



THE UNITED KINGDOM ASSOCIATES OF THE BERMUDA INSTITUTE OF OCEAN SCIENCES

**Charity Registered with the Charities Commission
Reg No 290729**

**ANNUAL REPORT AND ACCOUNTS
FOR THE YEAR ENDED 31 DECEMBER 2024**

**Supporting Students from UK Universities
To Extend their Studies at**



CHAIRMAN'S STATEMENT

The UK Associates of the Bermuda Institute of Ocean Sciences is a UK registered charity, working closely with The Bermuda Institute of Ocean Sciences (ASU BIOS), which since 2021 has been the headquarters of Arizona State University's School of Ocean Futures.



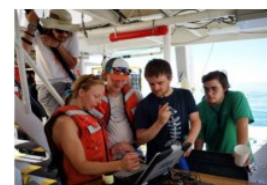
ASU BIOS is an institution with more than 120 years of excellence in ocean science education and research. The campus, in St George's, Bermuda, houses world class teaching facilities, laboratories and research vessels, providing a unique base for oceanic study of the surrounding Sargasso Sea and beyond into the Atlantic Ocean. Bermuda is located within one of the world's most diverse open-ocean ecosystems and ASU BIOS is renowned for the longest-running time-series on seawater chemistry, biology and physics (the Bermuda Atlantic Time-series Study), as well as the longest record of ocean sediment-trap studies in the world, the Oceanic Flux Program.



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I am delighted to report, on behalf of The Trustees of The UK Associates of the Bermuda Institute of Ocean Sciences, that 2024 was another outstanding year for our student programme, now in its 40th year. Over 200 early career scientists have benefited from our scholarship grants since we were founded in 1984 and we remain hugely grateful for the continued generosity of our donors and sponsors, notably, The Fishmongers' Company Fisheries Charitable Trust, Convex Insurance Group, Maggie Mills and members of our Trustees Board, who enabled us this year to support seven talented undergraduate and graduate students from UK universities to participate in specialist summer courses at ASU BIOS.



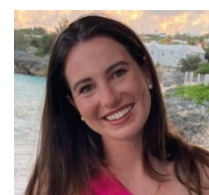
We were especially delighted to award an internship grant, funded by Convex Insurance Group, to one of our 2024 summer course students to continue his studies at ASU BIOS through a three-month intensive research internship exploring the application of Artificial Intelligence techniques in analysing satellite coral reef photographic data - an exciting and advanced approach to hyperspectral analysis, being spearheaded at ASU BIOS under Dr Eric Hochberg, which shows much promise in revealing new perspectives on the current health of coral reefs and the impacts of climate variation to predict its future status.



CHAIRMAN'S STATEMENT continued

In addition to the seven exceptional students from our 2024 programme, we are pleased to report that five of our intern students from previous years returned to ASU BIOS in 2024 to continue their marine science and teaching careers and contribute to the body of global techniques and methodology.

- **Dr Stuart Robertson** - BIOS 2015 Research Internship (*MSc in Marine Environmental Management, University of York; PhD 2020 from the University of Salford in Conservation Biology*) joined the ASU BIOS Faculty in August 2024 as Assistant Teaching Professor and Assistant Director of Education for University Programs.
- **Nicole Burt** – BIOS 2021 CRE Course; BIOS 2022 RDM Course and 2022 Axis Capital Intern; (*Integrated MSci Marine Biology graduate at the University of Southampton*); returned to ASU BIOS 2024 as a Teaching Assistant for the CRE Course before undertaking a PhD candidacy until 2029 in Marine Science at KAUST in Saudi Arabia.
- **Charlotte Gerrish** - BIOS 2023 Convex Intern in ASU BIOS Specialist Researcher Rachel Parsons' Microbial Ecology Lab (*Master's in Medical Microbiology at the London School of Hygiene and Tropical Medicine*) returned in 2024 as a Lab Technician for nine months to work with Professor Nick Bates and Microbial Scientist, Rachel Parsons.
- **Dr Carys Johnson** - BIOS 2017 Internship in Rachel Parsons' Microbial Ecology Lab (*University of Cardiff, Bachelor's in Molecular Biology; 2022 University of Cambridge, PhD in Stem Cell Research and Post-Doctoral Researcher; 2023-2024 worked as stem cell specialist Orchard Therapeutics London*) is currently ASU BIOS Post-Doctoral Research Associate in Rachel Parsons' Microbial Lab.
- **Jonny Chapman** - currently ASU BIOS Research Specialist who began his BIOS career under our sponsorship programme as a University of Liverpool BSc graduate 2019 in Ocean Science, taking the 2019 BIOS Modern Observational Oceanography Course (MOO) In 2020; he was awarded an Internship in the Glider Lab and was asked to join the BIOS permanent team as a Glider Technician in 2021.



