



## Darwin Initiative – Final Report

Project Reference	19-031
Project Title	Mapping St Helena's marine biodiversity to create a marine management plan
Host country(ies)	UK OT ST Helena
Contract Holder Institution	Joint Nature Conservation Committee
Partner Institution(s)	Nature Conservation Division, Environmental Management Department, St Helena.
Darwin Grant Value	£164,150
Start/End dates of Project	Apr 2012 – November 2014
Project Leader Name	Dr Tony Weighell
Project Website	No specific website but posts regarding to this project posted on the SHG government website <a href="http://www.sainthelena.gov.sh/marine-division/">http://www.sainthelena.gov.sh/marine-division/</a> and on <a href="https://www.facebook.com/sthelenaconservation">https://www.facebook.com/sthelenaconservation</a>
Report Author(s) and date	Dr Judith Brown

### 1 Project Rationale



One of the most remote island's in the world, Saint Helena is situated in the South Atlantic Ocean 1200 miles from southern Africa and 1800 miles from South America. The island is 47 square miles and has a sub-tropical climate, which is extremely rich in biodiversity and, due to its geographical isolation, is home to over 500 endemic species. Much is known about the terrestrial environment however the marine environment is relatively poorly studied with a lack of species and habitat inventories. The aims of this project was to redress these knowledge gaps generating detailed habitat and species maps for around the island and hence providing the necessary data for the creation of a Marine Management Plan allowing decisions to be made to sustainably manage St Helena's unique marine environment.

## 2 Project Achievements

### 2.1 Purpose/Outcome

The purpose of this project was “St Helena’s marine environment is better managed and therefore more capable of supporting sustainable tourism and enhanced livelihood potential for St Helena” and it was highly successful in not only delivering all the required targets but also in achieving a wide range of additional outputs which will be of great benefit to the island. Two Ordinances and two policy papers have been passed by council and the “Marine Management Plan” has been approved in principle by councillors. The Marine Management Plan will be enacted once the Environmental Protection Ordinance has been passed (which this project also fed into) (for verification see Government minutes Annex 12). This project has involved large amounts of training of local marine section staff to ensure that the management of the marine environment is continued post project.

Understanding of the species and habitats of the marine environment has been greatly improved with 128 new species records for St Helena having been discovered with at least 14 of these likely to be new species to science (currently being described by taxonomists). The inshore marine habitat has been mapped through both dive surveys and sidescan sonar mapping (see Annex 9 for map).

Several awareness surveys were conducted during the project (general public, marine tour operators, school children and tourists) to ascertain their levels of knowledge and marine awareness and how much they learned from the project. A summary of the surveys are given in Annex 8. Local dive business worked closely with the project manager and marine section throughout the duration of the project, including being involved with the dive surveys. A leaflet on diving and snorkelling good practice guidelines has been published both in print and on the SHG website (<http://www.sainthelena.gov.sh/wp-content/uploads/2013/07/dive-good-practice-email-version.pdf>) and this (along with three other leaflets on seabirds, cetaceans and whale sharks) have been distributed to the marine diving and tour businesses for giving to clients and to put on their websites. An information board has been erected at an important marine site Lot’s Wife’s Ponds providing information to visitors on the species found there.

Surveys were conducted on the artificial reef/wreck sites and data from these was combined with a literature review on the types and requirements of artificial reefs to produce an “Artificial reef report” (<http://www.sainthelena.gov.sh/wp-content/uploads/2013/07/Artificial-reef-report.pdf>).

Detailed habitat mapping has been completed using sidescan sonar and validated using drop down camera and GIS maps of the extent and locations of the habitats are given in Annex 9.

A marine life guide book including marine invertebrates and fish, the breeding seabirds and the wreck sites has been produced (Annex 11) and will be available for sale on St Helena as well as globally. In addition an educational Marine Life of St Helena video was produced and is available to view on the RMS ship to and from St Helena as well as for use in schools and on the local television. A set of stamps including seabirds, whale sharks and marine life has been produced and is available for sale (December 2014).

Underwater visual surveys were conducted all-round the island and data from this was used to establish long-term monitoring sites and details of methodology and requirements for these are given in the “Long term monitoring report” (<http://www.sainthelena.gov.sh/marine-division/>)

For all outputs see Annex 2 – summary of progress against the project logframe.

## **2.2 Goal/ Impact: achievement of positive impact on biodiversity and poverty alleviation**

The project goal was “Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources” with a sub-goal “To provide a marine management plan for St Helena’s shallow marine resources”. This project contributed to this by feeding into a new Environmental Protection Ordinance (EPO) which is currently undergoing public consultation and which includes as a schedule a list of protected species (including all endemic and CMS listed species) and prevents trade in endangered species (CITES). The marine management plan has been approved in principle by councillors and will sit under the EPO once it is enacted. This project has identified 128 new species records for St Helena (with at least 14 of these likely to be new species to science) and where appropriate these, plus the endemic species of St Helena, will be protected under the EPO. A policy paper on interacting with whale sharks, devil rays and cetaceans was written and approved by stakeholders and council and will help protect these species as tourism grows.

The educational material produced by this project will be of interest to tourists and can be used by marine tour operators to help encourage business. For example during the life of this project due to awareness raising regarding interacting with whale sharks the number of trips conducted by commercial tour businesses went from 2 in the first year to over 50 tours the following year after the promotional work had been conducted. The public awareness from this project (including both environmental good practises as well as the richness of St Helena’s waters comprising habitats and species identification) has resulted in more people and more regular diving around St Helena. This will generate income and has been beneficial to the two local dive businesses on island as well as local boat owners.

## **2.3 Outputs**

### **Output 1: Establishment of a marine database**

A reference database and marine bibliography folder (including links to PDF’s) has been created with 264 papers relevant to St Helena and marine issues that are applicable to the island. All historical data records have been checked taxonomically and a database established with species entered onto a database. There were 712 geo-referenced records at 133 sites. Training has been given and training manuals have been prepared for use by staff within the marine section on how to enter data onto and how to use these databases and local marine section staff are competent in using them.

### **Output 2: An electronic folder containing marine benthic data including, marine fauna, flora and habitats**

Three members of the EMD marine team have been trained in species identification and surveying. 150 surveys have been conducted to allow for both spatial and seasonal coverage around the island. Field survey forms and data storage worksheets have been created and are stored on the marine server with a newly established folder system for ease of finding relevant/useful documents.

All marine data from the project is located within one folder with subfolders for the separate areas (e.g. artificial reefs, budget, survey forms, marine science papers, MPA information, sand extraction, species of St Helena, whale sharks etc.).

In addition a waterproof field guide for use within the marine section including photos and names of all species which have been historically found on St Helena has been produced. This manual is updated as and when new species are discovered or identifications come back from taxonomists. Over 11,000 marine photographs have been taken during the project and these have all been stored within a photo-catalogue and are all labelled with location, species, phylum, and given a star rating. These can now be easily sorted for photographs for either identification or educational or publicity purposes. A training manual on how to use the photo

catalogue and how to enter photos onto it has been prepared and training also given to marine section staff.

Output 3: Generation of a series of GIS maps of the distribution and extent of both St Helena shallow marine resources and commercial usage of these resources.

A GIS specialist spent time on St Helena and provided training for all 4 members of the marine team (plus 16 other environmental staff on island). All of the team can now create maps including habitat locations, seabird colony locations and marine species locations/densities (see Project Annual Report 2).

Using fishermen's local knowledge maps have been produced for the distribution of the main locations where they fish for commercial species (Annex 10). Side scan sonar data (validated by drop down camera images) has allowed for the creation of maps of the substrate types and extent in the inshore area around St Helena (Annex 9). This will provide vital baseline information to inform decisions for any future developments or management strategies.

Output 4 i A report on proposed monitoring and management plans (using above outputs as a basis). Including the identification of current and potential future threats.

Two reports have been produced. A long term monitoring report identifies baseline sites for continual monitoring ensuring a range of locations and habitat types are covered. A marine management plan for St Helena has been produced identifying current threats (some of these have been dealt with in the policies and Ordinances delivered as part of this project) and highlighting potential future threats and how to address them (most will be address through new fisheries licensing criteria – both for commercial and sportsfishing and this project has fed into the production of these licensing criteria). The new licensing regime is still undergoing public consultation (led by the Agriculture and Natural Resources Division) and will be completed within the next six months.

Output 4 ii. A marine management plan published consisting of: species and habitats of high conservation importance; proposed monitoring and management plans; potential marine protected areas; sites that would benefit from artificial reefs'. A list of potential marine protected areas. A list of species and habitats of high conservation importance

A marine management plan for St Helena has been produced identifying potential marine protected areas and habitats of high importance. A list has been created of species of high conservation importance which will be included as a schedule in the new Environmental Protection Ordinance (which should come into force in the next 6 months) and will give these species high levels of protection.

Output 4iii. A list of sites that would benefit from artificial reefs, including one for lobster fisheries.

It is currently felt that there is no need for additional artificial reefs (including for lobster) due to sufficient pristine natural habitat around St Helena (as identified by dive surveys). Existing artificial reef/wreck sites have been surveyed. A Protection of Wrecks and Marine Archaeological Heritage Ordinance was prepared and passed by Legislative council. This Ordinance protects the current wrecks and marine life on them by prohibiting sand extraction, spearfishing and removal of artefacts from these locations. An Artificial Reef Report has been produced (and published online on the St Helena Government website) with information regarding current sites and considerations needed prior to creation of any further sites. Evidence from scientific literature provided in this report highlights the need for thorough considerations and planning prior to constructing any artificial reefs and questions their direct benefit to certain species.

