education and trials of crop protection measures
- Working with Village Governments to understand the drivers of HEC and work towards establishing Land Use Plans that facilitate human-elephant coexistence.
- Exploring and supporting establishment of corridors to facilitate safe elephant movement
- Providing immersive hands-on training and development opportunities for students and early career conservationists from inside and outside of Tanzania, many of whom go on to work for other organizations

2.1 Kilombero Valley

The Kilombero Valley, in the Udzungwa-Selous ecosystem, is a densely populated, fertile matrix of villages, agriculture and grazing land. Elephants regularly attempt to cross the short distance of ~10km across the valley, between Udzungwa Mountains National Park and Magombera Forest Reserve on the edge of Nyerere National Park (formerly Selous Game Reserve). Less than 50 years ago, there was continuous forest across the valley: today, the forest has been fragmented by rapid land conversion due to agriculture. The route is a critical connection between the western and southern elephant metapopulations of Tanzania (over 30,000 individuals) and the only link that can be maintained and restored. Intensive agriculture in the valley has created a hard edge between forest and farmland, making farms vulnerable to elephant crop damage. The multi-faceted land use challenges of the Valley have informed STEP's approach to building human-elephant coexistence in the Kilombero Valley - through limiting elephant movement into farmland and settlement through farm-based interventions, facilitating safe elephant movement through a designated wildlife corridor, and supporting income diversification and awareness-raising events.

2.1.1 Farm-based interventions, Village Savings and Loans Associations, and Awareness-Raising

To date, STEP has supported seven farmers groups (146 farmers, 63% women) registered as Community-Based Organizations to establish seven beekeeping projects in the Kilombero Valley to protect agricultural fields from elephants. In addition to reducing elephant movement into farmland and settlement, beehive fences generate revenue for farmers' groups through the sale of honey. Economic resilience is an important factor in building human-elephant coexistence. If a household's economic resources are depleted by an incident of crop raiding by an elephant, it is unlikely that members of the household will be willing to tolerate the presence of that elephant. In 2020, we established one new beehive project in Sole village, located adjacent to Udzungwa Mountains National Park, with 31 farmers. As part of beehive fence establishment, STEP runs beekeeping training to equip farmers with beekeeping best practice. In 2020, 30 farmers received beekeeping training. In addition to launching one new group, STEP continued to support its existing groups with field visits, in depth follow up and refresher training. STEP also extended the Kanyenja Beehive fence from 1.4 km to 2 km, and supported three farmers groups with construction of beehive huts. The aim of these beehive huts is to capture bee colonies and increase honey yields for farmers' groups. The activity includes moving unoccupied hives from the beehive fence to the beehive hut and moving them back to the fence once they are occupied. STEP also continued to operate the Udzungwa Honey Collection Centre, of which all STEP beekeeping groups are members, to enable the processing and packaging of honey generated by beehive fences.

STEP also works with farmers' groups to establish Village Savings and Loan Associations (VSLAs), informal financial systems in which members have access to credit and financial assistance through weekly contributions. Members can take loans from VSLAs and have access to emergency financial relief. By increasing community and household resilience to human-wildlife conflict, VSLAs can contribute to increasing coexistence. In 2020, we supported the establishment of one new Village Savings and Loan Association and continued to support four existing VSLAs. 104 farmers participated in VSLAs and took out 131 loans with a value of TZS 17,372,000/- to build small businesses, improve their farming practices, pay school fees, and to support household cash needs (e.g. payments for medication, food). Such access to credit is highly valued by VLSA members in our project area. Prior to VSLAs, farmers' options for accessing credit either required traveling >50 km to a larger commercial centre and seeking a loan from a formal financial institution, or engaging in 'prospective' rice selling. If members of the VSLA wanted to access credit sizes similar to their total loan size from

the VSLA, some would have had to part with six bags of rice or more, representing an enormous loss to future earnings and a significant blow to household food supplies. Therefore, the existence of the VSLA itself is impactful through creation of an alternative source of credit. Some VSLA members took more than two loans, indicating that the flexible nature of VSLA lending supports multiple uses.