All are outstanding scientists and are members of an UK Associates of BIOS Alumni group of over 200 ocean and environmental specialists who have benefitted from the exceptional and unique experience of learning and working at ASU BIOS. Many of our Alumni have gone on to become notable scientists and we are optimistic that students from 2024 will also make their mark in the world of ocean and environmental science.

CHAIRMAN'S STATEMENT continued

Our 2024 sponsorship programme provided seven UK University students to take part in the ASU BIOS Coral Reef Ecology (CRE) and Research Diving Methods (RDM) courses in June, July and August; and our Convex fully-funded Intern transitioned from the CRE course in August to a research internship which ran until mid-October.

The ASU BIOS summer courses were again well represented by exceptional UK undergraduates and graduates.

The Research Diving Methods Course, an intensive and demanding three-week programme which began late June, was designed to equip students with essential scientific diving skills, both theoretical and practical. This course, now in its third year, proved to be extremely popular with an international group of 18, four of whom came from the UK.

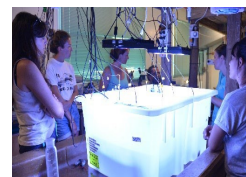
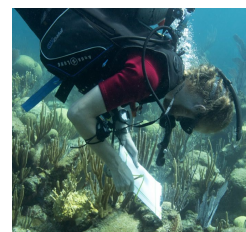
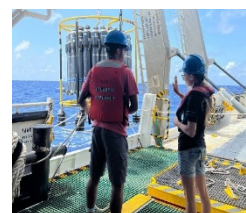
Important skills were learned in underwater photographic surveys, monitoring of coral bleaching and disease, performing seagrass surveys, and counting reef fish. In addition to the open-water sessions, the course included science lectures that detailed the importance of various research methods, enhancing students' understanding of marine science and the challenges of underwater research.

The Coral Reef Ecology Course in July and August is now well-established as a leading programme in ocean science development. The CRE course provides students with knowledge and research skills needed to understand environmental factors influencing coral reef ecosystems and reef health.

The course attracted 17 international students of which three came from the UK. All received a comprehensive foundation in reef functional ecology, which we hope will equip them to take part in future research projects on the ecological impacts of climate change of coral reefs.

Following participation in the CRE course, our 2024 Convex Intern began working alongside faculty member and CRE course instructor, Dr Eric Hochberg. The 12-week project was designed to build upon our intern's PhD research at the University of Cambridge, focussing on understanding and predicting present and future coral reef distribution via multimodal machine learning, a topic which is highly complementary to Dr Hochberg's research. This involved developing benthic class maps from high-resolution and hyperspectral aerial imagery, which broke new ground in computational analysis and further contributed to Dr Hochberg's long-term research programme. A paper is expected to be published in due course.

We are confident that our student programme makes a real difference to the scientific careers of the students we support, and we hope others will share our optimism that many of our recent Alumni will, like those over the past 40 years, make a genuine and important impact on environmental science.



CHAIRMAN'S STATEMENT continued

I should like to thank all who have helped us in the past year, notably my very able Vice Chair Lady Judy Vereker and all our fellow Trustees and advisors. Our board is entirely voluntary and the skills and wise counsel they bring is invaluable to the work of our charity.

Someone we will miss very much in the future is Lorraine Andrews who, in September 2024, retired as our Honorary Secretary (a position she has held for some 22 years). Lorraine served our charity faithfully and diligently and was a key member of our team not only in her formal capacity, but also in supporting the board at events bringing together our students' supporters and scientists. Lorraine joined us from the Fishmongers' Company and was formerly Secretary to the Shellfish Association of Great Britain. We wish her much happiness in her well-earned retirement.



