[Fish eye lenses: UK launches world's largest ocean monitoring system to protect wildlife and biodiversity](#)

- the world's first network of underwater camera rigs is being rolled out across the British Overseas Territories
- the network will collect important biological information across the Caribbean, South Atlantic, Indian, Pacific and Southern Oceans, making it the world's largest ocean wildlife monitoring system
- information collected on marine life will support British Overseas Territories to protect their marine environment

The UK is to become the first country to pioneer a major network of underwater camera rigs, funding the world's largest ocean wildlife monitoring system to help protect life below water.

The network is being set up as part of the [UK Government Blue Belt programme](#) — which covers more than 4 million square kilometres of ocean.

The camera systems — known as BRUVS — will allow the UK's Overseas Territories to observe and manage ocean wildlife in their diverse ecosystems. The non-intrusive method of capturing information on species will be used to document the incredible marine biodiversity in 10 Overseas Territories: Pitcairn, Ascension, St Helena, Tristan da Cunha, British Indian Ocean Territory, Cayman Islands, the British Virgin Islands, Anguilla, Montserrat and within the British Antarctic Territory.

The rigs are being rolled out at a time when the health of the ocean is declining and will allow scientists to improve their understanding of the marine environment and restore our oceans.

UK Prime Minister Boris Johnson said:

> The marine wildlife living along the coastlines of our Overseas Territories is some of the most spectacular in the world and we must do more to protect it.
>
> Cutting-edge technology, such as these cameras, will be vital in our crusade against climate change. Our marine experts are world-leaders in protecting our ocean and the myriad of species that live within it.

UK Minister for the Environment, Lord Goldsmith, said:

> Understanding and protecting marine life is essential to maintaining our world's biological diversity. The lack of

information on the variety and abundance of different species in large parts of the ocean makes it difficult for countries to protect them effectively.

The UK is committed to tackling the biggest global challenges, including climate change and loss of biodiversity. In addition to nurturing and growing the magnificent Blue Belt – 4 million square kilometres of marine protected areas around UK Overseas territories – we are building a strong network of international science and technology partnerships.

These UK-funded underwater video cameras will provide a wealth of information on the biodiversity in the seas around the Overseas Territories, including on globally threatened species of shark and migratory fish, like the bluefin tuna.

The 66 stereo-Baited Remote Underwater Video Systems (BRUVS) will be used to film and analyse data on many species, including white marlin, sailfish, silky sharks, black triggerfish, loggerhead turtles, Gould's squid, bottlenose wedgefish and sea snakes.

The 4-year programme – named the Global Ocean Wildlife Analysis Network – is expected to cost £2 million and will provide information on the ocean wildlife found in the vast maritime areas of the Overseas Territories, in the Atlantic, Indian and Pacific Oceans. It will also be used at the British Antarctic Survey Station, Rothera, in the Southern Ocean.

Project partner Blue Abacus, based in Perth, Western Australia, has pioneered the development of cutting-edge carbon fibre BRUVS.

Co-founder of Blue Abacus and Professor at the University of Western Australia, Jessica Meeuwig said:

The world's tunas, sharks and large reef fish continue to decline in numbers and this trend must be reversed. This programme will give decision makers the evidence they need to act decisively in support of their blue economies.

We are delighted that the UK Government and Overseas Territories support the drive for increased knowledge as we rebuild our oceans. Our refinements to conventional underwater cameras are what makes possible the rollout of this programme over four ocean basins, the largest single such government-supported initiative globally.

Blue Abacus will work with the 10 participating Territories to provide a benchmark of scientific understanding of the marine species and habitats within their maritime area, allowing the Territories to take more informed decisions about protecting and managing these diverse ecosystems.

Timothy Austin, Deputy Director, Research and Assessment, Cayman Islands

Department of Environment, said:

> The Cayman Islands Department of Environment is very excited at the opportunity to participate in the network that will bring the BRUV network into the Caribbean region for the first time. The opportunity to take this technology further offshore will greatly enhance the Cayman Islands' ability to implement meaningful and effective conservation regimes for this data limited, poorly understood, but crucially important ecosystem.

Diane Baum, Director of Conservation and Fisheries, Ascension Island Government, said:

> Ascension is committed to safeguarding its vast 445,000 square kilometre Marine Protected Area, but we recognise how challenging this will be. The support of the Blue Belt Programme and the opportunity to join this network will help us to meet that challenge. Our previous use of BRUVS has given us an insight into the amazing diversity of our open ocean ecosystems and enabled us to identify hotspots of biodiversity that need special protection. Being part of this initiative will provide Ascension with the information we need to take good local management decisions.

This initiative builds on significant progress to improve our understanding of the marine environment of the Overseas Territories through the Blue Belt programme, and ensure these diverse ecosystems are protected and managed for future generations. Through the Blue Belt programme, the Overseas Territories have put in place large-scale marine protection measures covering over 4 million square kilometres.

Video and still images from the Camera Network are [available from FCDO Communications Office](#).

- [The UK's Blue Belt programme](#) aims to enhance marine protection in the Overseas Territories. Marine protection measures are in place across 4 million square kilometres of ocean around the Overseas Territories, and the programme has supported the Territories to ensure these waters are effectively managed, with environmental monitoring and enforcement ongoing. The programme has been supported by nearly £25 million of UK funding to date.
- [Blue Abacus](#) has pioneered a cost effective and easy-to-deploy carbon-fibre stereo-baited remote underwater video system (BRUVS) that captures underwater imagery of marine wildlife from coastal reefs to the open ocean.
- Baited remote underwater video systems (BRUVS) are an effective non-lethal source of data to improve understanding of marine wildlife. Consisting of two small action cameras embedded within a base bar, a bait arm and a vertical upright, BRUVS record all animals that appear in the cameras' overlapping field of view. The first BRUVS were deployed in

the early 2000s to document the fish communities in shallow coastal waters, expanding in 2014 to open ocean monitoring. Since then Professor Meeuwig's University of Western Australia team has completed over 70 surveys in 35 international locations, obtaining records for more than 140,000 animals.