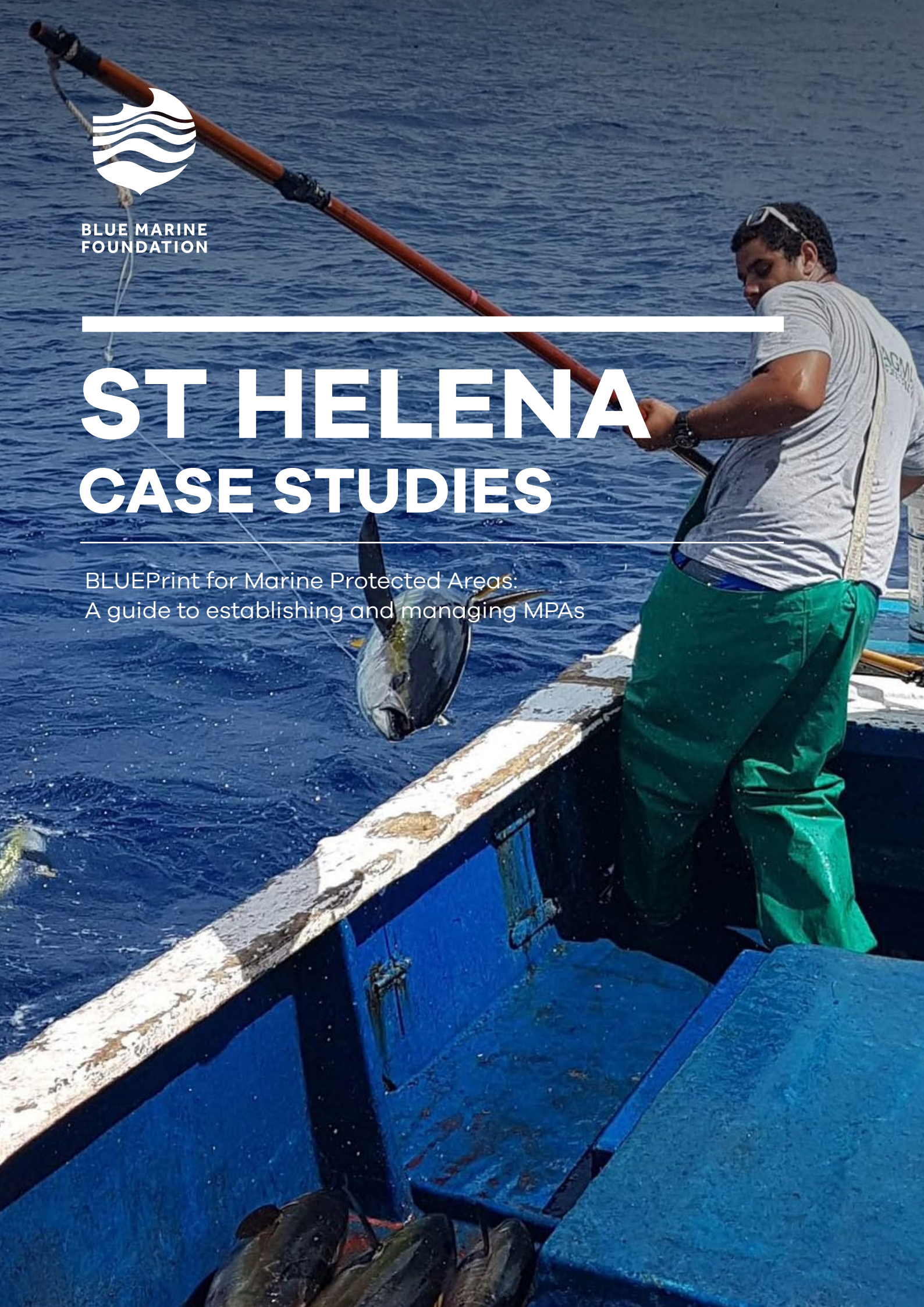


BLUE MARINE FOUNDATION

ST HELENA
CASE STUDIES

BLUEPrint for Marine Protected Areas:
A guide to establishing and managing MPAs

INFORMATION: MONITORING

St Helena: Marine scuba dive surveys for monitoring fish populations and inshore health