Output 4iv. A marine conservation/ promotional communication strategy. Presentations, workshops and leaflets and media coverage. Raised awareness in schools

Numerous public talks, newspaper/newsletter articles and radio interviews have been conducted by the Darwin marine biodiversity project and these are detailed in Annex 7. A communications strategy for the whole of the Environmental Management Division (including the marine section) has been produced (see Annex 8 Annual project report year 2). Marine Awareness Week was conducted in each of the year's of the project focussing on fish and invertebrates, habitats and uses of the marine environment and gave the whole community an opportunity to learn about marine life and marine conservation. Six high school students have been for work experience (several coming for repeat school holidays for the duration of the project). EMD have taken on two apprentices as part of the Government scheme with one spending one day per week with the marine section and the other being 100% based with the marine section. This project has enabled them to become trained in diving, learn species and sample processing and partake in the marine surveys.

### **3 Project Partnerships**

Project partnerships:

Collaboration between JNCC (the UK lead institution), and the Environment Management Division (EMD) of St Helena Government (host country partner) arose from the need of the host country to have assistance in developing marine management on the island. JNCC hosted several workshops during the lifetime of the project – an MPA workshop in UK (Nov 2013) and biodiversity, seabirds, fisheries and marine management workshops in Ascension (June 2014). During these workshops the project manager and local staff worked closely with JNCC gaining training and advice that can be used in the host country and also making vital contacts with other OT's and UK skilled specialists within the marine field. JNCC in collaboration with the South Atlantic Environmental Research Institute have funded a GIS centre based in the Falklands and this project manager visited St Helena and provided training to St Helena staff. One of the GIS expert's employed on the GIS project is based on St Helena and has given training and direct assistance to this project. The post holder will continue to work with the host country for the next 12 months after the life of this project. The challenge lay with the distance between the lead and host country, however effective communication with regular email and telephone communications meant that this was not an issue.

The Project manager spent much time training local staff from the marine team of EMD. Staff from St Helena provided advice to the Darwin funded Ascension Island Marine Surveys biodiversity project on Ascension and this collaborative relationship will continue.

Other collaborators:

The Project established working relationships with numerous taxonomists in various locations worldwide who assisted in identifying marine samples collected on St Helena. These include Drs Michael Schroedl & Vinicius Padula, University of Munich (for Opisthobranchs); Juliana Bahia, University of Munich (for flatworms); Prof Meyer, University of Carolina; Dr Nishi, Japan; Dr Sammy de Grave, Oxford Museum of Natural History (for shrimps); Dr Felix Lorenz, Germany (for Oculids and Conus); Dr Ronald Fricke (for fish); Mr Frank Swinnen, Belgium (for molluscs); Dr Reimer, University of the Ryukyus; Dr Alfonso Ramos, Universidad de Alicante (for ascidians); Ms Beatriz Riveria Universidad Nacional Autónoma de México (for fireworms); Dr Claire Goodwin, Natural History Museum of Northern Ireland (for sponges); Dr. Björn Berning, Upper Austrian State Museum (for bryozoans); Dr Horia Galea, Hydrozoan Research Laboratory, France (for hydroids); Dr Pawson Smithsonian Institution, Washington DC,US (for echinoderms) and Dr Peter Wirtz (all species). Working relationships with these taxonomists will continue after the life of the project with samples being sent to specialists as and when discovered.

The Darwin project part funded the travel of one of the local marine section staff to attend an international conference on whale sharks in Atlanta Georgia. This facilitated the establishment of a great working relationship with many international scientists, as well as resulting in St Helena being given two satellite tags. This relationship with both Mote Marine laboratory and Georgia Aquarium with regards to whale shark research is set to continue into the foreseeable future with both institutions looking to fund scientists to come to St Helena in 2015 as well as providing satellite tags to continue whale shark research. The project manager and one of the marine section staff also participated in the Ascension marine biodiversity survey gaining experience, establishing working relationships with other scientists as well as being valuable additions to the survey team. Three members of staff also attended the JNCC Fisheries and Marine Management workshop and formed strong collaborations with Falkland Islands Fisheries Department, South Georgia Government, the South Atlantic Environmental Research Institute, Tristan da Cunha fisheries department, Ascension Island Conservation team and the Foreign and Commonwealth Office all of whom have agreed to work together sharing expertise and equipment, where feasible, for the benefit of each overseas territory.

On St Helena partnerships between the Marine section EMD with the local dive groups and the fisheries association have gone from strength to strength with numerous stakeholder meetings. They have, and will continue to, input into Policy papers and the management of the marine environment on St Helena.

## **4 Contribution to Darwin Initiative Programme Outputs**

### **4.1 Project support to the Conventions (CBD, CMS and/or CITES)**

This project has helped St Helena Government (SHG) achieve one of the main National Environmental Monitoring Programme (NEMP) targets in creation of a Marine Management Plan (contents page given in Annex 13 – whole document is 43 pages). This project has identified 128 marine species which had not previously been recorded from St Helena and has provided a list of marine species which will be protected under the new Environmental Protection Ordinance. This project has fed into fisheries management on island and has produced two policies and two Ordinances to conserve the marine environment.

### **4.2 Project support to poverty alleviation**

- Did the project contribute to improved human development and welfare?

The project has improved local marine section staff development as it involved two years of training including marine species identification, survey methodology, GIS, sidescan sonar, underwater cameras, and specialised marine software. All three of the marine section and the project manager also represented St Helena at international conferences and presented data derived from the project. For the local staff this was the first time they had done this and the personal as well as career development that this opportunity gave them has assisted in building their confidence and knowledge.

- Did the project lead to greater representation of local poor in management structures of biodiversity?
  - Were there any management plans for biodiversity developed?  
A marine management plan was developed.
  - Were these formally accepted?  
This was approved in principle by councillors (see Annex 12)

- Were they participatory in nature or were they ‘top-down’? How well represented are the local poor in any proposed management structures?

Development of all policies, Ordinances and the Marine Management Plan were fully participatory with many stakeholders meetings and workshops (see Annex 7 for list of meetings held).

- Were there any positive gains in HH income as a result of this project?
  - i. How many HH saw an increase in their HH income?
  - ii. How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?

This was not assessed and was not one of the target outputs of the project; however the marine tourism businesses on island did see an increase in number of people partaking in tours (in particular whale shark trips) as a result of this project. An increase in number of people partaking in learning to dive and recreational diving has increased in the last two years (personal communications with local businesses) – this is likely to partly be due to an increased number of contractors on island, however the awareness raising, try dives and diving events (eg litter clear-ups and marine species ID dives) will have also heightened enthusiasm for diving on island.

### **4.3 Transfer of knowledge**

Did the project result in any formal qualifications?

- i. How many people achieved formal qualifications?
- ii. Were they from developing countries or developed countries?
- iii. What gender were they?

All marine section staff were female and two were from a developing country with one from a developed country. The full time marine apprentice was male, with the part time marine apprentice being female, both from a developing country. The male apprentice received formal PADI dive qualifications allowing him to partake in the marine surveys. No other formal qualifications were delivered, however two years of continuous training and knowledge transfer were provided.

The project manager gave several presentations to the Councillors on island (including on the Marine Management Plan) as well as having a meeting regarding marine management and fisheries with His Excellency the Governor and the deputy Governor. The Councillors were fully supportive when this project presented the two policies and two Ordinances for their consideration and these have all been formally accepted. All policy and Ordinance development were accompanied by a large amount of public engagement from workshops, radio interviews and newspaper articles.

### **4.4 Capacity building**

- i. Did any staff from developing country partners see an increase in their status nationally, regionally or internationally? For example, have they been invited to participate in any national expert committees, expert panels, have they had a promotion at work?
- ii. What gender were they?

Post project the female Marine Conservation Officer has been promoted to Marine Section Manager due to the training she received during this project and the excellent performance and leadership she demonstrated as part of this projects work – in particular she excelled at

representing St Helena at an international conference. As part of the project three of the female marine section staff and the project manager have all presented at international conferences or workshops. This project has increased institutional capacity by establishing and equipping a marine laboratory as well as a large amount of other scientific equipment (including two underwater cameras, a drop down camera and a side scan sonar as well as various software packages). The sales from the marine life guide book and marine life DVD will also be fed back into future marine research.

#### **4.5 Sustainability and Legacy**

Knowledge of the different marine species which can be found on St Helena will be a lasting legacy of this project. Not only has a database been established and held with the Government but an inshore marine life guide book has been published and an educational documentary made meaning this information is readily accessible to the on island scientific staff, general public, tourists and visiting researchers. Scientific publications have been written (and more in draft) which will also leave an international legacy. A first day cover set of marine life stamps has also been produced.

The project has also been responsible for two Government policies, one new and one updated pieces of primary legislation as well as feeding into a large piece of primary legislation the Environmental Protection Ordinance (EPO). A marine management plan has been written with proposed Marine Protected Areas to be designated once the EPO has been enacted.

Three members of the marine section staff who have gained training under this project are permanent employees and they will continue with the work and long term monitoring established under this Darwin project. The resources provided by this project both in terms of capital items and databases and resources will remain with the St Helena Government marine section.

As mentioned in section 3 there have been strong partnerships established during this project which will continue allowing further species found to be identified. There will be a continuation of contacts with individuals from other Overseas Territories, sharing relevant knowledge and resources.