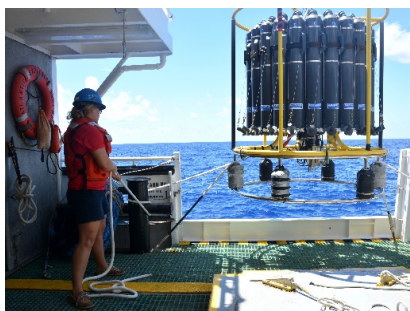
Christopher Day



22 January 2025

Chairman of the Board of Trustees of

The UK Associates of the Bermuda Institute of Ocean Sciences



TRUSTEES' ANNUAL REPORT

The Trustees have pleasure in presenting their report together with the accounts and the independent examiner's report for the year ended 31 December 2024.

Reference and administrative information

Charity Name The United Kingdom Associates of the Bermuda Institute of Ocean Sciences ("UK Associates of BIOS")

Charity Number 290729

Address Fishmongers' Hall, London Bridge, London EC4R 9EL

Trustees Christopher Day - Chairman
Lady Vereker – Vice Chair **
Ian Arnold – Treasurer (*appointed to Trustee Board 31 January 2024*)
Christopher Cunliffe
Suzanne Ferlic Johnson
Professor Richard Lampitt
Nick Pewter

*** Lady Vereker also sits on the Advisory Board of the Bermuda Institute of Ocean Sciences (BIOS)*

Hon Secretary Lorraine Andrews (*resigned 18 September 2024*)

Structure, Governance and Management

Constitution

The Charity is an unincorporated association. It is governed by a Trust, which was established by deed on 27 November 1984 and last amended on 28 September 2015. The Association was granted charitable status by the Charity Commission on 11 January 1985.

Trustees

The Trustees, the majority of whom must be UK resident, normally meet once a quarter and they form the management committee. The Board of Trustees appoints new trustees and decisions can be made by a majority vote with a minimum of three trustees present. There is no requirement for Trustees to be reappointed on a rotational or any other basis. The Trustees are aware of the Charity Commission's public benefit guidance and take this into account when making decisions to which the guidance is relevant.

TRUSTEES' ANNUAL REPORT continued

Management

The Trustees are responsible for the strategic direction and governance of the Charity. The Charity's Trustees consider that an audit is not required for this year under section 144 of the Charities Act 2011 (the "2011 Act") and that an independent examination is needed.

Advisors

The Trustees are further supported and assisted by the Advisors who provide insightful and multi-disciplinary guidance and expertise on all aspects of the Charity's operations and activities. During the year the following persons served in these roles:

Advisors: Professor Michael Depledge CBE
 Professor Christopher Carbone
 Christopher Leftwich

Trustee Emeritus: Diana Viscountess Dunrossil

These persons are invited to attend the Trustees Meetings but are not entitled to, and do not, vote at these meetings.

Objectives and Activities

Charitable purposes

The UK Associates of BIOS provides a valuable donation to the Bermuda Institute of Ocean Sciences ("BIOS") education programme for partial and full scholarships to UK university students to participate in courses and internships in Bermuda. BIOS, now partnered with Arizona State University's Julie Ann Wrigley Global Futures Lab ("ASU"), has an international reputation extending over one century for research and education in marine and atmospheric science. Full details can be found on <https://bios.asu.edu/education/uk-associates-of-bios/>

Activities

Bermuda is located in the middle of the North Atlantic Gyre and on the most northerly Atlantic coral reef system. This makes it an ideal location for studying the Open Ocean and sub-tropical near shore environments. BIOS is home to Hydrostation S, established in 1954, the longest running year-round data collection programme for any single location in the open ocean, and the Bermuda Atlantic Time-series Study (BATS). These studies are improving mankind's understanding of global ocean circulation, ocean chemistry and biology, and how the oceans and atmosphere interact and respond to a changing climate.

The Mid-Atlantic Glider Initiative and Collaboration (MAGIC) was launched at BIOS in 2014 to enhance and leverage BIOS's long-standing ocean measurement programmes southeast of Bermuda through the use of autonomous underwater vehicles. The overarching goal of MAGIC is to acquire new high-resolution measurements from underwater gliders to assess the contribution of small-scale processes that sustain the ocean's biological productivity, and

TRUSTEES' ANNUAL REPORT continued

to make those assessments over several years to build a statistically meaningful understanding of them.

