



The UK Overseas Territories (UKOTs) are home to around 90% of the UK's biodiversity, hosting a huge range of unique and endangered species, with some found nowhere else on Earth. The UK Government's Blue Belt Programme supports the protection and management of the ocean around these Territories.

The Programme currently works with the following UKOTs: Ascension Island, British Antarctic Territory, British Indian Ocean Territory (BIOT), Pitcairn Islands, St Helena, Tristan da Cunha, and South Georgia and the South Sandwich Islands (SGSSI).

Combined, their marine zones span over 1% of the global ocean; together the UKOTs make a significant impact in safeguarding precious marine environments and resources, as well as helping to combat global ocean threats such as climate change, illegal fishing and marine litter.

This report covers the sixth year of work across this flagship Programme, showcasing the UKOTs continued commitment to comprehensive ocean protection and sustainable management of marine resources. During this last period, the Blue Belt Programme also introduced two new sub-programmes: the Blue Shield and the Global Ocean Wildlife Analysis Network.

I am so grateful to the UK Overseas Territories for their hard work and visionary leadership.

Lord Goldsmith, UK Minister for Pacific and the Environment

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"The Overseas Territories Blue Belt Programme is an unrivalled success and demonstrates how small islands can have significant global impact by protecting their marine environment and sustainably using natural resources.

Designating areas of protection is only the first stage; the ongoing challenge is monitoring and enforcing these Marine Protected Areas, as well as demonstrating their benefits at a local, regional and global scale.

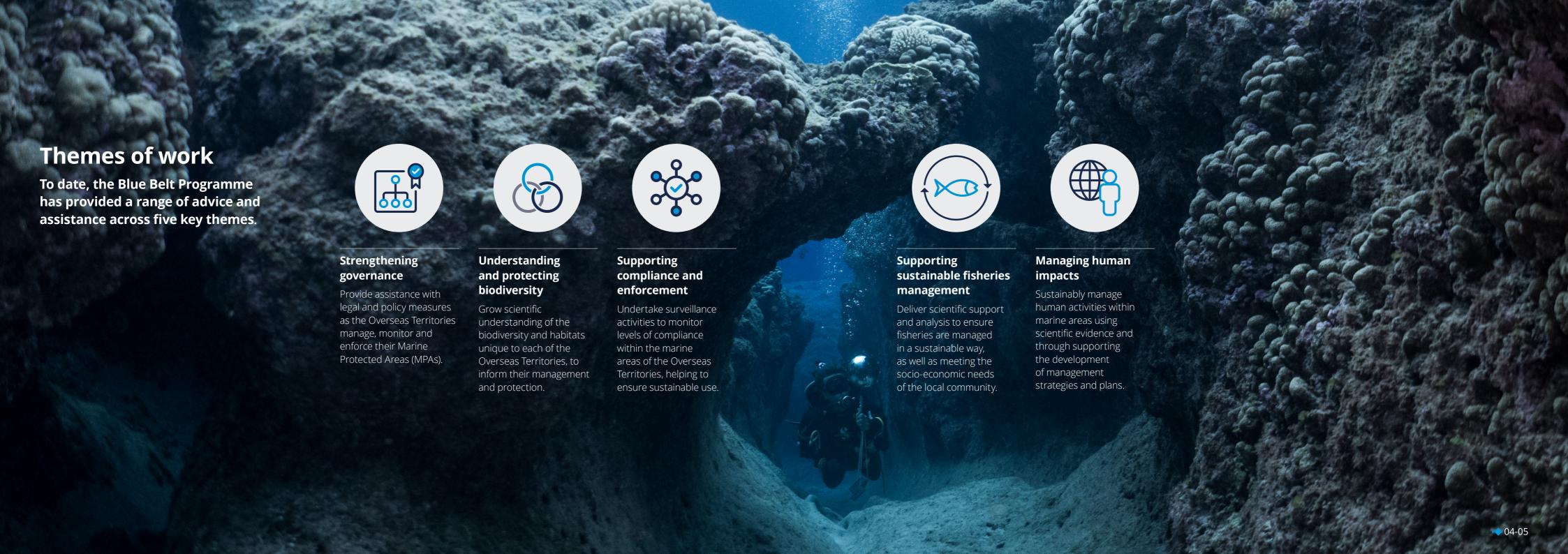
In 2021-22 the Turks and Caicos Island Government joined the Blue Belt Programme and two new subprogrammes were also launched to further support Territories. The Global Ocean Wildlife Analysis Network – the largest ocean wildlife monitoring network – now provides support to 11 Territories. And Bermuda was the first Territory to join the Blue Shield Programme, a maritime domain awareness project to support Territories to monitor and manage human activities.