In order to establish baselines from which to identify both natural and anthropogenic changes to the biodiversity or habitats, long term monitoring of the marine environment should be undertaken. However, any repeated monitoring adds a significant cost to any department budgets and full consideration should be given to the need and frequency (i.e. what will the data be used for, what management actions could be taken based on results, what sample size is required, what frequency of surveying gives comparable results). Scientists tend to aim for as much data as possible, which although obviously gives the most robust information must be weighed against the economic implications of the monitoring. Equally the funding needs to be sourced to ensure enough data can be collected to provide accurate and usable information for making effective management decisions.

Important features of long-term monitoring:

- Standardised (and documented survey method).
- Simple – the more complex a survey the more experienced the surveyors need to be and the increased likelihood of reporting errors. Noting that they need to be detailed enough to gather useable/relevant information.
- Repeatable in important and/or representative habitats.
- Maintain timings of surveys each year and depths. If possible, repeat at two different times of year.
- Keep costs to a minimum as finding annual funding can be difficult.
- Experience of surveyors – need simple training program.
- Can indicator species be used to represent whole area/habitat to reduce effort.
- Data storage – have a means to collect meta-data of surveys and make accessible to other researchers interested in the region so efforts don't get duplicated

Monitoring for marine health on St Helena has been conducted since 2002 via underwater visual surveys for fish diversity and abundance and have been enhanced to include invertebrates and habitats since 2013. Surveys were carried out twice a year in summer (April) and in winter (October) along eighteen sights on the leeward side of the Island (selected for ease of access and better weather conditions).

The surveys ran from October 2002 until April 2007 then there was a gap in data due to financial shortfalls until additional project funding allowed surveys to start again in 2011, which also included increased coverage. To minimise costs but maintain coverage and data reliability, biannual and five-year monitoring was proposed allowing more regular surveys at less sites with greater coverage at specific time intervals.

The full monitoring plan report for "Marine life abundance and diversity surveys for long term monitoring" on St Helena can be found here: **https://www.sainthelena.gov.sh/wp-content/uploads/2013/07/Marine-Life-Abundance-and-Diversity-Survey-for-Long-Term-Monitoring.pdf**

St Helena monitoring lessons learnt:

ISSUE	SOLUTIONS/CONSIDERATIONS
Knowledge of the different species and experience of surveyors	Training course and photo ID quiz before surveyor data used. Comparative counts along same transect by two surveyors and counts compared.
Islanders use local/slang names for fish (e.g. cunningfish for the St Helena butterflyfish) which can lead to confusion between field surveyors using different names	Ideally use scientific names as standardised internationally, however some people may find these difficult to learn in which case tailor the survey form to the surveyor and the names they know (though keep order of species on survey sheet same for all surveyors and ensure species ID known through quiz) so in St Helena there were two survey forms – Såt Helena common names and more global common names – form used depended on what the surveyor was comfortable with.
Analysis of large volumes of data	Dive surveys (especially if they include photo quadrats) can generate huge quantities of data. In St Helena there was limited in-house Government staff capacity to analyse this and so the data was analysed by consultant scientists employed through the Blue Belt program. MSc or PhD students offer another option for evaluating large data sets; however, they will need to be supervised through a university.
Additional costs of monitoring often not budgeted for	Regular servicing and maintenance of dive equipment is necessary for safety of staff, and this cost is often not considered in annual budgets. This was paid for through project funding initially. Also, if there is staff turnover, it is necessary to consider where funding for new people's specific equipment will come from e.g., wetsuits.
Use of volunteers	Often volunteers are keen to be involved and will help in reducing survey costs. Need to ensure any data they collect is accurate and time spent training them is re-paid in terms of number of surveys they can commit to.
Whale sighting data – collected but not analysed, time consuming and no specific management action	Historical regular whale surveys were conducted from shore. However, use of data and repeatability of data was not questioned or the need regularly evaluated. Whilst the surveys were not expensive, they were resource heavy in terms of staff time with no specific output. Data was subsequently analysed to provide species and seasonality of whales around St Helena and used to produce an important policy on coastal development restrictions to minimise impact on whales. The surveys were then halted to allow staff time to be directed to other marine management focus areas. Additional information regarding cetaceans in the area are now collected by citizen scientists i.e. general public can report sightings into a marine records database that St Helena Government can then utilise the information reported. This highlights the need to continually assess long-term data sets, their outputs and robustness alongside options for collecting the data from alternate methods. Future surveys on ad hoc basis could still be conducted if needed based on evidence from citizen science reports and compared against the historic baseline for comparison.

