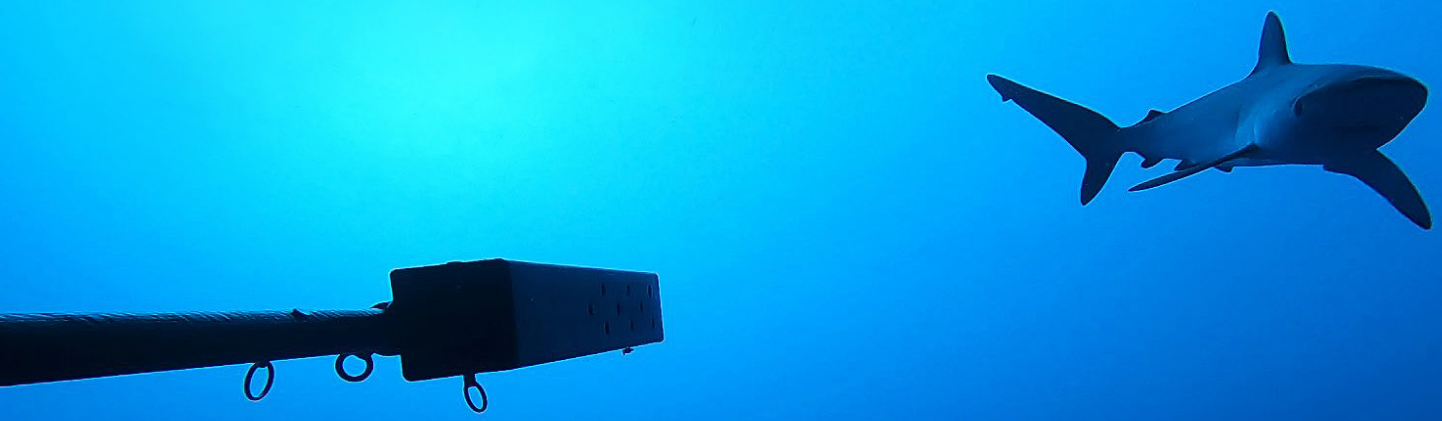
Global Ocean Wildlife Analysis Network



Pulling back the blue curtain across the UK Overseas Territories

The Blue Belt Programme

BlueAbacus

UK Government

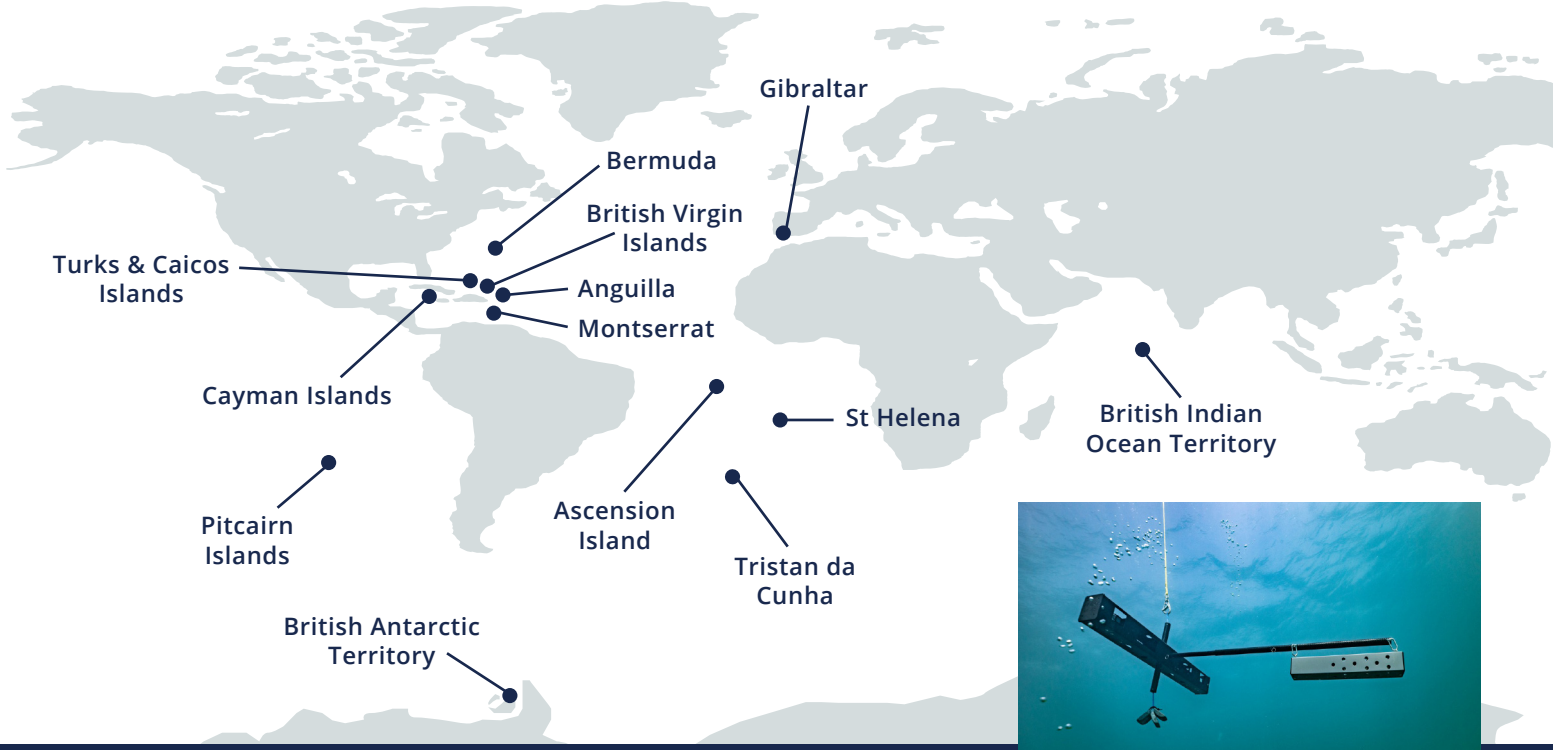
Global Ocean Wildlife Analysis Network (GOWAN)

The marine wildlife and diverse ecosystems of oceans around the world will be more visible than ever thanks to pioneering work to establish a global network of Baited Remote Underwater Video Systems (BRUVS).

Known as the Global Ocean Wildlife Analysis Network, this Blue Belt Programme funded project is providing information on ocean biodiversity and ecosystems found in the vast maritime and coastal areas of the UK Overseas Territories (UKOTs) in the Atlantic, Indian, Pacific and Southern Oceans.

> This global network will improve our understanding of the marine environment and help ensure these diverse ecosystems are protected for future generations.

Current UKOT members of the Global Ocean Wildlife Analysis Network:



This initiative, open to all UKOTs, builds on support provided through the Blue Belt Programme, which has supported the protection, management and conservation of over 4 million km^2 of ocean. This global network will improve our understanding of the marine wildlife of the UKOTs and help ensure these diverse ecosystems are protected and sustainably managed for future generations.

What are Baited Remote Underwater Video Systems (BRUVS)?

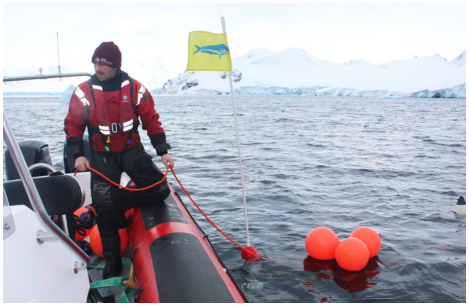
The camera systems, known as BRUVS, are a non-intrusive method of capturing information on marine species and habitats. The BRUVS used as part of the GOWAN are produced by Blue Abacus and constructed from carbon fibre, making them extremely light and durable.