STEP has also been working to develop coexistence tourism as an income stream for farmers groups. In March 2020, STEP engaged an international volunteer, experienced in communications, with the hope of improving our tourism-focused communications materials, building relationships with tour operators and working to market coexistence tourism opportunities. Unfortunately, her stay was cut short because of COVID-19 border closures. Due to the COVID-19 pandemic, tourism is at a ten-year low in Tanzania and no tourists visited coexistence projects in 2020. We will re-engage with this work once tourism begins to recover in Tanzania.



Beehive hut construction, Kanyenja village



Beehive fence, Katurukila village

2.1.2 Awareness-Raising and Education

In 2020, we were unable to deliver our educational program in schools due to school closures and changes to teaching schedules as a result of the COVID-19 pandemic. Instead, we initiated a program of film nights, to raise awareness about human-elephant coexistence and safety around elephants. STEP ran these film nights in villages that border Udzungwa Mountains and Nyerere National Parks and Magombera Nature Reserve. During these film nights, we provided education about elephant biology and behaviour, elephant ecology, and wildlife corridors. STEP also distributed over 1000 copies of flyers containing information about human-elephant coexistence, methods to stay safe when you come across an elephant, benefits of elephants, the life of elephants, and mitigation strategies to reduce human-elephant conflict. These conservation education activities reached 2295 people (1,510 adults and 785 children) in 8 villages.



Cinema night, Kanyenja village

2.1.3 Corridor Restoration

Restoration and protection of wildlife corridors is a key component of enhancing human-wildlife coexistence and improving livelihoods over the long term. To this end, STEP is working with a range of stakeholders to restore the Kilombero Elephant Corridor, a historic corridor connecting Udzungwa Mountains National Park and Nyerere National Park (formerly Selous Game Reserve), via Mwanihana and Magombera forests. The restoration of the corridor is a multi-year project. In 2018-2019, activities included monitoring of elephant movements and impacts (3.2 and 3.3), consulting widely with communities, district and regional authorities, and relevant national bodies, building consensus, initiating and facilitating land use planning processes to designate the corridor. The vision is to have a fenced corridor to funnel elephants across the Kilombero Valley, thereby reducing the impacts of elephants moving past houses, through schools and through farmland. The corridor will reduce economic losses from crop damage for the community, create employment and generate associated income-generating projects. In 2020, the STEP team continued to move toward achieving the restoration of the Kilombero Elephant Corridor. Activities included extensive stakeholder meetings, consultation at different levels, land use planning and land valuation, and formation of a Corridor Management Committee to manage the corridor. In collaboration with other STEP departments, the corridor team has continued to put efforts into corridor-related income-generating activities that improve community security and livelihoods.

2.2 Rungwa-Kizigo-Muhesi

Bordering Ruaha National Park to the north and west, Rungwa-Kizigo-Muhesi Game Reserves comprise 15,200 km² of wildlife habitat. Historically an elephant stronghold within East Africa, the area lost 60% of its elephants between 2009 and 2015 to poaching (Thouless et al. 2016). Between 2015 and 2018, the elephant population remained stable. However, human-elephant conflict is a rapidly emerging threat to elephants in the area. Human settlement along protected boundaries, in conjunction with a lack of land use planning, has led to more frequent human-elephant interactions. STEP works to mitigate human-elephant conflict in villages on the western edge of Rungwa Game Reserve through a combination of farm-based interventions, establishment of Village Savings and Loans Associations, and awareness-raising and education activities.

2.2.1 Farm-based interventions and Village Savings and Loans Associations

In 2017, STEP established two farmer groups (37 farmers, 40% women) in two sub-villages in Rungwa village, both of which operate beehive fences and VSLAs. In 2020, STEP supported the establishment of two new farmers groups in Doroto village. All four groups operated VSLAs in 2020, and STEP provided training in VSLA management, record-keeping, running of group meetings, share purchasing, and loan issuing and request procedures. STEP's HEC team conducted monitoring and advisory support to the four VSLAs during field visits throughout the year. In 2020, a total of 102 farmers participated in VSLAs. 74 loans were issued from VSLAs of a value of TZS 12,685,900/-. These loans supported establishment of small businesses and agricultural activities.