## **5 Lessons learned**

The main lesson learnt from this project is that a two year time frame is very short to achieve all the outputs – especially on remote locations where shipping in people/equipment takes a long time. This project highlighted many other areas of work that need expert input and finances to address the issues and ensure good management of the marine environment. Although this project went a very long way to addressing many of the issues the timeframe to pass new policies and legislations, including the necessary stakeholder engagement to go with introducing new regulations, takes a very long time. The project fed into fisheries management with the project leader sitting on the Fisheries Task Force Group on St Helena however this highlighted this as an area where St Helena needs further funding to develop the fisheries science to ensure sustainably managed fisheries.

There was an initial problem with the proposed methodology, however once the appropriate expertise was employed a suitable change was agreed with Darwin to allow for the outputs to be achieved using the necessary and relevant methodology. This project highlighted the importance of employing not only the right skill set but also personnel who are used to working in small communities to ensure vital stakeholder buy-in.



## **5.1 Monitoring and evaluation**

The initial methodology for this project was changed quite substantially however the final output remained the same. Once the project manager was in place the proposed satellite mapping of St Helena's marine environment was deemed impossible due to the nature of the inshore marine topography. Habitat data was instead collected by sidescan sonar, validated by drop down camera and dive surveys which also meant species diversity and abundance data could also be gathered. The logframe and budget were altered to reflect these changes. Due to the isolation of the island and delay in recruitment the project start was also delayed by 8 months and hence the project was granted an 8 month extension.

The project monitoring and evaluation system provided a good way for the project lead to have fuller written six monthly updates of the project from the project manager on the host country in a formal structure.

All reports produced as part of this Darwin project were evaluated internally and signed off by the head of EMD. These reports were also checked and commented on by the Fisheries section of the Agricultural and Natural Resources Division of SHG. The work was also evaluated externally when it was presented at international conferences and workshops. These opportunities to have the work reviewed were very useful, in particular the external feedback during international workshops allowed for ideas and knowledge from experts from other countries to be fed into the project. All evaluations indicated strong support for the work of this project and the comments and ideas raised were included in the final documents.

## **5.2 Actions taken in response to annual report reviews**

All issues raised within the annual reports have been addressed in the following half year/annual report. The request to report against outputs 4i and 4ii has been addressed in this report (these were outputs which were only due for completion once others areas of work had been finalised but these are now all complete). All reports were discussed by teleconference between JNCC and the host country.

## **6 Darwin identity**

The Darwin logo has been used on all published material (leaflets, posters, interpretation board, marine life guide book, marine educational DVD) as well as in newspaper articles. When radio interviews were given reference was always given to the work being funded by the Darwin Initiative. The project was always referred to as the Darwin marine biodiversity and mapping project however it also fed into the larger work remit of the marine section of the Environmental Management Division.

Due to the small population of St Helena and large outreach of the project a large percent of people on island will be familiar with the Darwin Initiative from Government staff, councillors, the general public, school children and stakeholders for the project. As staff presented at international conferences/workshops as part of this project the Darwin logo featured on all presentations given and the Darwin Initiative formed part of the introduction to each talk to identify how the work had been funded.

## **7 Finance and administration**

### **7.1 Project expenditure**

The project was altered from the initial proposal (including revised budget which was approved by Darwin) as initially the habitat mapping was to be conducted using satellite imagery. This would not be feasible on St Helena's rugged coastline as the depth drops off quickly. Underwater visual surveys were combined with sidescan sonar and dropdown camera work to give a more accurate picture of the marine habitats and the species abundance and diversity in St Helena's waters. Staff time for a GIS specialist was reduced from £30k to one month's salary as most of the GIS specialist post was match funded by a separate GIS project funded by JNCC through SAERI.

Project spend since last annual report	2012/14 Grant (£)	2012/14 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				Underspend as were given alternate funding for travel to workshop
Operating Costs				
Capital items (see below)				
Others (see below)				Underspend as poor weather prevented as much boat hire as budgeted for
<b>TOTAL</b>	<b>£164,150</b>	<b>£152,447.38*</b>	<b>-7.1</b>	Underspend as poor weather prevented as much boat hire as budgeted for

Staff employed (Name and position)	Cost (£)
Dr Judith Brown (Darwin marine biodiversity project manager)	
Divers (temporary contracts)	
GIS specialist	
<b>TOTAL</b>	

Capital items – description	Capital items – cost (£)
Laptop for Project manager Laptop for lab Underwater cameras and housings fibre optic lights microscopes for laboratory camera and adaptor for microscope side scan sonar drop down camera computer software Adobe lightroom, design Oxygen first aid kit ID books hand held depth sounder Dive/scientific equipment Vehicle Hard drive for storing images etc x 2	
<b>TOTAL</b>	

Other items – description	Other items – cost (£)
Consumables setup of laboratory fuel /car insurance ID marine samples including posting Job advertising Publication of literature, movie* Media advertising local Audit Side scan sonar software training in side scan sonar Hire of Boats (including use of SSS)	
<b>TOTAL</b>	

\* Still awaiting cost of shipping marine life guide book as currently with printers

#### Additional funds or in-kind contributions secured

This project also sourced extra funding where possible from other external bodies to increase the value of this project and also by building strong collaborations with other institutions a large amount of taxonomic work was done for free (amounting to a large amount of in kind staff time) and several pieces of equipment were donated to the marine section of St Helena Government.

Source of funding for project lifetime	Total (£)
SHG (office overheads, fieldwork costs – use of SHG 32 vehicle including fuel, consumables), staff time – marine section staff x 3, administration & finance staff, management time	
JNCC funding for conferences/workshops (Ascension biodiversity project assistance and training; UK MPA workshop; Atlanta Georgia International whale shark conference attendance; Ascension Fisheries MPA workshop) etc, staff time project lead	
Free satellite tags (and other equipment) given to SHG from Atlanta Georgia aquarium and Mote Marine laboratory	
Enterprise St Helena contribution to Marine Awareness Week, training in Geoeye fisheries software; seabird monitoring	
<b>TOTAL</b>	<b>£34,100</b>

Taxonomic expertise free of charge from:

Opisthobranchs - Drs Schroedl & Padula, University of Munich; Flatworms – Ms Bahia, University of Munich Fireworms - Ms Riverea Universidad Nacional Autónoma de México , Crinoids- Prof Meyer, University of Carolina; Sabellariids - Dr Nishi, Japan; Shrimps - Dr de Grave, Oxford Museum of Natural History; Crabs - Dr Paul Clark Oxford Museum of Natural History, Oculids and Conus - Dr Lorenz, Germany; Micromolluscs- Mr Swinnen, Belgium; Zoanthids - Dr Reimer, University of the Ryukyus; Hydroids - Dr Galea, Hydrozoan Research Laboratory, France; Ascidians - Dr Ramos, Universidad de Alicante; Bryozoans - Dr. Björn Berning, Upper Austrian State Museum); Fish and sample collection – Dr Peter Wirtz and Peter Nahnke (both self-funded themselves to visit St Helena to help collect samples).

<b>Source of funding for additional work after project lifetime</b>	<b>Total (£)</b>
Marine life guidebook sales	
GIS project funded by JNCC – continues habitat mapping work	
<b>TOTAL</b>	<b>£75,000</b>

## **7.2 Value for Money**

St Helena Government has a stringent procurement process which entails getting several quotes and ensuring value for money of all services/products purchased and these regulations were adhered to for all items/services acquired under this project. Several items which were purchased had been used by other Overseas Territories and so were recommended as good value and high quality.

# Annex 1 Project's full logframe, including indicators, means of verification and assumptions.

**Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.**

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p><b>Sub-Goal:</b>  <b>To provide a marine management plan for St Helena's shallow marine resources.</b></p>			
<p><b>Purpose</b>  St Helena's marine environment is better managed and therefore more capable of supporting sustainable tourism and enhanced livelihood potential for St Helena</p>	<p>A management plan for St Helena's marine environment is published and accepted for implementation by end of project.</p> <p>Awareness within local population of the importance of a well managed marine environment is increased by end of project.</p> <p>Local dive businesses show evidence from Darwin project in conducting sustainable dive tourism in the marine environment by end of project.</p>	<p>Minutes of Govt. meetings show management plan is approved and sanctioned for use.</p> <p>Awareness survey results from start to end of project show improved awareness – at least a 30% increase in number of people aware.</p> <p>Minutes from meeting on sustainable use of the marine environment. Published "Dive Responsibly" leaflet embodies key recommendations from MMP.</p>	<p>Staff are available are capable and willing to be trained.</p> <p>There are species of conservation importance e.g. endemic species</p> <p>Throughout the project sufficient information has been collated to produce a report.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>Increased level of visitor awareness of marine management issues (as incorporated into MMP) amongst visiting tourists. Evidence of tourists keen to return to St Helena or recommend St Helena as a dive destination.</p> <p>Increased level of awareness of marine management issues (as incorporated into MMP) amongst tour operators and the value of such in promoting sustainable tourism</p> <p>Surveys conducted to examine the benefit of different types of artificial reef both through a literature review and dive surveys.</p> <p>A marine life guide to St Helena is published which also includes a dive site guide</p> <p>Establish long –term monitoring sites.</p>	<p>Awareness surveys of visitors to the island to establish level of awareness prior to and at end of project show increased awareness of marine issues. Surveys show an increased number of tourists keen to return to St Helena or recommend as dive destination.</p> <p>Survey of tour operators promoting St Helena tourism to establish level of awareness concerning nature and value of effective marine management in the context of promoting sustainable tourism.</p> <p>Fish survey data analysed and report on comparison of fish numbers (including commercial species) between areas near and on artificial reefs produced</p> <p>Book published highlighting vast diversity of the St Helena marine life and also importance of good marine management</p> <p>Set dive sites established for long-term monitoring of increases in fish numbers.</p>	<p>There is an appetite for marine conservation amongst stakeholders</p>
<p><b>Outputs</b></p> <p>1. Establishment of a marine database that contains all existing known material on the marine resources of St Helena</p>	<p>The database is fully populated with all existing material within 12 months of project start up.</p>	<p>Copy of database available</p>	<p>Data/location of data is accessible (via various routes)</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>Data mining, of all existing marine records within 12 months of project start up and referenced and stored in a standardised electronic format.</p> <p>Meetings with stakeholders to research available data regarding sea users.</p> <p>Data management systems is functioning and can receive, store and retrieve all existing and new data.</p>	<p>Dedicated file containing bibliography. Commercial data collated /purchased (receipts for purchased commercial data)</p> <p>E-mail/ meeting appointments with stakeholders.</p> <p>The data management system is routinely utilized for data management staff trained and are competent and confident in all aspects of data management system.</p>	<p>Stakeholders provide data/ location of data</p> <p>Stakeholders will regularly attend meetings.</p> <p>Project manager has sufficient data management experience. Marine recorder can be adapted to St. Helena.</p>
<p>2. An electronic folder containing <sup>1</sup> marine benthic data including, marine fauna, flora and habitats</p>	<p>Recruitment of volunteers/ expert at project commencement</p> <p>Training of staff/locals in identification and specimen collection. Construction of field survey forms and data storage templates designed, to be compatible with GIS software</p> <p>60 surveys undertaken and data collated</p> <p>Datasheets containing marine data located in one folder.</p>	<p>Volunteers/ contractors in place Contract for volunteers / expert.</p> <p>Interested parties obtain certificate of attendance at course. Survey forms laminated and ready to use and data templates compatible with GIS.</p> <p>Completed surveys forms and data stored in a standardised format</p> <p>Referenced data sheets within folder, completed and accessible within marines section.</p>	<p>Volunteers or an expert can be recruited to undertake works at start of project. Initial preparation undertaken.</p> <p>Marine conservation staff and personnel are interested in attending course.</p> <p>Surveys will be undertaken during non-rainy season.</p>