PEOPLE: COMMUNICATIONS

St Helena: Engaging local businesses and communities in whale shark protection

Whale sharks gather in large numbers between December and May around the island of St Helena. These magnificent creatures are not just environmentally important but also a charismatic megafauna that attract tourists to areas where they can be viewed. They represent a major draw to tourism on St Helena, however, to meet with international standards of the IUCN category six MPA that exists around St Helena, interactions with them need to be properly regulated.

The St Helena Government brought in policy to regulate interactions with whale sharks based on global best practise standards, (including only two boats allowed in the area where there have been sightings, only eight people are allowed into the water to interact with an individual shark, and snorkelers must remain at least three meters from the shark, and at least four meters from its powerful tail). Alongside this, a marine tourism accreditation scheme was established which also has benefits for local tour operators who can obtain "green" certification for their company, demonstrating to tourists the environmental ethos of their business and allowing them to charge appropriately for a skilled, environmentally sound tour.

Marketing of whale sharks around St Helena not only helps promote tourism in the area but also raises awareness of the unique biodiversity and environmental importance of the region. Promotion of accredited businesses helps them see the advantages of regulations as a benefit to their company, and fosters a sense of pride in local operators who will also self-police the activity through reporting other businesses who are not complying with regulations.

The whale shark festival draws the crowds to learn about these magnificent creatures that seasonally visit St Helena

St Helena engagement activities:

ACTIVITY	BENEFITS/POINTS OF NOTE	COMMUNITY GROUP REACHED
Local marine team staff presented at international whale shark conference.	Built strong collaborations with renowned international whale shark scientists which led to tagging research and scientific papers on St Helena.	International whale shark scientists.
Marine tourism accreditation for businesses.	Engagement of local businesses and provides them with accreditation to help in their promotion with tourists.	Local businesses and tourists.
Articles in dive magazines.	**http://divemagazine.co.uk/destinations/st-helena/7754-st-helena-whale-sharks**	Global reach, predominantly marine enthusiasts and divers.

ACTIVITY	BENEFITS/POINTS OF NOTE	COMMUNITY GROUP REACHED
Bone shark festival Including 360 virtual reality whale shark experience; Information on science (e.g., how lasers are being used to measure the size of St Helena's whale sharks, and what this means for the population); Q & A sessions with local and visiting marine experts; Marine competitions with prizes; Face painting and a bouncy castle for children.	Wide reaching within community – large turnout and opportunity to promote marine conservation and the MPA at different levels, ages and interest levels. Run annually so people remember it and look forward to the event.	Local community family event.
Marine Awareness week Activities and information on marine species and habitats.	Focussed on island youth.	All local school children.
Scientific papers published e.g. https://www.frontiersin.org/articles/10.3389/fmars.2020.576343/full	Raises global scientific interest for the island. Proves data used in management has been peer reviewed. Raises awareness of research opportunities for visiting scientists which is an economic benefit to the island.	Local and international scientists.