With over 4 million square kilometres of ocean protected, I am so grateful to the UK Overseas Territories for their hard work and visionary leadership which will benefit current and future generations."

Steph Martin, Government of Tristan da Cunha, UK Overseas Territory Representative for the Blue Belt Programme:

"The UK Overseas Territories' marine areas are important ecosystems with incredible biodiversity from the Tropics, through the Atlantic, and down to the Southern Ocean. The local communities and other stakeholders are working with the UK Blue Belt Programme to help understand and manage these special habitats for long-term conservation. This critical work is vital in these remote marine waters for future generations."







Effective marine protection and management requires clear and robust governance structures. To date, all of the Blue Belt Programme UKOTs have established MPAs, and during 2021/22 three published new comprehensive Marine Management Plans. These documents set out in detail how these Territories will manage, enforce and protect their MPAs.

- Tristan da Cunha's Marine Protection Zone (MPZ) – one of the largest in the world – was ratified into law. A five-year MPZ Management Plan was published, which sets out evidence-based goals and actions for the management of this pristine marine environment.
- Ascension Island Government published their five-year MPA Management Plan, detailing the aims, methods and approach to managing their vast MPA. Developed through consultation with the Ascension community, the plan informs the day-to-day running of the MPA and outlines to the global community how the MPA is being managed.
- The Pitcairn Islands' MPA is home to pristine coral reefs and habitats of global biological significance. The new Pitcairn MPA Management Plan sets out the activities that will be taken over the next five years to protect the island's marine ecosystems, as well as ensure the MPA is effectively managed.
- St Helena Government are currently in the process of reviewing and updating their existing Marine Management Plan (published in 2016) and are due to publish this during 2022/23.

The Blue Belt Programme assisted the development and publication of these management plans, providing scientific and technical advice. These plans provide a comprehensive overview of the management of these unique marine environments and provide a leading global example of best practice for the governance of marine areas.



Baited Remote Underwater Video Systems deployed around Pitcairn Island

Policy and legislation are key tools for a UKOT in ensuring robust management and enforcement of their Exclusive Economic Zones (EEZ).

• The Programme continues to

assist the St Helena Government to develop new legislation for their MPA. The St Helena Fisheries Ordinance came into force in September 2021 and will ensure the sustainable management of St Helena's fisheries for the future. St Helena Government is now writing regulations to manage tourism and development activities in the MPA.



The St Helena Fisheries Ordinance is signed into law

 The Programme provided peer review support on the Pitcairn Islands' Marine Conservation Regulations, which will manage impacts of human activities within the MPA. Regular socio-economic monitoring and ensuring sustainable island economies is critical for the long-term effectiveness of MPAs. The Blue Belt Programme hosted a number of successful roundtable events on these topics this year, encouraging knowledge exchange and collaboration.

- October 2021 saw international experts, UKOT and Blue Belt Programme representatives come together to discuss the social dimensions of MPAs. The roundtable was an opportunity to learn about the importance of socio-economic assessments, highlight the different assessment tools available, and ultimately show how this data can be used to inform effective MPA management.
- In February 2022 a roundtable event took place to discuss challenges, barriers, opportunities and actions for MPA financial resilience and sustainable ocean economies.

 Attended by UKOT Governments, key partners, and ocean finance experts, the roundtable discussions provided an excellent platform for sharing global learning and approaches, discussing the challenges faced by UKOTs for funding and connecting individuals together on this important topic.

The Blue Belt Programme has funded on-island job roles in several UKOTs to help build capacity and ensure a legacy of marine protection.

- This year the Pitcairn Islands welcomed a new MPA Officer, who is excited to begin contributing to the protection of their island's marine biodiversity.
- Key roles continue to be funded within Ascension Island and St Helena Governments to support with the management and implementation of the MPAs.
- A range of relevant training and learning materials are provided to these teams to support the building of on-island capacity and skill sets.
 For example, this year stakeholder engagement training was provided to all UKOTs, including bespoke 1-2-1 and group virtual sessions.

Funding has also been provided for vital equipment and infrastructure across the UKOTs, to enhance capacity and support their work. Examples include:

 On Ascension, the Programme funded the purchase of equipment for the Island's new eDNA laboratory, which will support the ongoing monitoring of biodiversity and biosecurity. Additionally, an inshore vessel was funded to support

Effective marine protection and management requires clear and robust governance structures

MPA monitoring and research work, helping to collect regular samples to continue with active assessments of resources.