<sup>1</sup> Changed from collation to collection – this was an error in stage 1 application – should have read collection originally (see linked indicators etc).

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>3. Generation of a series of GIS maps of the distribution and extent of both St Helena shallow marine resources and commercial usage of these resources.</p>	<p>Maps of the extent and distribution of marine resources are produced. A list of maps will be made available.</p> <p>Training for up to 3 marine staff in GIS to sufficient level of competency to use data systems available within 18 months of project startup.</p> <p>Staff will be capable of undertaking mapping exercises with limited outside support by end of project. Less reliance on off-island support for GIS mapping.</p>	<p>Electronic maps to be published within project report (and potentially on website) and open source</p> <p>Certificates of attendance</p> <p>On island generation of maps and other outputs.</p>	<p>Permission is granted to publish maps on Government web site. Internet infrastructure is able to withstand large images</p> <p>Staff attend course</p>
<p>4 i A report on proposed monitoring and management plans (using above outputs as a basis). Including the identification of current and potential future threats.</p>	<p>Recommendations for management plans using evidence from outputs of surveys provided.</p> <p>Stakeholder discussions on best monitoring and management tools.</p>	<p>Stand-alone paper, protocols and project report.</p> <p>Marine management plans produced to include identification of local and sports fishing areas and identify requirements for marine Environmental Impact Assessments in particular the provision of mitigation measures under the 'polluter pays' principle.</p> <p>Guidance for divers and sea-users on sensitive biodiversity hotspots and recreational areas produced.</p> <p>Meeting agendas and meeting minutes including any agreements circulated.</p>	<p>St Helena will be provided with information on the range of management tools.</p> <p>Monitoring and management protocols will be fit for purpose.</p>



Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>4 ii. A marine management plan published consisting of: species and habitats of high conservation importance; proposed monitoring and management plans; potential marine protected areas; sites that would benefit from artificial reefs'</p> <p>A list of potential marine protected areas</p> <p>A list of species and habitats of high conservation importance</p>	<p>List of candidate sites</p> <p>List of species and habitat including those of commercial and conservation importance 6 months after survey completion</p>	<p>Publication of report</p> <p>Published list of marine species of conservation importance to national and where applicable, international databanks</p>	<p>Outputs from point 4 i are achieved</p> <p>Correct interpretation and application of existing national and international criteria e.g. IUCN/ BAP</p>
<p>4 iii. A list of sites that would benefit from artificial reefs, including one for lobster fisheries.</p>	<p>List of candidate sites.</p>	<p>An artificial reef monitoring plan report with recommendations on use of artificial reefs for tourist purposes e.g. set up snorkel/ dive trail. Use drop down camera/ video for tourist information</p>	<p>There are sites that can be used for the location of artificial reefs for the benefit of lobster fisheries</p>
<p>4 iv. A marine conservation/ promotional communication strategy. Presentations, workshops and leaflets and media coverage. Raised awareness in schools</p> <p>Stakeholder engagement strategy developed and implemented to achieve agreement on proposed management strategy</p>	<p>Stakeholder workshops undertaken regularly through the project with groups including fishers, tourism groups, wider community, government, industry</p> <p>Agreement reached on management strategies outlined by each stakeholder group by end of project. .</p> <p>Overall agreement reached on the management plan by end of project.</p>	<p>Workshop meeting minutes</p> <p>Workshop meeting minutes Letter to Ministry of Environment endorsing management strategies from each stakeholder group</p> <p>Government Meeting Minutes – HANSARD or equivalent for St Helena.</p>	<p>Local and international media will be interested in publishing marine/project updates</p> <p>Workshops will be well attended School children will be interested in learning about St Helena's marine environment and participate in activities</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>School children in St Helena show greater understanding and awareness of marine environment with measurable increase from start to end of project.</p>	<p>Management Plan published on St Helena Govt. website.</p> <p>Awareness survey undertaken at start and end of project. shows measurable increase in awareness in school children aged from 10-12.</p>	

## Annex 2 Report of progress and achievements against final project logframe for the life of the project

Note: For projects that commenced after 2012 the terminology used for the logframe was changed to reflect DFID's terminology.

Project summary	Measurable Indicators	Progress and Achievements April 2012 - November 2014
<p><b>Goal:</b> <i>Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</i></p> <p><b>Sub-Goal:</b> To provide a marine management plan for St Helena's shallow marine resources</p>		<p>Large positive changes have occurred in regard to attitude towards the marine environment. Marine tour operators in particular are now strongly advertising sustainable tourist activities Changes within the St Helena community with regard to biodiversity include positive feedback and buy in to a policy on interacting with marine species. This project has fed into fisheries licensing including adding environmental conditions to the fishing licences.</p>
<p><b>Purpose</b> St Helena's marine environment is better managed and therefore more capable of supporting sustainable tourism and enhanced livelihood potential for St Helena</p>	<p>A management plan for St Helena's marine environment is published and accepted for implementation by end of project.</p> <p>Awareness within local population of the importance of a well managed marine environment is increased by end of project.</p> <p>Local dive businesses show evidence from Darwin project in conducting sustainable dive tourism in the marine environment by end of project.</p>	<p>Two policy papers have been produced and passed through public consultation and councillors have approved. Two pieces of primary legislation have been passed through public consultation and councillors have approved and these are now in force. A marine management plan has been produced and taken to public consultation including a workshop. This has been approved by councillors on the Environmental and Natural Resources committee to be taken forward once the Environmental Protection Ordinance is enacted.</p> <p>A huge amount of public awareness has been conducted during the two years. An initial awareness survey showed public knew most about St Helena's terrestrial environment but due to this project's large amount of publicity the public awareness has been raised significantly. Awareness survey conducted at the end of the project showed an increased awareness of the marine environment.</p> <p>Discussions with dive businesses' show great enthusiasm for sustainable management. Both operators partook in the marine surveys. Workshop held on marine life and sustainable marine management and "Marine packs" including guides, current marine legislation and information leaflets (including Dive sustainably) given to all marine tourism operators. Information leaflets produced for tourism on importance of marine environment. Sub Tropic Adventures is using information provided by this project to advertise good dive practises on their web site</p>

Project summary	Measurable Indicators	Progress and Achievements April 2012 - November 2014
	<p>Increased level of visitor awareness of marine management issues (as incorporated into MMP) amongst visiting tourists. Evidence of tourists keen to return to St Helena or recommend St Helena as a dive destination.</p> <p>Surveys conducted to examine the benefit of different types of artificial reef both through a literature review and dive surveys.</p> <p>A marine life guide to St Helena is published which also includes a dive site guide</p>	<p>(<a href="http://www.stsa.co.sh/">http://www.stsa.co.sh/</a>).</p> <p>Successful litter clear-ups (shoreline and underwater) conducted with both dive tour operators, the dive club and numerous volunteers from the community</p> <p>Questionnaire to tourists on reasons to visit St Helena now includes marine tourism questions. Tourism surveys showed those who partook in diving or snorkelling rated them 4 or 5 out of 5.</p> <p>Baseline dive surveys on wrecks/artificial reef conducted. Report produced (including literature review) on Artificial reefs including review of pros and cons and requirements for any future construction of reefs</p> <p>A marine life of St Helena guide book has been produced and published for general public and tourists as well as researchers. A further waterproof guide to all species present in St Helena's waters produced for local staff and copies given to all marine tourism operators.</p>
<p><b>Output 1.</b> Establishment of a marine database that contains all existing known material on the marine resources of St Helena</p>	<p>The database is fully populated with all existing material within 12 months of project start up.</p> <p>Data mining, of all existing marine records within 12 months of project start up and referenced and stored in a standardised electronic format.</p> <p>Meetings with stakeholders to research available data regarding</p>	<p>Reference database established with 264 papers found and entered (including links to PDF's).</p> <p>Historical data records have been checked taxonomically 634 species entered onto a database including 71 algae, 195 molluscs, 42 echinoderms, 156 fish, 19 cnidaria, 33 Bryozoa, 69 Formanifera and 45 crustaceans. There were 712 geo-referenced records at 133 sites.</p> <p>Questionnaire issued to local community (with 130 completed) regarding how people use the local marine environment. Meetings with local</p>