Large farm sizes, shifting land tenure systems and the lack of a hard edge between forest and open areas have complicated the efficacy of the beehive fence model. Bees in the area also prefer to establish colonies higher off the ground than our beehive fences are hung, and hive occupancy proved a persistent challenge. Therefore, we modified the beehive fence design so that it is made up primarily of 'dummy' hives, with real hives hung in trees nearby to increase beehive occupancy. Two fences (2.4 km in total) were modified through the installation of 228 dummy hives and 231 iron poles. The efficacy of this new design was monitored through 2020, and no elephants were recorded crossing the dummy hive fence.

In 2020, we continued to explore beekeeping as an income-generating opportunity in Rungwa-Doroto. We began a trial with 46 farmers (20 in Rungwa and 26 in Doroto) who had experience with traditional beekeeping and hives. Each participant in the trial was given three modern hives and provided with training on modern hives for beekeeping in April-May 2020. The training aimed to improve practices focused on hive monitoring, cleaning, and removing pests and other insects, wax application, harvesting procedures, and honeycomb extraction.

2.2.1 Awareness-Raising and Education

In 2020, we continued and expanded community outreach and education efforts. We revised our Swahili-language human-elephant coexistence booklet, which we first published in 2019, to include a section on wildlife corridors. 2600 copies of the booklet and 1500 copies of a flyer made from streamlined booklet content were distributed in and around Rungwa as part of the Tembo Cup week of outreach and education activities.

In August 2020, STEP facilitated a workshop for 24 village leaders in which key human-elephant coexistence concepts were discussed. This workshop served as a follow-up session from the first village leaders workshop held in 2019. The workshop was attended by Village Executive Officers, Village Chairpersons, Ward Executive Officers, Itigi District Officers (DBKO and Coordinator for LUP), and 2 Rungwa-Kizigo-Muhesi Officers (Community Development Officer and Project Manager). During the workshop, leaders explored how land use practices were contributing to increasing human-elephant interactions, and the feasibility of land use planning as a means to manage human-elephant interactions. Participants shared their practices regarding land use experience, learned from others, and had the opportunity to clarify questions they had about land use planning with District and Game Reserve officials.

In collaboration with Tanzania Wildlife Management Authority and Itigi District Council, STEP's Human-Elephant Coexistence team hosted the second instalment of the *Tembo Cup* Football Tournament in November 2020 (Tembo is Swahili for elephant), after the success of the first tournament in 2019. The tournament involved villages experiencing human-elephant conflict adjacent to Rungwa-Kizigo-Muhesi Game Reserve. The coverage of the tournament was expanded to ten villages in two zones: Rungwa and Muhesi. The tournament aimed to raise awareness about human-elephant coexistence, the benefits of protected areas, and to create a positive association with elephants through an engaging community activity. 28 matches were played during the tournament (15 in Rungwa zone and 13 in Muhesi zone), involving 26 teams, which were attended by 8,835 people. In addition to football matches, film nights, community trainings and trainings at schools were conducted. The training focused on building a culture and norm of loving and respecting elephants, as well as on safety around elephants to handle potential encounters with elephants on foot on village land.

- Over 3000 students were trained at nine primary schools and one secondary school

- Over 3000 people attended film nights at which Swahili language wildlife films were shown
- Over 700 people assembled for community training held before or immediately following football matches.

In 2020, we broadened the role of Local Elephant Monitors to disseminate information about crop protection strategies and safety around elephants to farmers who have been affected by crop damage. While surveying elephant activity on village land, they visit and train farmers affected by elephant damage in their communities. A total of 1,020 farmers were trained in 3 sub-villages in Rungwa villages by this team of Local Elephant Monitors. These farmer trainings focused on staying safe around elephants, measures to avoid or reduce human activities in areas preferred by wild animals, improving food stores, and using chilli pepper to scare elephants.