- On St Helena, funding was provided for the completion of the new marine scientific laboratory and visitor centre; this is in addition to significant funding provided in previous financial years. The laboratory is due to open in the summer of 2022.
- On Tristan da Cunha, funding was provided for the purchase of a new Rigid Inflatable Boat, or RIB, to support MPA management and monitoring.



Understanding and protecting biodiversity



Building a detailed understanding of the biodiversity and marine ecosystems that each UKOT are custodians of is key to designing protection and management measures. The Blue Belt Programme provides scientific advice and support to the Territories to expand current knowledge of their marine environments.

Research expeditions within the MPAs of the UKOTs allow local communities and scientists to collect a range of new data on habitats and species. These research expeditions fill datagaps in some of the least surveyed areas of the world's oceans, and findings are used to directly inform protection and governance measures such as policy and legislation.

In September, the Programme supported the Pitcairn Island community to undertake an expedition to the outer islands of Ducie, Henderson and Oeno.

12 islanders led the expedition and collected information on fish, corals, marine mammals, bird populations and marine litter. The Programme supported this through

providing equipment, training and survey planning. The new data sets collected – which are currently being analysed by experts – will provide new insights and inform the Pitcairn community in their work to protect marine ecosystems.

• The Ascension Island and St Helena Governments have worked with the Blue Belt Programme to design a research expedition into these two large South Atlantic MPAs. This expedition, which is set to sail in 2022, will increase understanding of previously unexplored seabed and seamount habitats, and offers a chance to trial ocean monitoring technology. Findings will significantly increase understanding of marine ecosystems in these



The Pitcairn community prepare to set off on their survey expedition



The Pitcairn team encountered a number of humpback whales during their expedition

two MPAs, enabling Ascension Island and St Helena to develop their management of these areas accordingly.

This year the SGSSI Government marked the ten year anniversary of the designation of their MPA. The Blue Belt Programme has continued working with SGSSI Government to build understanding of their unique marine environment, and is using this knowledge to inform its protection and the management of the sustainable fishery.

 Working with the fishing industry, mini cameras have been attached to over 500 fishing long lines around South Georgia. These cameras monitor fishing operations and provide insights on deepwater biodiversity within SGSSI waters. This year a report on the camera's impact and findings was published, allowing the SGSSI Government to identify vulnerable marine ecosystems and build a greater understanding of areas of seabed that may be at risk from fishing activity.



Research conducted during the RRS

Deep-water corals around SGSSI

Discovery 99 expedition (2019) to SGSSI continues to provide insight on seabed ecosystems. Research into the vulnerability of these seabed habitats was identified during the last MPA review as a key data gap. This year findings from the expedition informed multiple peer reviewed publications which will address these data gaps and will be used during the next MPA review process (2022/23).

The Programme has also worked with the UKOTs and key partners to develop monitoring and assessment tools, to ensure quality data is collected and used in the most effective ways. Reliable data is essential to ensure management measures are effective and achieve their purpose.

• A rapid study to assess the utility of a Wave Glider (a new type of ocean monitoring tool) for long-term MPA monitoring was carried out in the UK. While initially designed for use around Ascension Island, this technology also has promise for other UKOTs. Blue Belt Programme scientists look forward to trialing this with Ascension Island Government during the RRS *Discovery* expedition.

Reliable data is essential to ensure management measures are effective and achieve their purpose

 Funding was provided for the purchase of albatross satellite transponders, to be deployed in South Georgia, in order to monitor the declining population of black-browed albatrosses. The tags will improve understanding of migration patterns of juveniles and their susceptibility to bycatch in different fisheries. The Blue Belt Programme
 has funded the Joint Nature
 Conservation Committee (JNCC)
 to develop a tool for assessing the
 condition of MPAs in the OTs, in line
 with the UK's 25 Year Environment
 Plan. This indicator will allow OTs
 to assess the condition of their
 MPAs and adjust management and
 protection measures as needed.

This year a collection of 23 peer-reviewed scientific papers based on the UKOTs were collated by the Blue Belt Programme and key partners into an online e-book, titled *Working Towards a Blue Future*.

The papers provide new insights

and answer key questions which support the UKOTs to protect and enhance their marine environments. Findings from these papers fill critical evidence gaps and have already been shown to influence major policy decisions within the Territories, such as the designation of MPAs, the safeguarding of fisheries resources and the protection of vulnerable ecosystems.