Project summary	Measurable Indicators	Progress and Achievements April 2012 - November 2014
	<p>sea users.</p> <p>Data management system is functioning and can receive, store and retrieve all existing and new data.</p>	<p>fishermen on areas used and which species targeted. Meeting with sand extraction operator to establish quantities of sand pumped and information regarding their business.</p> <p>System established for recording all metadata and sharing with other research organisations. Training in importance of data collection and storage. Survey data entered in set format. JNCC Marine Recorder system loaded, training manual produced and data entered.</p>
<p><b>Output 2.</b> An electronic folder containing marine benthic data including, marine fauna, flora and habitats</p>	<p>Recruitment of volunteers/ expert at project commencement</p> <p>Training of staff/locals in identification and specimen collection. Construction of field survey forms and data storage templates designed, to be compatible with GIS software</p> <p>60 surveys undertaken and data collated</p> <p>Datasheets containing marine data located in one folder.</p>	<p>Project manager recruited (22<sup>nd</sup> November 2012) and paid divers and volunteers recruited.</p> <p>Local marine team have received training in specimen collection and identification, field surveys, use of scientific equipment, data collection. Field survey forms produced and data storage systems established and are compatible with GIS.</p> <p>Training surveys undertaken and 150 monitoring surveys conducted</p> <p>Marine data all located within one folder. Marine section folder on server sorted into easy to use folders.</p>
<p><b>Output 3.</b> Generation of a series of GIS maps of the distribution and extent of both St Helena shallow marine resources and commercial usage of these resources.</p>	<p>Maps of the extent and distribution of marine resources are produced. A list of maps will be made available.</p> <p>Training for up to 3 marine staff in GIS to sufficient level of competency to use data systems available within 18 months of project startup.</p>	<p>GIS maps of distribution and density of marine species, locations of commercial fish species, locations of wrecks, locations of rockfishing sites, seabird nesting areas all produced in QGIS. Inshore marine habitat map produced using data from sidescan sonar and validated using drop down camera.</p> <p>Project manager, 3 marine section staff (plus 16 other staff from Environment and GIS departments) trained in GIS (see Appendix in Annual report 2 for certificates of attendance).</p>

Project summary	Measurable Indicators	Progress and Achievements April 2012 - November 2014
	Staff will be capable of undertaking mapping exercises with limited outside support by end of project. Less reliance on off-island support for GIS mapping.	Each staff member has produced a map for an area of the marine section work.
<b>Output 4i.</b> A report on proposed monitoring and management plans (using above outputs as a basis). Including the identification of current and potential future threats.	Recommendations for management plans using evidence from outputs of surveys provided.  Stakeholder discussions on best monitoring and management tools.	A report “Marine life abundance and diversity surveys for long term monitoring” produced documenting future and long-term monitoring requirements. A Marine Management Plan for St Helena produced.  Stakeholders involved in all stages of the project from helping with collecting survey data to inputting into policies and legislation.
<b>Output 4ii.</b> A marine management plan published consisting of: species and habitats of high conservation importance; proposed monitoring and management plans; potential marine protected areas; sites that would benefit from artificial reefs’  A list of potential marine protected areas  A list of species and habitats of high conservation importance	List of candidate sites  List of species and habitat including those of commercial and conservation importance 6 months after survey completion	A Marine Management Plan (MMP) for St Helena produced and approved in principle by Councillors on the Environmental committee – to be taken forward one Environmental Protection Ordinance (EPO) has been passed (as MMP will sit under this). A species list has been proposed for the EPO of marine species of high conservation importance in particular including all endemic species.  Potential Marine Protected Areas are proposed within the MMP.  Species list for protection under EPO created. Habitats for extra protection included within MMP. Habitats protected under Protection of wrecks Ordinance and within Spear guns control Ordinance which this project was responsible for writing and passing through Council.
<b>Output 4iii.</b> A list of sites that would benefit from artificial reefs, including one for lobster fisheries.	List of candidate sites.	New Ordinance passed through LEGCO to protect existing artificial reefs (wrecks sites) and form regulations on construction of new artificial reefs. It is felt that there is enough natural pristine habitat for lobsters and that creation of artificial reefs (especially from old cars) is not necessary.  Report produced on Artificial reefs including review of pros and cons and requirements for any future construction of reefs

Project summary	Measurable Indicators	Progress and Achievements April 2012 - November 2014
<p><b>Output 4iv.</b> A marine conservation/promotional communication strategy. Presentations, workshops and leaflets and media coverage. Raised awareness in schools</p>	<p>Stakeholder workshops undertaken regularly through the project with groups including fishers, tourism groups, wider community, government, industry</p> <p>School children in St Helena show greater understanding and awareness of marine environment with measurable increase from start to end of project.</p>	<p>A communications strategy for St Helena Government has been produced (see Annex 8 Annual project report year 2). Numerous stakeholder meetings were undertaken (see Annex 7 below).</p> <p>Spider diagrams of children's knowledge of marine environment undertaken (Annex 8). Large amount of work undertaken to raise awareness in children including assemblies, work experience, Marine Awareness week.</p>

## Annex 3 Standard Measures

Code	Description	# of people receiving training/qualifications		
		Total	# of people from developing countries	# male/female
<b>Training Measures</b>				
1a	Number of people to submit PhD thesis	0		
1b	Number of PhD qualifications obtained	0		
2	Number of Masters qualifications obtained	0		
3	Number of other qualifications obtained	0		
4a	Number of undergraduate students receiving training	0		
4b	Number of training weeks provided to undergraduate students	0		
4c	Number of postgraduate students receiving training (not 1-3 above)	0		
4d	Number of training weeks for postgraduate students	0		
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification( i.e. not categories 1-4 above)	3	2	0/3
6a	Number of people receiving other forms of short-term education/training (i.e. not categories 1-5 above)	20	16	11/9
6b	Number of training weeks not leading to formal qualification	64	3	0/3
7	Number of types of training materials produced for use by host country(s)	6 (DVD, reports, manuals, databases, book, scientific papers)		



Research Measures		Total #	Comments where necessary
8	Number of weeks spent by UK project staff on project work in host country(s)	0	Project manager spent time in UK with UK project staff before and during an MPA workshop
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s)	1 marine management plan	Was it participatory? yes
10	Number of formal documents produced to assist work related to species identification, classification and recording.	2	1 full species photo identification guide 1 marine inshore marine life guidebook
11a	Number of papers published or accepted for publication in peer reviewed journals	3	At least a further 3 to be submitted
11b	Number of papers published or accepted for publication elsewhere	0	
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	2	Species list and find database Marine papers reference manager
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country	1	Library of scientific papers
13a	Number of species reference collections established and handed over to host country(s)	1	Marine species reference collection established
13b	Number of species reference collections enhanced and handed over to host country(s)		

Dissemination Measures		Total #	Comments where necessary
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	4	2 x week long Marine awareness weeks (involving all schools and general public) Workshop for marine tour operators On island Marine Management Plan workshop
14b	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated.	8	Training and fieldwork for Mapping marine biodiversity in Ascension project in Ascension International whale shark conference, USA MPA workshop, UK Biodiveristy workshop, Ascension Seabird workshop, Ascension Fisheries workshop (2 presentations), Ascension Marine management workshop (1 presentation), Ascension Elasmobranch society conference – present St Helena whale shark data, USA

Physical Measures		Total #	Comments where necessary
20	Estimated value (£s) of physical assets handed over to host country(s)	£40,000	
21	Number of permanent educational, training, research facilities or organisation established	1	1 laboratory set up
22	Number of permanent field plots established	44	22 to be done twice per year, 22 to be done once per 5 years
23	Value of additional resources raised for project (See Section 8.2 above)		

## Annex 4 Aichi Targets

	<b>Aichi Target</b>	<b>Tick if applicable to your project</b>
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	✓
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved	

	and sustained.	
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	
14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	✓
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

## Annex 5 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. contact address, website)
Journal	Cyphoma eludens n. sp. - spectacular new Ovulid from the Atlantic Ocean (Gastropoda: Ovulidae) Lorenz, F and Brown, J. 2014	German	German	Male	Conchylia Magazine	
Journal	Evidence that St Helena island is an important multi-use habitat for whale sharks, <i>Rhincodon typus</i> , with the first description of mating in this species Clingham, E; Brown, J; Henry, L, Beard, A; Dove, 2014	St Helenian	St Helena	Female		
Journal	Fireworms (Amphinomidae: Annelida) from Ascension and Saint Helena Island, Central South Atlantic. Yáñez- Rivera, Beatriz and Brown, Judith	Mexican	Mexico	Female	Marine Biodiversity Records	
Book* (see Annex 11)	Marine life of St Helena, Brown, J, 2014	British	St Helena	Female	Naturebureau publishing	
DVD	Remote, The Marine life of St Helena, educational movie 2014	St Helenian	St Helena	Male	Vision Media Ltd	