The BRUVS consist of a pre-calibrated base bar which houses two GoPro cameras, a bait arm and canister which holds the bait in front of the cameras, and a vertical rigging pole which connects the BRUVS to surface buoys. In addition, a full set of supplementary equipment – including rigging, floats, hard drives, a laptop for data processing and a radio telemetry system for tracking the BRUVS – is included in the equipment provided.

Baited Remote Underwater Video Systems, or BRUVS, in open ocean, ready to deploy on board, and in seabed habitats

Training and deployment across the network

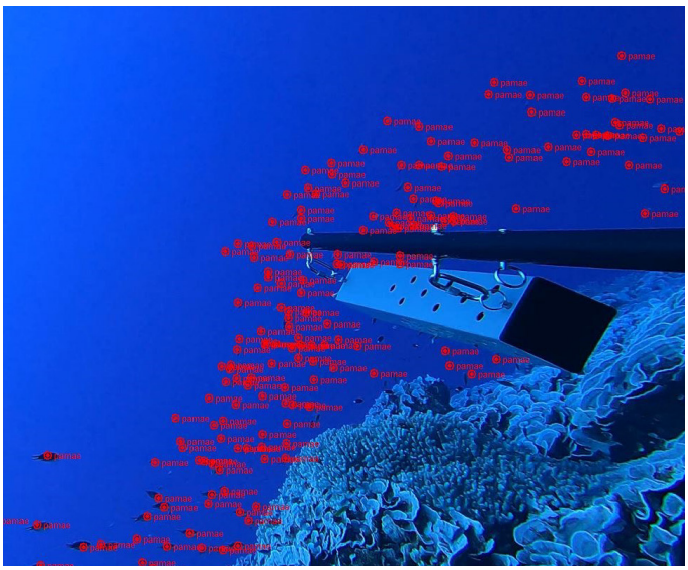
Remote training is provided to every UKOT that is part of the Global Ocean Wildlife Analysis Network. Training includes guidance on the assembly and rigging of the BRUVS, and is delivered via a combination of live streams, training videos and the provision of detailed Standard Operating Procedures. Research support is also provided for survey design and video analysis.



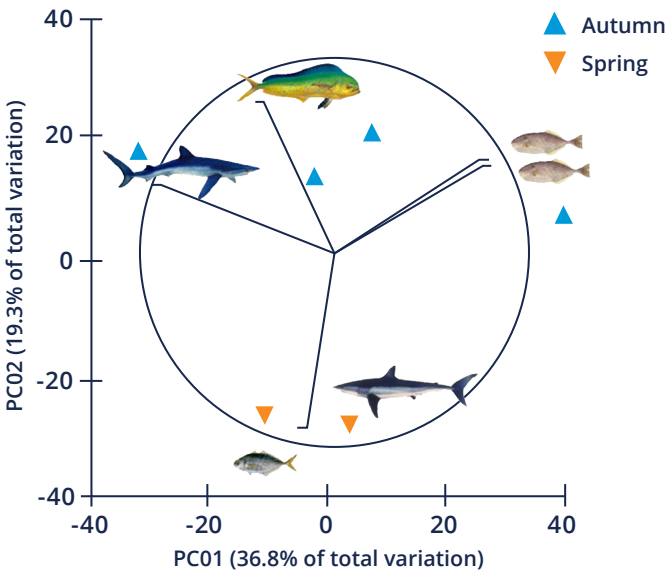
Investigating vulnerable marine species and habitats

The BRUVS can be deployed in both the open ocean to monitor pelagic wildlife such as tunas and ocean sharks, and on the seabed in coastal areas to monitor seabed habitats and ground fish species. As the BRUVS are versatile, they can be deployed easily from small inshore research or fishing vessels.

Once video data has been collected, the imagery is analysed and a comprehensive, interactive report on species diversity and abundance will be provided to support policy and management decisions. All data is owned by the Territories. Support is also provided during the integration of the BRUVS into ongoing and new monitoring programmes.



Counting the number of fish in a school – each red dot is an individual fish and its identifier



Identifying which species are most common in the Austral autumn and spring

Using the data for marine management and conservation

BRUVS are capable of providing a range of valuable information regarding marine ecosystems, including the identification of species present, the abundance of these species, as well as an accurate estimate of size.