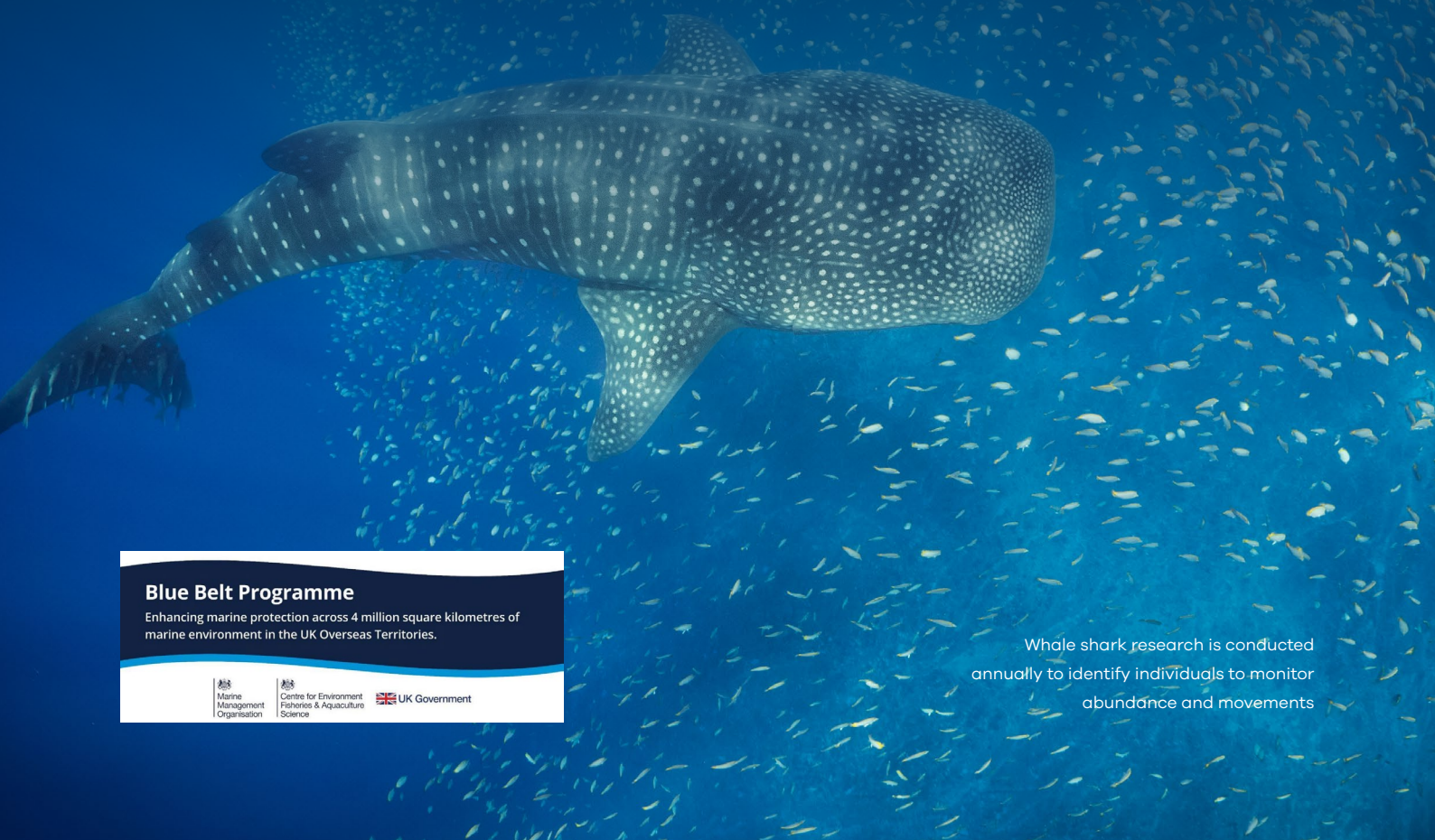
Marine awareness week and the whale shark festival bring together the whole community to learn about, and celebrate, their unique marine biodiversity

ECONOMICS AND FINANCING: SUSTAINABLE FINANCE MODELS

St Helena: Blue Belt Fund

The UK has sovereign responsibility over 16 Overseas Territories which are conservation hotspots, hosting rich biodiversity of species and critical habitats. The NGO community, including Blue Marine, focused strong advocacy work on the UK Government on behalf of these territories, raising awareness of the importance of their natural environments, and the urgent need for financial assistance and designations to ensure their long-term protection.