## Annex 6 Darwin Contacts

<b>Ref No</b>	19-031
<b>Project Title</b>	Mapping St Helena's marine biodiversity to create a marine management plan
<b>Project Leader Details</b>	
Name	Dr Tony Weighell
Organisation	JNCC
Role within Darwin Project	To provide advice to the project manager in the host country
Address	Monkstone House, City Road, Peterborough, Cambridgeshire PE1 1JY
Phone	
Fax/Skype	
Email	
<b>Partner 1</b>	
Name	Dr Judith Brown
Organisation	Environmental Management Division, St Helena Government
Role within Darwin Project	Manager of project on the ground, responsible for on island staff training, conducting research, producing reports
Address	Essex House, Jamestown, St Helena
Fax/Skype	
Email	
<b>Partner 2 etc.</b>	
Name	
Organisation	
Role within Darwin Project	
Address	
Fax/Skype	
Email	

## Annex 7 Record of publicity for Darwin project

### Newspaper articles

1. November 2012 EMD monthly newsletter – article introducing Project manager and brief outline of Darwin marine biodiversity project (article also in Sentinel 29<sup>th</sup> Nov and Independent 30<sup>th</sup> Nov)
2. December 2012 article on 1000<sup>th</sup> dive and information on the Project manager in EMD quarterly newsletter
3. January 2013 EMD monthly newsletter – Darwin marine biodiversity project update (article also in Sentinel 28<sup>th</sup> Jan and Independent 29<sup>th</sup> Jan)
4. February 1<sup>st</sup> 2013 Article on whale sharks including biology (article in Independent)
5. 8<sup>th</sup> March – St Helena Government report on marine awareness week
6. March 2013 EMD monthly newsletter –Project update – Mollusc March (article also in Sentinel and Independent – both 28<sup>th</sup> March)
7. March 2013 EMD quarterly newsletter - Darwin marine biodiversity project update (Molluscs)
8. April 2013 EMD quarterly newsletter - Darwin marine biodiversity project update (surveys)
9. May 2013 EMD monthly newsletter –Article on *Astropecten variegatus* – (article also in Sentinel and Independent – 23<sup>rd</sup> and 24<sup>th</sup> May)
10. June 2013 Blog for Darwin work on Ascension marine biodiversity – training for local St Helena staff, also included in EMD monthly newsletter (article also in Sentinel and Independent )
11. June 2013 – Article for Ascension conservation quarterly magazine
12. July 2013 – submitted to Darwin newsletter - Darwin marine biodiversity project update
13. September 2013 EMD monthly newsletter – seabird tracking, marine sightings scheme, Underwater blasting and Darwin marine project update including bryozoans – (article also in Sentinel and Independent – 26<sup>th</sup> and 27<sup>th</sup> September)
14. January 2014 – whale shark tagging (article in Sentinel and Independent)
15. 21<sup>st</sup> February 2014 – SHG newswire – article on work of marine conservation assistants and how it feeds into Darwin project
16. March 2014 St Helena Ambassador newsletter – summary and feedback from Marine Awareness Week and fishing festival
17. March 2014 Quarterly newsletter from Ascension Island Government. GIS training on Ascension and St Helena
18. April 2013 – Article on unusual fish sightings around St Helena and importance of reporting species finds (Sentinel 30<sup>th</sup> April 2014)
19. 2<sup>nd</sup> May 2014 – online OT and CD News Bulletin 11 JNCC – highlighting working relationship with JNCC and Darwin marine biodiversity project
20. 15<sup>th</sup> May 2014 – Article on shrimps of St Helena
21. 15<sup>th</sup> May 2014 – Article on protection of wrecks in St Helena waters
22. 26<sup>th</sup> and 27<sup>th</sup> June EMD monthly newsletter Fish species of St Helena – total numbers and new records
23. 17<sup>th</sup> and 18<sup>th</sup> July 2014 Spear guns control Ordinance Public notice (in Sentinel and Independent)
24. 29<sup>th</sup> August 2014 SHG Government newsletter Ambassador – Marine Management Plan for St Helena
25. 29<sup>th</sup> August 2014 Darwin project summing up and outputs in the Independent newspaper
26. 4<sup>th</sup> September 2014 Darwin project summing up and outputs in the Sentinel newspaper

## Record of talks/events done for Darwin marine biodiversity project

1. 7<sup>th</sup> December 2012 – talk/dissection/marine invertebrate display to Prince Andrew secondary school (Marine biology and fisheries as a career)
2. 22<sup>nd</sup> Jan Public talk on Darwin marine mapping and biodiversity project at the St Helena Museum
3. 18<sup>th</sup>, 20<sup>th</sup>, 21<sup>st</sup> February Marine Awareness Week talk at each Primary school (given by Elizabeth Clingham) including Darwin marine biodiversity project
4. 22<sup>nd</sup> February Darwin marine biodiversity project including Marine Awareness Week talk at Prince Andrew Secondary school
5. 23<sup>rd</sup> February-1<sup>st</sup> March – Marine Awareness Week – including Darwin marine biodiversity project dive at Munden’s Point; Darwin marine biodiversity corner in conference hall; guided marine invertebrate tour to all who came to the Marine Awareness Week conference hall (including all school children); and public talk on the 1<sup>st</sup> March.
6. 20<sup>th</sup> March NRDEC talk to councillors– introduction to the Darwin marine biodiversity project
7. 18<sup>th</sup> April EMD stakeholder forum – Darwin marine mapping project working with stakeholders talk. EC&JB
8. 25<sup>th</sup> April 2013 LH &EC Marine awareness at Ruperts Bay with Hartford Primary school
9. 7<sup>th</sup> June 2013 Talk at Conservation workshop in Ascension on Mapping marine biodiversity in the Overseas territories
10. 13<sup>th</sup> June 2013 Community talk in Ascension on Mapping marine biodiversity in the Overseas territories
11. 19<sup>th</sup> June 2013 Talk on the RMS on marine life of St Helena including seabirds and cetaceans (JB &EC)
12. 28<sup>th</sup> September 2013 Talk on the RMS EC
13. 9<sup>th</sup> October 2013– Talk on whale sharks of St Helena by EC at International Whale Shark conference
14. 18<sup>th</sup> October 2013– Talk on whale sharks of St Helena by EC at Mote Marine Laboratory Florid
15. 6<sup>th</sup> November 2013 - Presentation with year 5/6 students at St. Pauls Primary School– Coastlines and impacts of humans (LH)
16. 13<sup>th</sup> November 2013- Presentation with year 5/6 students at Pilling Primary School– Coastlines and impacts of humans. Did demonstration on Surveying beaches etc to support school outing to Sandy Bay Beach. (EC)
17. 22<sup>nd</sup> November 2013- School Assembly PAS (Year 7) 22/11/2013 – St. Helena’s Whale Sharks (EC)
18. 27<sup>th</sup> November 2013 - Fisheries Science Demonstration
1. 2<sup>nd</sup> December 2013 -Presentation to ENRDC– Whale Shark conference etc (EC) and seabird tracking update (AB).
19. 23<sup>rd</sup> January 2014 - Presentation to ENRDC– Whale Shark and cetaceans interactions policy
20. 23<sup>rd</sup> January 2014 -Presentation to Prince Andrew School assembly on marine biodiversity Prof Dr Peter Wirtz
21. 30<sup>th</sup> January 2014- talk at museum - Prof Dr Peter Wirtz on marine biodiversity of Sao Tome and St Helena
22. 6<sup>th</sup> February 2014 Presentation to Prince Andrew School assembly on whale sharks (EC)
23. 12<sup>th</sup> February 2014 – Prince Andrew school lesson on Marine biodiversity and research (EC)
24. 14<sup>th</sup> February 2014 – Prince Andrew school lesson on Marine biodiversity and research (EC)
25. 17<sup>th</sup> March – Ocean habitats and marine resource use talk at Pilling Primary school
26. 18<sup>th</sup> March – Ocean habitats and marine resource use talk at Hartford Primary school
27. 20<sup>th</sup> March – Ocean habitats and marine resource use talk at Prince Andrew Secondary school



28. 24<sup>th</sup> March – Ocean habitats and marine resource use talk at St Pauls Primary school
29. 24<sup>th</sup> March – Ocean habitats and marine resource use talk at St Helena Museum for general public
30. 22<sup>nd</sup> -29<sup>th</sup> March – Marine Awareness Week – including Darwin marine biodiversity project diveclean up wharf steps; entire yacht club building (over two floors and outbuilding) converted into different habitats showing species which live in each; guided marine tour to all who came to the Marine Awareness Week (including all school children); pub quiz, try dive, shore area clean up at Lemon Valley, marine theme movie night, stakeholders evening including guided tour of displays, Fishing festival including fish dissection.
31. 11<sup>th</sup> June Environmental Action Planning on St. Helena – presentation at international workshop held in Ascension (LH)
32. 12<sup>th</sup> June Seabirds monitoring on St Helena – presentation at international workshop held in Ascension (AB)
33. 16th June Fisheries Science on St. Helena: Where we are at, where we would like to be – presentation at international workshop held in Ascension
34. 17th June Developing Sport fishing licenses and policies on St. Helena – what needs to be included– presentation at international workshop held in Ascension
35. 20th June St. Helena MPA Case study: Presentation and review of the St. Helena draft MPA management Plan– presentation at international workshop held in Ascension
36. 25<sup>th</sup> July Workshop for marine tour operators on species of St Helena, marine legislation and best practices