An MPA is only effective if the management measures and regulations put in place by a **UKOT Government are complied** with and enforced. The Blue Belt **Programme assists the UKOTs** with a suite of support to help achieve this, ranging from the use of satellite imagery and innovative technology to fishing logbooks and observers.

The Blue Belt Surveillance and Intelligence Hub continues to monitor the 4.3 million km² of UK Overseas Territories EEZs, providing intelligence and assistance to UKOT compliance and enforcement operations. We continued to work with Oceanmind and the Joint Maritime Security Council during 2021/22, undertaking satellite surveillance in each of the UK Overseas Territories.

In 2020, Tristan da Cunha designated two Areas to be Avoided (ATBA), creating a voluntary exclusion zone for large vessels around the islands to reduce chances of collision incidents. In 2021-22, the Blue Belt Programme worked with Tristan da Cunha to encourage compliance with this by:

- Contacting flag States of vessels transiting the ATBA – in a spirit of cooperation and collaboration - to notify them of the presence of the ATBA and encourage future behaviour change.
- Created and implemented Aid to Navigations devices which notify vessels of the presence of the ATBAs.



In St Helena, a number of methods are used to track fishing activity and catch weights, to ensure fishing effort remains within the sustainable quota. This year:

- Fishing logbooks that are used to track catch weights were reviewed and updated to ensure optimal information is being collected from fishers. A training video was also created, designed to be shown to fishers, which outlines the purpose and importance of fishing logbooks.
- An interactive tool was developed to support St Helena Government when measuring the quantity of fish caught, helping to inform the management of fishing quotas.
- The Programme supported the installation of a remote electronic monitoring system (REM) to a 12-metre tuna fishing boat on St Helena to assist with monitoring of fishing effort and patterns.

These technologies offer a cost effective, low emission alternative to traditional enforcement tools

Innovative drone technology is also being developed by the Blue Belt Programme to support monitoring of large and often highly remote areas of ocean. These technologies offer a cost effective, low emission alternative to traditional enforcement tools such as patrol vessels, and will play a significant role in monitoring activities across the MPAs to help prevent threats such as IUU fishing.

· With Loughborough University, a bespoke surveillance drone is being developed which can be launched off the BIOT patrol vessel. The drone will allow the patrol vessel to react to live intelligence quicker, while simultaneously increasing surveillance capability, covering large areas rapidly and helping to detect illegal activity. This year improvements have been made to its design, communications and camera systems, based on data from recent field trials.

A cutting-edge drone solution is currently in development with Virginia Tech University. The goal of the project is to develop an autonomous fleet of drones that can communicate with one another and provide a live intelligence picture of marine activities taking place within the MPAs to enforcement teams based on the ground. In the first phase of the project Virginia Tech have successfully designed a 'virtual world' in which to train the drones and developed the software that will allow enforcement teams

to operate drones remotely.



Virtual simulation of autonomous drones tested by Virgina Tech



A drone is tested around BIOT

Supporting sustainable fisheries management

A number of Blue Belt Programme UKOTs have active fisheries within their MPAs and EEZs. With Programme assistance, the UKOTs undertake a wide range of work to ensure these fisheries are run at a sustainable level, which strikes a balance between robust environmental protection and the socio-economic requirements of the local community:

- The work of the UKOTs continues to be recognised by international certification standards, with this year seeing Tristan da Cunha's rock lobster fishery re-certified by the Marine Stewardship Council.
- St Helena's MPA contains a sustainable fishery which extracts species such as grouper and yellowfin tuna. This year the Blue Belt Programme produced fisheries advice reports for tuna, baitfish and groundfish species. Using latest scientific data and findings, these reports provide advice and recommendations to the St Helena Government on the status of these species and ensure quota levels remain sustainable.



Tristan da Cunha's rock lobster fishery

In 2022 SGSSI celebrated a decade of marine protection, after marking the tenth anniversary of their MPA's designation. In that time biodiversity and ecosystems are recorded to be in recovery, with key species such as the blue whale returning to SGSSI in larger numbers. With the Blue Belt Programme, the SGSSI Government are now looking ahead to the next MPA review process in 2023.