See **https://www.gov.uk/guidance/the-blue-belt-programme and https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/977844/St_Helena_Blue_Belt** for examples of the UK Government funded Blue Belt program and its outputs for marine conservation progress in the UKOTs. However, with any large-scale funded program, there are potential pitfalls on the way to ensuring that large amounts of available funding are spent effectively and with maximum benefit to the area itself.



Whale shark research is conducted annually to identify individuals to monitor abundance and movements

POTENTIAL ISSUE	SOLUTIONS/CONSIDERATIONS
Large amount of spending off-island, or driven by off-island groups.	Ensure there is good stakeholder engagement and consultation with on-island groups who are responsible for delivering the MPA. This determines what is needed, what questions remain unanswered and what resources are available on island.
Limited on-island capacity. Funding for capital items/ research programs that are long term and require continued staff and financial resources – how will these be continued, maintained and funded in future.	Train on-island staff or provide training programs so staff can learn online in future. Consult with local organisations about in-house capacity and design monitoring programs with this in mind. Consider alternative options for data collection e.g. using technology – Remote Electronic Monitoring (REM) cameras are used in St Helena to monitor fish catches – reduces requirement for observer coverage and collects high quality data
Funding doesn't replace lost revenues within community.	Need to have funding to establish alternative sustainable livelihoods. Help with promotion of sustainable businesses operating within MPA.
Funders may feel Government responsible for all costs of MPA and harder to raise additional funds.	Delineate projects by core that is funded by Government and added value that could attract external funders.

MANAGEMENT: PREVENTING DAMAGING FISHING

St Helena: Pole and line one by one fishing

Traditionally, local fishermen catch tuna around St Helena using pole and line, catching one fish at a time. This culturally important fishing method is very successful as well as being highly sustainable with low impact and no bycatch issues. Working with the International Pole and Line Foundation (IPNLF) and Blue Marine Foundation, local fishermen advocated for all fishing to be one-by-one only, resulting in a government ban on longline fishing (used by the high seas tuna fishing fleet) within St Helenas 200nm Exclusive Economic Zone (EEZ) which is a category six MPA.

The island community have a strong connection with the ocean, pole and line and rock fishing is passed down through the generations

Issues:

Economic pressures on St Helena to become self-sufficient financially puts pressure on the Government to seek external investors and encourage exploitation of the natural resources. Strong local and international advocacy for sustainable fishing methods were paramount to ensure the Government enacted legislation to permit sustainable fishing only. However, lack of data means quotas have been set without full understanding of amount of local residency of the tuna populations on the seamounts around St Helena. St Helena Government have established science protocols for vessels which includes a thorough tagging program to collect data which is essential for stock assessments. This data is paramount to set sustainable quotas into the future that will protect the stocks and local fishermen's livelihoods.

Strong local and international advocacy for sustainable fishing methods were paramount to ensure the Government enacted legislation to permit sustainable fishing only

Solutions:

New fisheries legislation includes one-by-one fishing only so no longlining will be permitted. An updated version of the Marine Management Plan is due to go out for public consultation in 2022 and Government representatives have said it will ensure there are no loopholes for permitting any unsustainable fishing practises.

Regular evaluations of the scientific data by independent reviewers are essential to ensure quotas are established in line with stock assessment data and based on environmental needs not economic ones.

It is important to have international support to raise global awareness of such good fishing practices, and the importance of these traditional fishing methods to local fishermen. Promotion of one-by-one fishing will hopefully also generate a higher value for the catch with ethical consumers. Articles by IPNLF on St Helenas pole and line fishery can be found here: **http://ipnlf.org/search?q=St+Helena.**

Locals fish for tuna with pole and line – only sustainable fishing methods are permitted within the MPA

BLUE MARINE FOUNDATION

3rd Floor South Building,
Somerset House, Strand, London,
WC2R 1LA

+44 0207 845 5850
info@bluemarinefoundation.com
www.bluemarinefoundation.com

BARCLAYS

ST HELENA NATIONAL TRUST