#### Radio interviews

2. 20<sup>th</sup> February – Introduction to Darwin Project
3. 23<sup>rd</sup> February - Marine Awareness Week
4. 25<sup>th</sup> February – Marine Awareness Week – events and feedback on success so far
5. 12<sup>th</sup> September – Whale sharks of St Helena (& attendance of conference) EC
6. 18<sup>th</sup> September – Underwater blasting policy and Darwin marine update (SAMS radio 1)
7. 5<sup>th</sup> and 6<sup>th</sup> November (Saint FM and SAMS) – covered whale shark conference topic and future plans for whale shark monitoring etc (EC).NOTE: Received in excess of 30+ positive feedback from general public, numerous SHG officials.
8. 29<sup>th</sup> November– volunteering with marine conservation team (EC and AB)
9. 13<sup>th</sup> December – Marine Protected Areas workshop update
10. 23<sup>rd</sup> December - Darwin project update
11. 6<sup>th</sup> January – two radio interviews (SAMS and St Helena Radio) – tagging of whale sharks
12. 21<sup>st</sup> January – Introduction to visiting scientists and marine biodiversity
13. 23<sup>rd</sup> January – update on whale shark movements and large group sightings EC
14. 24<sup>th</sup> January – sunrise show with Prof Dr Peter Wirtz on St Helena marine biodiversity
15. 6<sup>th</sup> February – sunrise show (SAMS) whale shark policy
16. 13<sup>th</sup> February – GIS training, data management and mapping and how it inputs into Darwin marine biodiversity (SAMS)
17. 25<sup>th</sup> February – Fisheries science, working with fishermen and lead up to Marine Awareness Week – both radio stations (SAMS and SaintFM)
18. 5<sup>th</sup> March – Seabird work and lead up to Marine Awareness Week – both radio stations (SAMS and Saint FM) (AB)
19. 11<sup>th</sup> March Marine sightings and lead up to Marine Awareness Week – both radio stations (SAMS and Saint FM) (LH)
20. 13<sup>th</sup> March – Juicy Mango show LH talk on Marine work of Government (SAMS)

21. 18<sup>th</sup> March Marine Awareness Week – both radio stations (SAMS and Saint FM) (EC)
22. 28<sup>th</sup> April 2013 –Unusual fish sightings
23. 12<sup>th</sup> and 13<sup>th</sup> May 2013 Protection of wrecks and marine archaeological heritage ordinance St Helena
24. 15<sup>th</sup> May 2014 – Article on shrimps of St Helena and new record/new species finds
25. 3<sup>rd</sup> June 2014 Introduction to GIS marine work as part of Darwin marine mapping using sidescan (SC)
26. 24<sup>th</sup> June 2014 Humpback whales return to St Helena (and regulations for interactions) (EC)
27. 27<sup>th</sup> June 2014 Fisheries and MPA conference on Ascension SAMS sunrise show
28. 15<sup>th</sup> July 2014 Spearguns Control Ordinance SAMS sunrise show
29. 16<sup>th</sup> July 2014 Spearguns Control Ordinance Saint FM
30. 20<sup>th</sup> August 2014 Marine underwater documentary launch Saint FM and SAMS

#### Other articles generated in response to Darwin marine biodiversity project

7<sup>th</sup>/8<sup>th</sup> March (published in Sentinel/Independent)– Trevor Thomas – local fisherman – article on marine pollution

28<sup>th</sup> March 2013 - article on St Helena online by Simon Pipe on St Helena molluscs

2<sup>nd</sup> September 2013 EMD marine section to SHG webpage including Darwin reports

26<sup>th</sup> September 2013 – article on underwater blasting by Sentinel

30<sup>th</sup> January 2014 - articles on whale shark policy and one on visiting scientists to assist with Darwin project by Sentinel

20<sup>th</sup> February 2014 – article on GIS training, data management and mapping and how it inputs into Darwin marine biodiversity (Sentinel)

#### Conference/workshop attendance

1. June 2013 – (JB & EC) training and fieldwork assistance for Mapping marine biodiversity in Ascension project in Ascension
2. October 2013 – (EC) attends International Whale shark conference in Atlanta Georgia
3. November 2013 – (JB) attends Marine Protected Workshop for the UK Overseas territories in UK
4. 11<sup>th</sup> June Environmental Action Planning workshop - held in Ascension (JB, AB, LH)
5. 12<sup>th</sup> June Seabird monitoring workshop - held in Ascension (JB, AB, LH)
6. 16<sup>th</sup> -18<sup>th</sup> June Fisheries workshop - held in Ascension (JB, AB, LH)
7. 19<sup>th</sup>-20<sup>th</sup> June Marine Protected Areas workshop - held in Ascension (JB, AB, LH)
8. 31<sup>st</sup> July 2014 “Observations and First Tagging of Whale Sharks off St. Helena in the South Atlantic “ American Elasmobranch Society Conference, USA, Presented by Robert Hueter

## Work experience

4<sup>th</sup>- 8<sup>th</sup> March Work experience student x 1 including collection dive, Lots wife pond trip, data entry, lab

1<sup>st</sup> -3<sup>rd</sup> May Work experience student x 1 including dive survey, data entry, sample workup

2<sup>nd</sup> July and 15<sup>th</sup> - 19<sup>th</sup> July 4 x work experience –introduction to marine biodiversity monitoring. Sample collection (Lots wife ponds), fisheries science, dive ecotourism information search, meeting and proposals for green diving.

18<sup>th</sup> September 2013 – Prince Andrew School Careers Pathway – introduction to marine science and marine biology as a career.

9<sup>th</sup> October Careers fair day at Prince Andrew School

21<sup>st</sup>-25<sup>th</sup> October 2 x work experience.

7<sup>th</sup>- 8<sup>th</sup> January 1 x work experience

Apprenticeship scheme started January 2014 – one student one day per week with Marine section; plus from 1<sup>st</sup> June – one student full time with Marine section

July/Aug 2014 2 x work experience once a week for 6 weeks

August 2014 1 x work experience – every day for 2 weeks school holidays

## Web activities

St Helena Government website <http://www.sainthelena.gov.sh/marine-division/>

2<sup>nd</sup> September 2013 - Set-up Facebook page on Nature Conservation in St Helena  
<https://www.facebook.com/sthelenaconservation>

Wiki Village page set-up– information added on St Helena seabirds, cetaceans and marine species

Website on tagged whale shark

[http://www.wildlifetracking.org/index.shtml?tag\\_id=67652&dyn=1390476144](http://www.wildlifetracking.org/index.shtml?tag_id=67652&dyn=1390476144)

Blog on SAERI website on GIS training in St Helena (Feb 2014)

Blog post up on the Oxford University Museum of Natural History (OUMNH blog) about the St Helena decapods: <http://morethanadodo.com/2014/05/09/saint-helena-shrimps/>

## Stakeholder meetings

1. 17<sup>th</sup> July 2013 - Dive tourism
2. 22<sup>nd</sup> August 2013 - Sportsfishing
3. 11<sup>th</sup> October 2013 - Artificial reefs/wrecks
4. 17<sup>th</sup> October 2013- Underwater Blasting – public consultation meeting on policy
5. 21<sup>st</sup> October 2013- Sportsfishing
6. 16<sup>th</sup> December 2013 – Dive club AGM – project update, policies in progress, marine management plan

7. 14<sup>th</sup> January 2014 – Fisheries Association stakeholder meeting - project update, policies in progress, marine management plan
8. 5<sup>th</sup> February 2014- whale shark and cetacean interactions – public consultation meeting on policy
9. 13<sup>th</sup> March 2014 – Meeting with councillors for final approval of Whale shark policy and permission to draft wreck ordinance
10. 15<sup>th</sup> April 2014 – Sportsfishing meeting
11. 30<sup>th</sup> April 2014 – stakeholder meeting Protection of wrecks and marine archaeological heritage ordinance
12. 8<sup>th</sup> May 2014 Meeting with councillors for Protection of wrecks and marine archaeological heritage ordinance
13. 19<sup>th</sup> May 2014 - public consultation meeting on Protection of wrecks and marine archaeological heritage ordinance
14. 9<sup>th</sup> July 2014 S&CDC committee meeting (councillors) Spearfishing Ordinance
15. 15<sup>th</sup> July 2014 Councillor O’Dean Spearfishing Ordinance meeting
16. 16<sup>th</sup> July 2014 Exploratory fishing proposal design meeting
17. 11<sup>th</sup> August 2014 Legislative Council – Ordinances on Protection of wrecks and Spear guns control were presented and approved
18. 12<sup>th</sup> August 2014 Stakeholder/public consultation on Marine Protected Areas
19. 15<sup>th</sup> August 2014 Chair of Fisherman’s Association consultation on Marine Protected Areas
20. 21<sup>st</sup> August 2014 Marine Management Plan presented to Councillors of the Environment and Natural Resources Committee
21. 28<sup>th</sup> August 2014 Governor of St Helena and deputy Governor consultation on Marine Protected Areas

Other

December 2014 Stamp issue – 3 sets seabirds, whale sharks and marine life of St Helena Christmas issue

## Annex 8 Marine awareness surveys

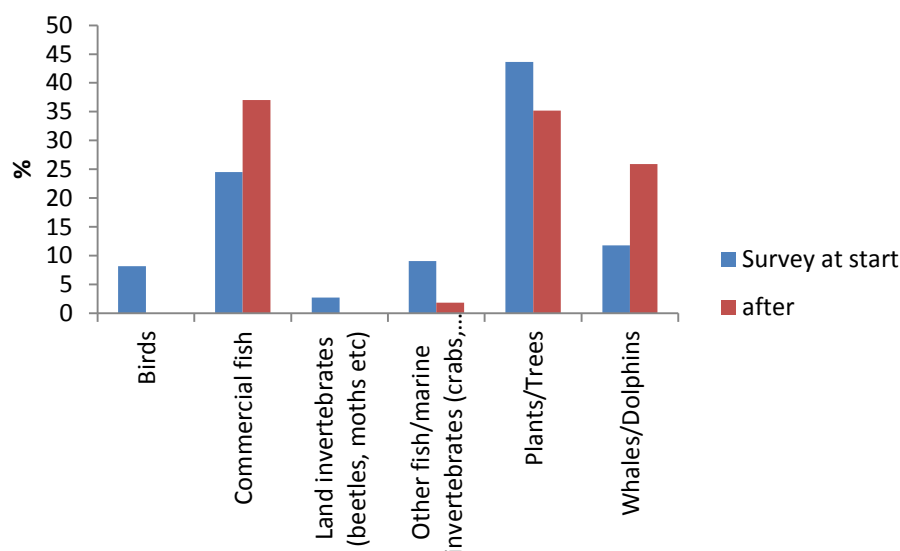
Several surveys have been conducted as part of the Darwin marine project to ascertain people's awareness of the marine environment and the impact of this project on their levels of knowledge of the marine environment.