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- In preparation for the MPA review, the Blue Belt Programme has created a bespoke and interactive management risk tool for the SGSSI Government. This tool uses historic fishing patterns to predict environmental impacts and scenarios if further protection zones are introduced. This tool will play an active role in informing the review, helping marine managers ensure protective measures are working optimally and meeting the stated goals of the MPA.
- Recreational fishing is popular within a number of the UKOTs, and management measures are in place to ensure sustainability.
- The Blue Belt Programme has been developing educational materials on recreational fishing for key stakeholders in BIOT. Working with the BIOT Administration, these materials provide fishers with information on current management measures, species identification, as well as catchand-release best practice. Surveys will be undertaken before and after these materials are deployed to measure their impact and the awareness of the current rules on recreational fishing.

- For the British Antarctic Territory and SGSSI, critical CCAMLR (Convention for the Conservation of Antarctic Marine Living Resources) regulations that are in place for the krill fishery are currently being renegotiated.
- The Blue Belt Programme has recently started working with the British Antarctic Survey (BAS) to provide scientific analysis and advice to support decisions made by fisheries managers in the CCAMLR Commission. In particular, the Blue Belt Programme has become involved with BAS research which is evaluating the risk of concentrating krill fishing in areas important to krill predators. This work was previously funded by Darwin Plus and Pew Charitable Trusts. The findings will be used to assess the risks of localised fishing on both predators and krill, therefore informing adjustments of the designated catch level to minimise risk to fisheries levels.

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Yellowfin Tuna





An elephant seal is photographed by fishing longline cameras around SGSSI



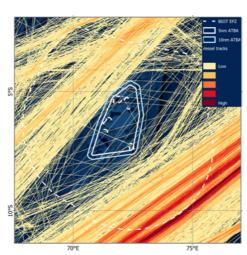
From fishing to tourism, human activities can have a diverse range of impacts on the marine environment. The EEZs of the UKOTs are used by the local communities or international visitors for a number of purposes, and the Blue Belt Programme has worked with local governments to assist in identifying and minimising impacts on the marine environment.

Situated in the heart of the Indian Ocean, BIOT is home to pristine coral reefs and hugely diverse marine ecosystems. A range of human activities also take place within its MPA, from recreational fishing to transiting commercial vessels.

Working with the BIOT
 Administration, the Blue Belt
 Programme continues to investigate
 the potential need for a voluntary
 Area To Be Avoided (ATBA) for
 transiting vessels. The team
 analysed the vessel traffic passing
 through the MPA. In particular,
 they looked at how close ships

come to the shallow coral reefs to determine the level of risk. If created, the ATBA would mean nearby vessels are aware of the important coral reefs around BIOT, reducing collision risks and supporting conservation activities.

 The Blue Belt Programme has carried out a review of current biosecurity measures for visiting vessels to BIOT. Recommendations from this review will strengthen biosecurity guidance for visiting vessels to minimise risks from invasive and non-native species.



Movement of vessels over 400GT in relation to the BIOT ATBA

It is also key for local communities to be aware of the impact human activities can have on the marine environment, to effectively minimise and manage such impacts.

The Blue Belt Programme
 collaborated with The Pacific
 Community (SPC) to provide remote
 training for the Pitcairn Islands
 community, covering fisheries
 management, monitoring and
 compliance and enforcement skills.
 The five sessions were well received
 with good discussion among
 participants who are now able to
 apply for a Professional Certificate
 in Community Compliance.

• The Programme supported the St Helena Government to develop a stakeholder engagement plan. This plan sets out how the St Helena Government will engage with key stakeholders, such as fishers, around MPA management activities to raise awareness and build support.

Monitoring the impact of human activities on the marine environment is key to ensuring they are managed appropriately.

 St Helena Government continue regular water quality surveys, with the support of the Blue Belt Programme. These regular surveys monitor levels of faecal indicator bacteria in the James Bay area, and indicate if water quality is acceptable in the main swimming areas or if there is any risk to human health from microbial pathogens in the sewage outflows from the island. This year saw the landmark
United Nations Climate Change
Conference, or COP26.

- The Blue Belt Programme's work was showcased at the conference through an event hosted by the United Kingdom Overseas Territories Association (UKOTA), titled Our Vision for Healthy Oceans.
- The Blue Belt Programme also hosted an exhibit at the Virtual Ocean Pavillion a digital and open-access space where users could find out more about the work of the Programme in relation to climate change. Live sessions were also hosted on this digital platform, with members of the Programme team presenting relevant work and impacts.



Marine litter is found both on beaches and on the coral reefs across the Pitcairn Islands

From fishing to tourism, human activities can have a diverse range of impacts on the marine environment



Marine litter is documented on the Pitcairn Islands

Sub-programmes

During 2021/22 the Blue Belt Programme launched two subprogrammes which support its objectives and also extend support to other UKOTs.