BIOS expertise also lies in marine microbiology, risk prediction, coral reef ecology and resilience, and fish ecology. Recent highlights of research activities include the use of Baited Remote Underwater Video Stations (BRUVS) and eDNA coding to further our understanding of native reef fish and invasive Lionfish populations.

BIOS believes that ocean science for human good involves not only research with tangible benefits for communities and the environment, but also education programmes that highlight the many ways our lives are connected with the ocean. BIOS views education as a crucial part of global ocean science research, helping to translate the work of its faculty into meaningful experiences for students to better understand the importance of oceanography in the study of fish stock management, climate change and risk prediction, pollution and human health.

The mission of the UK Associates of BIOS is for the advancement of experiential education through scholarship and grant funding for both undergraduate and post-graduate UK university scientists, to enable them to study and carry out research at the Bermuda Institute of Ocean Sciences in an international student and faculty community. Without scholarships of this nature they would not have access to summer courses or longer internships, which provide hands-on educational opportunities to study Bermuda's unique marine ecosystems and geology, as they explore coastal and open ocean environments. Under the supervision of, and in collaboration with, BIOS scientists they gain field methods and unparalleled insight into the logistics required to plan and execute research activities. This experience affords a unique opportunity not readily available to UK students, and is often one that could support their career decisions as future scientists and educators.

The latest chapter in the history of BIOS has been the partnering in 2021 with the Julie Ann Wrigley Global Futures Lab at Arizona State University (ASU); and the recent launch of the ASU Global Futures Lab's 4th School of Ocean Futures of which BIOS is now its major component. The goal of the union is to marry programmes and scientific study within both organisations, strengthen them with experts in various fields who can learn from each other and share research ideas and results.

BIOS and ASU will now be able to look more holistically at the health of the ocean and atmosphere. UK Associates of BIOS will have a more valuable role to contribute to an international student body working on global collaborative research projects as the planet faces adapting to a warming planet.

Achievements and Performance

With the generosity of our donors, £32,475 (2023- £34,875) of funding was provided for BIOS internships and summer courses.

Many BIOS alumni have found the experience invaluable to support career decisions in marine science. Some return to BIOS at a more senior level to further their skills in collaborating, communicating and analysing scientific problems; making them strong candidates for future academic endeavours.

TRUSTEES' ANNUAL REPORT continued

Long-term success will be measured by leveraging shared knowledge gained by a better understanding of our oceans and the impact of climate change and how that relates to the health of our oceans, fisheries, marine environment, risk prediction and ultimately human health. This demands the survival of oceanographic research and educational institutes to equip new generations of scientists with life-skills and technology to achieve academically as future scientists at the cutting-edge of discovery.

Financial Review

The main source of funding continues to be from donations received.

Receipts from donations and associated gift-aid were £31,975 (2023 - £36,162). Payments were £32,560 (2023 - £35,027), of which £32,475 (2023 - £34,875) was spent towards our charitable causes. This represents 99.7% (2023 – 99.6%) of total payments, the balance in 2024 being incurred on bank charges. The deficit for the year was £570 (2023 – surplus of £1,157).

The Trustees' policy is to maintain cash reserves above £1,000 in order to meet commitments and cover any unexpected expenditure. Cash at bank and in hand at the end of the year was £1,669 (2023 - £2,239), which is within the target range.

The Trustees are responsible for safeguarding the assets of the Charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

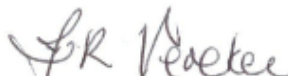
Plans for Future periods

The Trustees intend to continue and develop the education programme for the benefit of UK university students.

Approved by the Trustees on 22 January 2025 and signed on their behalf by:



.....
Christopher Day
Chairman



.....
Lady Vereker
Vice Chair

**INDEPENDENT EXAMINER'S REPORT TO THE TRUSTEES OF THE UNITED
KINGDOM ASSOCIATES OF THE BERMUDA INSTITUTE OF OCEAN SCIENCES FOR
THE YEAR ENDED 31 DECEMBER 2024**

I report to the Trustees on my examination of the accounts of the United Kingdom Associates of the Bermuda Institute of Ocean Sciences ('The Trust') for the year ended 31 December 2024, which are set out on pages 10 to 11.

Responsibilities and basis of report

As the Charity Trustees of The Trust you are responsible for the preparation of the accounts in accordance with the requirements of the Charities Act 2011 ('the Act').