Students read STEP Human-Elephant Coexistence booklet



Football match during Tembo Cup



Captain of the Tembo Cup winning team with the tournament trophy

2.3 Capacity building

In 2020, two Tanzanian students, three Tanzanian volunteers, and one international volunteer participated in human-elephant coexistence activities and learned fieldwork and community engagement methods. Two continued with further studies, and one successfully found a job in the conservation sector.

Over the course of the year, STEP hosted 19 visitors from Tanzanian conservation and research organizations at the beehive fence projects to share best practice about using beehives to reduce human-elephant conflict.

In 2020, STEP led the development of the country's first National Human-Wildlife Conflict Management Strategy (2020-2025) at the invitation of Tanzania's Ministry of Natural Resources and Tourism. The Strategy was launched in 2020, and many of STEP's ongoing activities support the Objectives and Targets outlined in the Strategy. The Strategy can be accessed here: https://www.maliasili.go.tz/uploads/National_Human_Wildlife_Conflict_Management_Strategy_final.pdf.

3. Conducting elephant research to inform conservation efforts

The goal of this programmatic area is to collect and analyse data to inform the formulation of meaningful and sound conservation strategies, as well as to monitor the impact of our conservation work. The geographic focus of this program comprises the Ruaha-Rungwa and Udzungwa-Selous ecosystems. The main activities under this program include:

- Running a long-term elephant research project in Ruaha National Park to assess population status and to investigate tusklessness, ecology and behaviour
- Monitoring elephant distribution and status in the forests of the Udzungwa Mountains
- Monitoring wildlife corridors
- Assessing spatial and temporal trends in human-elephant interactions and evaluating solutions
- Collaboration and development opportunities for early career researchers from inside and outside of Tanzania

3.1 Monitoring elephants in the Ruaha-Rungwa ecosystem

STEP's elephant monitoring program in Ruaha National Park aims to collect long-term data on elephant population structure, tusklessness, distribution and behaviour. In 2020, our researchers continued to conduct monitoring of elephants in the Park to add to this dataset and our database of known elephants for Ruaha, which includes >2,000 elephants. Our ongoing research has improved our knowledge of seasonal shifts in elephant range use and highlighted the importance of increasing protection for areas beyond the core tourist zone of Ruaha National Park. As a result of the monitoring program, our elephant ID database for Ruaha National Park has continued to grow into an important tool for tracking individuals over time and look at the impact poaching has had on their demography, social and reproductive lives, and survival. These demographic data resulted in a scientific publication on the population structure and status of the Ruaha elephant population (Jones et al. 2018). In 2020, we also continued a camera trap study to investigate elephant activity patterns and elephant use of water sources in Ruaha-Rungwa. Our finding that elephants regularly use water on village land, and the times at which they do so, will be used to provide recommendations for managing shared access to these water sources for people and elephants.

3.2 Monitoring elephants in Udzungwa-Selous

A key objective of STEP's work in the Kilombero Valley is to support the recovery of the Udzungwa-Selous elephant population and to secure long-term connectivity for elephants between Udzungwa and Selous through restoration of the Kilombero Elephant Corridor, a historic corridor that spans the Kilombero Valley. To monitor our progress toward this objective, we monitor elephant presence and status in Mwanihana and Magombera forest, which form endpoints of the Kilombero Elephant Corridor, as well as elephant presence in the corridor area. We hope to see an increase in elephant use of the forest and corridor area over time as a result of our conservation efforts.

In 2020, we continued monitoring of elephants in Mwanihana forest (first begun in 2015) and Magombera forest (begun in 2019) to collect data on elephant use of these forests through foot transects. Our monitoring suggests that elephant use of Mwanihana forest in Udzungwa has increased over the past five years – a positive indication that the forest is becoming safer for elephants. Also in 2019, we deployed 18 camera traps to monitor wildlife use of the corridor area and forest edges and to record attempted and successful elephant crossings of the corridor area. Camera trap photos were used to build a reference database of known elephants to monitor elephant presence in the corridor area will also be used to study the sex, age, number and behaviour of elephants using the Kilombero Elephant Corridor. Since 2019, camera traps have detected >470 elephant events and have revealed that most elephant activity is crepuscular and nocturnal, and that the forest edge is used primarily by bull elephants.