The Blue Shield

The Blue Shield is a maritime domain awareness programme to assess and understand the activities that may impact the health and sustainability of the maritime environment. Such activities include but are not limited to Illegal, Unreported and Unregulated (IUU) fishing, commercial and recreational vessel activity and marine development projects.

Blue Shield will support the Territories in establishing and enhancing appropriate compliance and enforcement frameworks, remote monitoring and surveillance to ensure compliance with environmental regulations and, where necessary, assist the OTs to undertake enforcement action against any noncompliance. Blue Shield Territories can also benefit from innovative, technology-based compliance and enforcement solutions identified through the Blue Belt Programme, and potentially support the wider Programme by acting as a testbed for technology trials.



Representatives from the Blue Belt Programme visited Bermuda to meet key stakeholders

Bermuda became the first Territory to join the Blue Shield, and following the official launch the Programme was able to provide equipment to the Department for Environment and Natural Resources and Coastguard to support compliance and enforcement. Blue Shield will assist the Bermuda Government by providing information on activities within their marine zone, as well as providing advice and assistance to the Government should vessels not comply with management measures.



MORE INFORMATION

The Global Ocean Wildlife Analysis Network

This year the Blue Belt Programme (in partnership with Blue Abacus) established a new global biodiversity and habitat monitoring network across the UKOTs. The largest of its type globally, the network is made up of underwater cameras known as Baited Remote Underwater Video Systems (BRUVS).

These cameras will provide detailed and valuable insights into the rich marine environments of the UKOTs. The knowledge provided will build our understanding of these unique marine ecosystems, ultimately informing the conservation, management and protection of these unique marine resources.



A shark is photographed using BRUVS within the Pitcairn Islands MPA

The network currently consists of 11 UKOTs, situated across the Pacific, Caribbean, Atlantic, Southern and Indian oceans. Training is being provided to each of the Territory representatives upon arrival of their kit, and bespoke surveys are being designed and deployed to answer specific research questions that the Territories have chosen to investigate.

The data collected will provide valuable insights on a local scale and also allow scientists to further investigate the impact of global ocean challenges, such as climate change and over-fishing.



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Looking ahead to the next three years of the Blue Belt Programme

The Blue Belt Programme now supports the protection and enhancement of around 4.3 million square kilometres of ocean. The continuation of this flagship marine conservation Programme demonstrates the UK Government's sustained commitment to tackling global ocean threats, from climate change to over-fishing and biodiversity loss.

The Programme is delighted to welcome the Turks & Caicos Islands (TCI), which becomes the first Caribbean Overseas Territory to join the Blue Belt. Over the coming year the Programme will work with the Turks & Caicos Islands Government on their key priority areas, including improved MPA compliance and enforcement, MPA governance, and research and monitoring.

Engagement will also take place with other Overseas Territories that are interested in joining the Blue Belt Programme or sub-programmes the Blue Shield and the Global Ocean Wildlife Analysis Network.

To assist the UKOTs in their work to maintain healthy, productive and biologically diverse marine ecosystems that support sustainable growth, connect people with the natural environment, and are resilient to the impacts of climate change, the Blue Belt Programme will work across the following key themes going forward:

- Strengthening governance and management
- Understanding and protecting biodiversity
- Managing human impacts
- Supporting compliance and enforcement
- · Capacity building and ocean literacy.

During 2022/23, key elements of the Blue Belt Programme's work with UKOTs and external stakeholders include:

- During the UN Ocean Decade, continue to highlight and share learnings from the Programme at major international conferences and events. During 2023, UKOT representatives will attend and present at the IMPAC5 conference in Canada.
- A Blue Belt Programme World
 Ocean Day event will be hosted
 in London, bringing together UK
 Overseas Territory representatives
 and key stakeholders to celebrate
 achievements and focus on
 future ambitions and priorities.

- The delivery of a major research expedition to St Helena and Ascension Island to help build understanding of the biodiversity and habitats across the offshore environments around these two Territories.
- Further build on island capacity and skills within the Overseas Territories to ensure a long-term programme legacy through supporting infrastructure, education and outreach, training and in-country roles.
- Continue to develop new technologies and innovative solutions that allow largescale remote surveillance and monitoring of marine activities within the EEZs of the Territories.



Find out more and for latest updates from the Blue Belt Programme:

- www.gov.uk/government/publications/the-blue-belt-programme
- Blue Belt Programme newsletter
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