I report in respect of my examination of The Trust's accounts carried out under section 145 of the 2011 Act and in carrying out my examination I have followed all the applicable Directions given by the Charity Commission under section 145(5)(b) of the Act.

Independent Examiner's Statement

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

1. accounting records were not kept in respect of The Trust as required by section 130 of the Act; or
2. the accounts do not accord with those records.

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

**Richard Beckett FCA
6 Foundry House
Walton Well Road
Oxford
OX2 6AQ**



22 January 2025

**STATEMENT OF RECEIPTS AND PAYMENTS
FOR THE YEAR ENDED 31 DECEMBER 2024**

| | Notes | 2024 £ | £ | 2023 £ | £ |
|-------------------------------|-------|-----------------|---|-----------------|---|
| Receipts | 1 | | | | |
| Voluntary receipts | | | | | |
| <i>Donations and Gift Aid</i> | 3 | 31,975 | | 36,162 | |
| <i>Legacies</i> | | - | | - | |
| | | <u>31,975</u> | | <u>36,162</u> | |
| Unrestricted bank interest | | 15 | | 22 | |
| | | <u>31,990</u> | | <u>36,184</u> | |
| Payments | 1 | | | | |
| Charitable activities | 3 | (32,475) | | (34,875) | |
| Fundraising costs | | - | | (67) | |
| Governance costs | | - | | - | |
| Bank charges | | (85) | | (85) | |
| | | <u>(32,560)</u> | | <u>(35,027)</u> | |
| Net (payment)/receipt | | <u>(570)</u> | | <u>1,157</u> | |

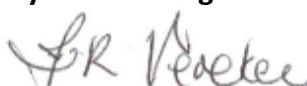
**STATEMENT OF ASSETS & LIABILITIES AND BALANCES
AS AT 31 DECEMBER 2024**

| | Unrestricted funds 2024 £ | Unrestricted funds 2023 £ |
|--------------------------------------|---------------------------------|---------------------------------|
| <u>Bank and cash balances</u> | | |
| Bank deposit account | - | - |
| Bank current account | 1,669 | 2,239 |
| | <u>1,669</u> | <u>2,239</u> |
| <u>Funds reconciliation</u> | | |
| Cash at bank and in hand – Dec 2023 | 2,239 | 1,082 |
| Net (payment)/receipt for the year | (570) | 1,157 |
| Cash at bank and in hand – Dec 2024 | <u>1,669</u> | <u>2,239</u> |

Approved by the Trustees on 22 January 2025 and signed on their behalf by:



Christopher Day - Chairman



Lady Vereker – Vice Chair



Ian Arnold – Treasurer

NOTES TO THE ACCOUNTS

1. Basis of Accounting

These accounts have been prepared on the Receipts & Payments basis in accordance with Section 133 of the Charities Act 2011.

2. Nature and purpose of funds

Unrestricted funds are those that may be used at the discretion of the Trustees in furtherance of the objects of the Charity. The Trustees maintain a single unrestricted fund for the day-to-day running of the Charity.

Restricted funds are those funds that the Trustees are obliged to spend only on particular purposes set out by the donor or in an appeal document and these particular purposes are narrower than the Charity's objectives.

Endowment funds are funds that the Charity is prohibited by the governing document from spending as income. Normally these will be investments but may also be property held as endowment for use by the Charity. The investment receipts must be spent for the purposes indicated by the governing document.

Designated funds are part of unrestricted funds, which the Trustees have set aside or earmarked to be used for a particular purpose. They are not legally distinct funds and Trustees can at any time re-designate them for other purposes.

There were no restricted, endowment or designated funds at the beginning or the end of the year.

3. Donations and Charitable activities

| | 2024 | 2023 |
|-------------------------------|--------|--------|
| | £ | £ |
| Donations and gift aid | | |
| Unrestricted funds - General | 3,375 | 2,562 |
| - Designated | 10,000 | 14,500 |
| - Total | 13,375 | 17,062 |
| Restricted funds | 18,600 | 19,100 |
| | 31,975 | 36,162 |
| Charitable activity | £ | £ |
| Unrestricted funds - General | 3,875 | 1,275 |
| - Designated | 10,000 | 14,500 |
| - Total | 13,875 | 15,775 |
| Restricted funds | 18,600 | 19,100 |
| | 32,475 | 34,875 |