We plan to continue ground transects and camera trapping in the coming years to assess the results of our conservation activities, and, in particular, to evaluate the outcomes of restoring Tanzania's first elephant corridor.



Elephant bulls captured on camera traps in Magombera forest

3.3. Studying human-elephant interactions

To help plan and evaluate human-elephant coexistence strategies, we monitor elephant activity and crop losses on village land. In 2020, we worked with 12 local elephant monitors (LEMs) across seven villages. Each elephant monitor is provided with training and regular performance feedback, a GPS unit and Swahili-language datasheets following standard guidelines for monitoring elephant impacts. In one of our project sites, we moved to mobile data collection using Kobo Collect in 2020. We plan to roll out mobile data collection at our second project site in 2021. In 2020, we recorded over 400 incidents of crop damage. These data informed our work in a number of ways:

- 1) to help us select locations for trials of novel elephant deterrents (see 3.4);
- 2) to assess baseline crop damage to elephants prior to restoration of the Kilombero Elephant Corridor; and
- 3) to evaluate trials of novel crop protection methods.

In 2021, we will continue to work with local elephant monitors to collect data on elephant activity on village land. As local experts on elephant activity, we expanded the role of elephant monitors to include outreach and education with farmers that they encounter during their survey work in our Rungwa-Doroto project site. This expansion of the role of local elephant monitors will be rolled out in the Kilombero Valley in 2021. Through our partnership with researchers at the University of Newcastle (UK), we will analyse the predictors of crop damage hotspots in the Kilombero Valley.



Elephant dung pile on village road, Kilombero Valley

3.4 Trialling farm-based interventions

To increase capacity for human-elephant coexistence, STEP absorbs the risks and costs of trialling novel crop protection strategies which could be scaled up by farmers who incur crop losses to elephants. To date, STEP's primary crop protection method has been linear beehive fences along the forest-farm interface, due to their effectiveness at reducing elephant incursions into farmland (Scheijen et al. 2018) and the availability of suitable sites along the forest-farm interface for beekeeping. However, beehive fences are not feasible everywhere in the Kilombero Valley, especially in seasonally-flooded areas. It is therefore important to develop and trial a range of possible elephant deterrents that can be deployed in different contexts. In addition, as elephants are intelligent, they may habituate to deterrents, so it is helpful to be able to combine multiple mitigation techniques. To this end, we initiated trials of alternative, novel elephant deterrents in the Kilombero Valley in 2020.

In June 2020, we started a trial of smelly repellent as an elephant deterrent in Kanyenja village, adjacent to Nyerere National Park. Smelly repellent is a liquid mixture first developed in Uganda made using natural ingredients such as water, chilly, ginger, garlic, neem leaves, eggs, and cow dung/elephant dung. This mixture is cooked and then left to ferment, giving it a very unpleasant smell. This mixture can be used to surround individual farms in a fence using plastic bottles, or it can be sprayed directly on crops. It has no hazardous effects on humans, but elephants dislike the smell. Seventeen farmers from Kanyenja participated in the installation of the smelly repellent fence and received training in production of the repellent. The trial fence is 1.5km long and has a total of 1500 bottles filled with smelly elephant repellent. Our monitoring has revealed that between July and

December 2020, elephants encountering the fence while moving from the Park to farmland turned around at the fence on 62% of approaches, walked around the fence on 21% of approaches, and crossed the fence on 17% of approaches. These six months of data suggest that the fence stops more than half of attempted elephant movements into farmland. Given these positive preliminary results, STEP plans to expand on this work through two test-control trials in 2021.



Smelly repellent fence, Kanyenja

In July 2020, we began piloting solar-powered strobe lights as an elephant deterrent in Kanyenja village adjacent to Nyerere National Park. We installed a 200m linear fence with 20 solar-powered strobe lights attached to bamboo poles to help deter elephants from farms and reduce crop damage. Our monitoring has shown that between August and December 2020, elephants crossed between the Park and adjacent farmland in a 500-meter stretch before or after the fence - thereby avoiding the fence - on 41 occasions (89% of approaches). Over the same period, elephants walked along and around the fence on five occasions (11% of approaches). Elephants were more likely to avoid the fence when heading from the Park to farmland and more likely to walk along and around the fence when returning to the Park. These results demonstrate the potential of this method as an elephant deterrent, and we plan to expand trials of solar-powered strobe lights in 2021 if funding can be obtained.