This information is then used to inform the development of management and conservation strategies, and to address many scientific and management questions linked to the status and condition of marine ecosystems. These include:

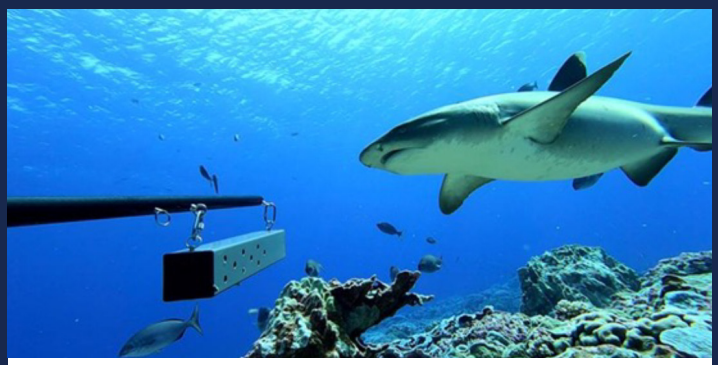
- What management and implementation measures are needed to conserve endangered and exploited marine habitats and species?
- What is the status of large commercially important pelagic and ground fish species and how is this changing over time?
- How do marine species utilise marine habitats as feeding and nursery grounds?

Contribution to global ocean conservation

Beyond the key insights the network will provide on a local scale for the UKOTs, it will also contribute to global conservation efforts. As the amount of data collected increases and new UKOTs join, so will the Global Ocean Wildlife Analysis Network's ability to understand how the status of the marine ecosystems are changing at a local, regional and global scale. This work is vital if we are to reverse the decline in marine biodiversity and protect our oceans for future generations to come.

For more information about the Blue Belt programme and the Global Ocean Wildlife Analysis Network:

Email: Bluebelt@cefas.co.uk
Twitter: @UKGovBlueBelt
Web: www.gov.uk/government/publications/the-blue-belt-programme

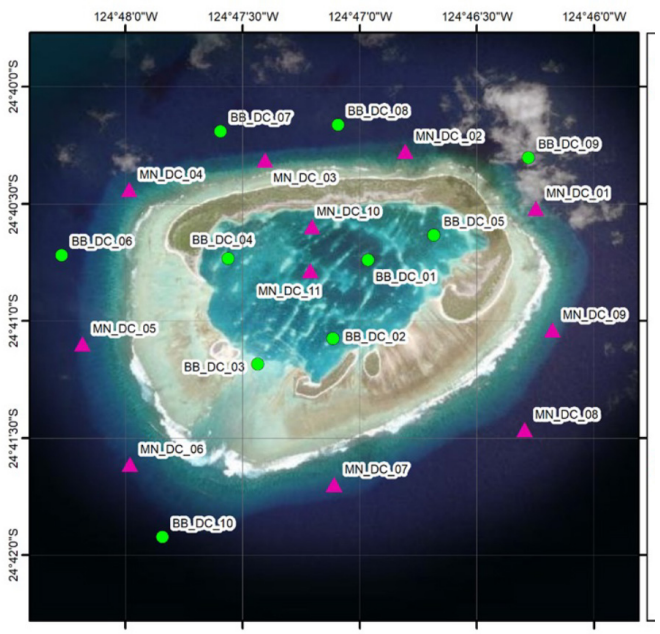


Case Study: Operation Fafaia

Recently the Pitcairn Islands Government used BRUVS as part of an expedition to the outer islands of Henderson, Ducie and Oeno.

The main objectives of this expedition were to identify vulnerable marine habitats, monitor sharks and lobsters and to undertake detailed reef resilience and vulnerability assessments.

The information collected will be used to inform and help fulfil many of the objectives that have been developed as part of the Pitcairn Island Marine Protected Area Management Plan.



Map of BRUVS deployments and their sample IDs during Operation Fafaia

BlueAbacus

UK Government