Setting up of the solar-powered strobe lights fence

3.5 Capacity building

In 2020, STEP established research collaborations with two students from UK universities (University of Kent, University of Newcastle) to complete Masters' theses using data from STEP's research data. In 2020, STEP continued to be an invited member of the technical committee developing Tanzania's Elephant Management Plan for 2020-2029.

4. Organizational capacity building and strategy development

In August 2020, STEP in Tanzania conducted a team-wide Strategy Retreat on the boundary of Udzungwa Mountains National Park. Over the course of two days, the team thought and shared ideas about the next five to ten years: where do we want to be working, what do we want to be doing, what are the main challenges facing elephants in Tanzania and how can we respond to them? We spent some of the time in a big group and other times reflecting in smaller, team-based groups about our unique challenges and what types of systematic improvements we can make. We closed our retreat by thinking across teams about the landscapes that we work in: The Kilombero Valley, the Ruaha-Rungwa ecosystem and beyond! How can our Protection, Human-Elephant Coexistence and Research Teams work together to meet the challenges of these ecosystems? Our Finance and Admin Team and Vehicles Team were also present and brought critical perspectives on their role and improvements that can be made in supporting operations in the field. In December 2020, we followed up on our first strategy retreat with two days of meetings focused on developing strategy for future work in the Kilombero Valley.



STEP Tanzania team during strategy retreat meetings

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Policy on Reserves

The Charity operates with limited cash reserves. The Trustees' objective is to maintain a sufficient balance to meet committed expenditure on current projects and cover foreseeable administration expenses.

Financial Review

The 2020 Accounts, which have been examined by an independent examiner, are submitted as a separate document accompanying this report.

Approved by the trustees on 15th October 2021 and signed on their behalf by:

Helen Pearson

Signature: 

Dated: 15.10.2021

**SOUTHERN TANZANIA
ELEPHANT TRUST**

Charity registration number 1179460

**FINANCIAL STATEMENTS
FOR THE PERIOD ENDED 31 DECEMBER 2020**



SOUTHERN TANZANIA ELEPHANT TRUST

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SOUTHERN TANZANIA ELEPHANT TRUST

LEGAL & ADMIN INFORMATION FOR THE PERIOD ENDED 31 DECEMBER 2020

Status

The trust was formed as an incorporated charity on 1st August 2018.

Trustees

Nicholas McWilliam
Helen Pearson
Nat Comber

Charity number

1179460

Independent Examiner

Community360
Winsley's House
High Street
Colchester
CO1 1UG

Business address

30 Barn Road
Stirling
FK8 1EP

Bankers

Natwest
Cleveleys Branch
Lancs
FY5 2AL

SOUTHERN TANZANIA ELEPHANT TRUST

INDEPENDENT EXAMINER'S REPORT FOR THE YEAR ENDED 31 DECEMBER 2020

I report on the accounts of Southern Tanzania Elephant Trust for the year ended 31st December 2020 which are set out on pages 3 to 5.

Respective responsibilities of trustees and examiner

The Charity's Trustees are responsible for the preparation of the accounts. The Charity's Trustees consider that an audit is not required for this year (under section 144 (2) of the Charities Act 2011 (The Act) but that an independent examination is needed.

It is my responsibility to:

- Examine the accounts under section 145 of the Charities Act,
- To follow the procedures laid down in the General Directions given by the Charity Commissioners (under section 145(5)(b) of the Charities Act, and
- To state whether particular matters have come to my attention.

Basis of independent examiner's Statement

My examination was carried out in accordance with the General Directions given by the Charity Commissioners. An examination includes a review of the accounting records kept by the Charity and a comparison of the accounts presented with those records. It also includes considerations of any unusual items or disclosures in the accounts, and seeking explanations from you as trustees concerning any such matters. The procedures undertaken do not provide all the evidence that would be required in an audit and consequently I do not express an audit opinion on the view given by the accounts.

Independent examiner's statement

In the course of my examination, no material matters have come to my attention which gives me cause to believe that in, any material respect:

- the accounting records were not kept in accordance with section 130 of the Charities Act; or
- the accounts did not accord with the accounting records; or
- the accounts did not comply with the applicable requirements concerning the form and content of the accounts set out in the Charities (Accounts and Reports) Regulations 2008 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.

I 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.

Shelley-Marie Rudling FMAAT AATQB for and on behalf of:

Community360

Winsley's House, High Street, Colchester, Essex



Date

22/10/2021

SOUTHERN TANZANIA ELEPHANT TRUST

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31 DECEMBER 2020

	Notes	Unrestricted Fund £	Restricted Fund £	2020 Total £	2019 Total £
Receipts					
Donations, legacies and other similar receipts	2	6,170	53,229	59,399	55,444
Total receipts		<u>6,170</u>	<u>53,229</u>	<u>59,399</u>	<u>55,444</u>
Charitable payments					
Charitable activities	3	6,070	2,598	8,668	10,470
Total payments		<u>6,070</u>	<u>2,598</u>	<u>8,668</u>	<u>10,470</u>
Net of receipts/(payments)		<u>100</u>	<u>50,631</u>	<u>50,731</u>	<u>44,974</u>
Cash funds as at 1 December 2019		909	44,065	44,974	-
Cash funds as at 31 December 2020	4	<u>1,009</u>	<u>94,696</u>	<u>95,705</u>	<u>44,974</u>


Notes on pages 5 form part of these accounts

SOUTHERN TANZANIA ELEPHANT TRUST

STATEMENT OF ASSET AND LIABILITIES AS AT 31 DECEMBER 2020

	Notes	2020 £	2019 £
<u>Monetary assets</u>			
Cash at bank and in hand:		95,705	44,974
Total monetary assets		95,705	44,974
<u>Funds</u>			
Unrestricted	4	1,009	909
Restricted	4	94,696	44,065
Total Funds		95,705	89,948
<u>Other monetary assets</u>			
<u>Liabilities</u>			
Independent examiner fee	5	400	400
		400	400

These accounts were approved by the Trustees and signed on their behalf by :

Signed:  _____

Date: 20/10/2021

Helen Pearson

SOUTHERN TANZANIA ELEPHANT TRUST

NOTES TO THE ACCOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2020

1. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement on 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)- (Charities SORP (FRS 102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Companies Act 2006.

The accounts are prepared under receipts and payments basis.

Period

These accounts cover a 12 month period from 1st January 2020 to 31st December 2020.

2. Donations, legacies and other similar receipts	Unrestricted Fund £	Restricted Fund £	2020 Total £	2019 Total £
Donations	6,170	53,229	59,399	55,444
	6,170	53,229	59,399	55,444

3. Charitable activities	Unrestricted Fund £	Restricted Fund £	2020 Total £	2019 Total £
Insurance	-	268	268	537
Self employed	6,070	2,330	8,400	9,800
Travel	-	-	-	133
	6,070	2,598	8,668	10,470

4. Cash Funds	Balance at 01/01/20 £	Incoming £	Outgoing £	Transfers £	Balance at 31/12/20 £
Unrestricted					
General fund	909	6,170	(6,070)	-	1,009
	909	6,170	(6,070)	-	1,009
Restricted Funds					
Wild Planet Trust	28,910	17,000	(1,190)	-	44,720
Bristol Chester Zoo	4,875	5,000	(350)	-	9,525
Association Mazingira	10,280	10,273	(719)	-	19,834
MBOMIPA Protection Project	-	3,800	(266)	-	3,534
Corridor restoration	-	17,156	(73)	-	17,083
Totals	44,065	53,229	(2,598)	-	94,696

5. The Independent Examiners Fee will be £400.00.
6. No remuneration was paid to any trustee or to any person(s) known to be connected with any of them.
7. There were no related parties within the year.
8. The charity is operating on a going concern basis.