### General public

Awareness raising comprised: Newspaper articles (both local papers), radio interviews, public talks, Marine Awareness Week, educational leaflets, marine guide book produced .

Survey conducted: Questionnaires were emailed around all government departments, handed out after a talk and asking people in the street at the start of the project and towards the end of the project. 124 people completed the questionnaire at the start and 60 at the end.

Results: 75% of people said they were more informed about St Helena's marine environment due to the awareness raising initiatives by the Marine section. People rated their main source of information as the radio with newspaper articles and adverts being the second highest. When asked to rate what they thought the most important with regard the environment initially people rated plants & trees the highest (43.6% of people) though at the end of the project people rated commercial fish and whales/dolphins higher than at the start of the project.



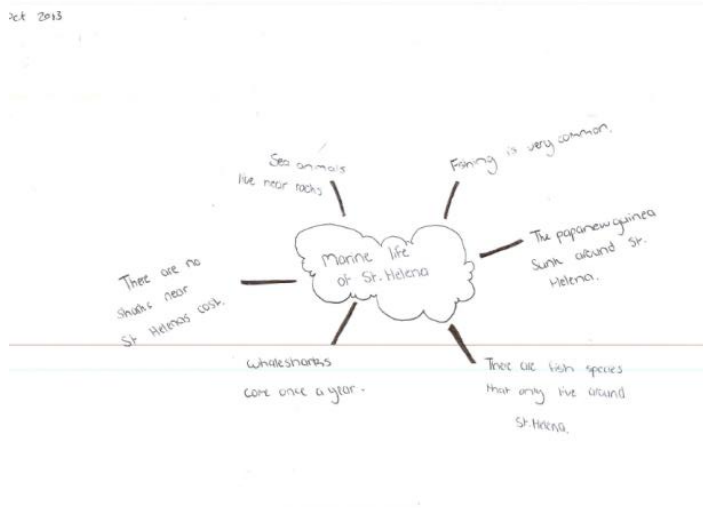
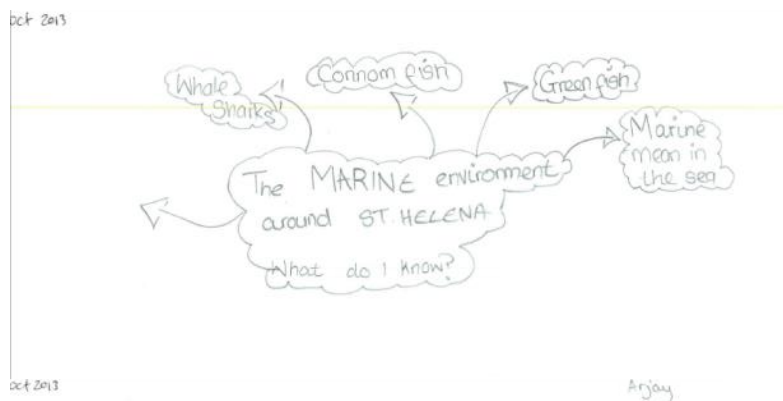
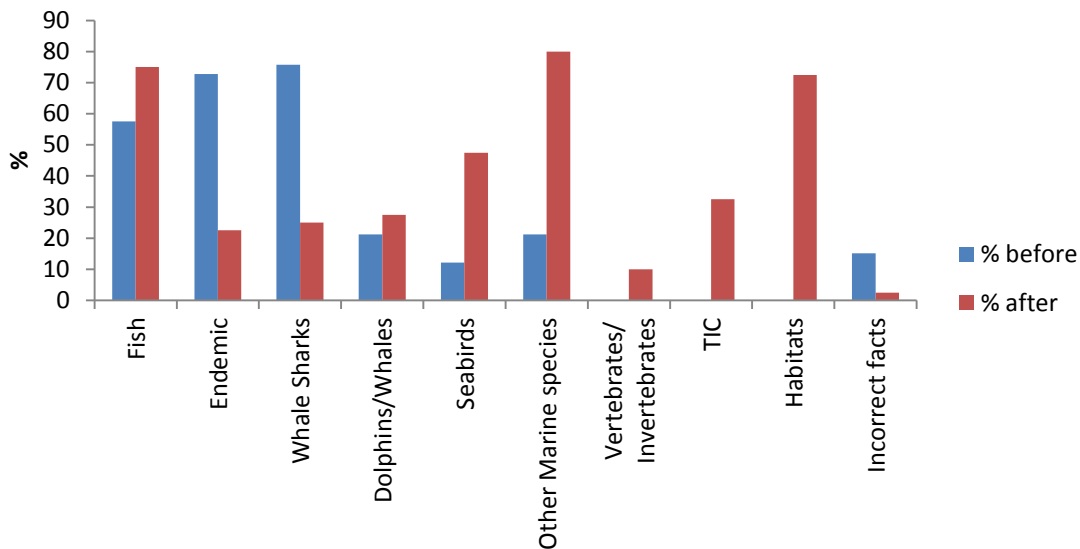
### School children

Awareness raising comprised: School presentations, Marine Awareness Week (x2), marine movie, work experience, apprentice scheme, newspaper articles (both local papers), radio interviews, public talks, posters for schools produced.

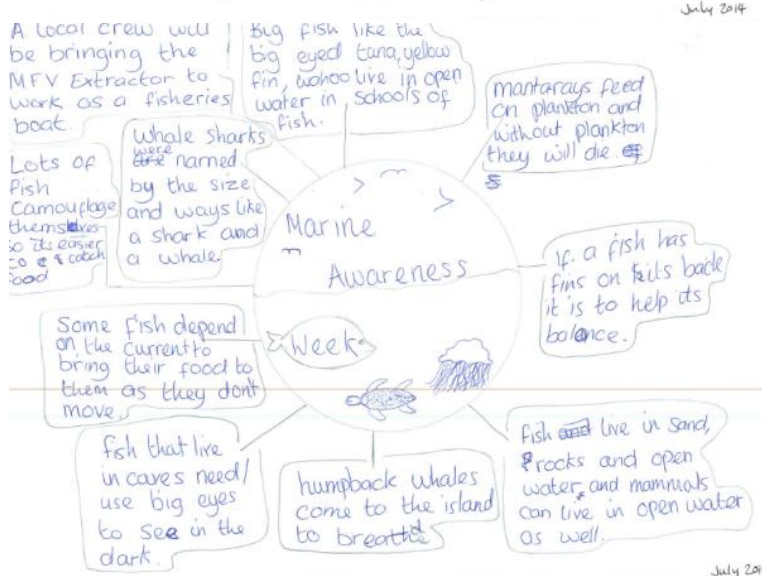
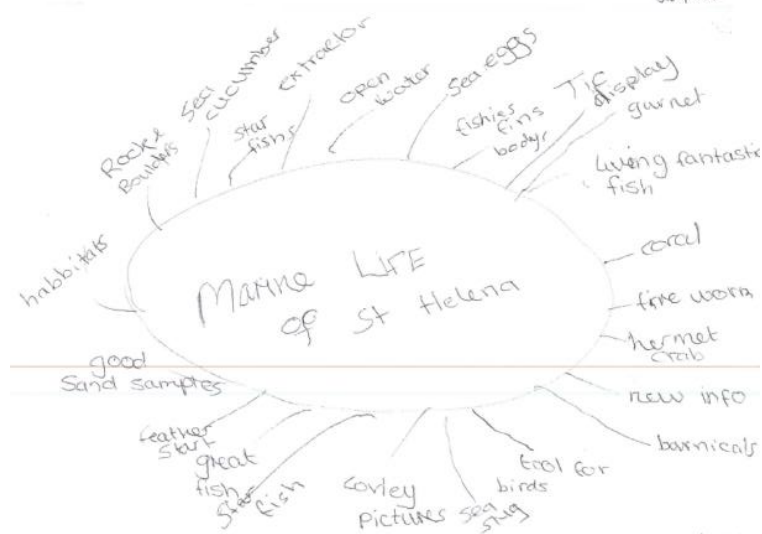
Survey conducted: Spiders diagrams were completed by the school children regarding their knowledge of the marine environment near the start of the project (just after a talk given at the school on whales sharks) and towards the end of the project. 33 children completed the diagrams at the start and 40 at the end.

Results: At the end of the project there was an increase in awareness on the following topics: fish (30.3% increase), whales/dolphins (29.6% increase), seabirds (291.9% increase) and other marine species (ie invertebrates) (277.1% increase). There were three areas which had no mention at the start of the project but some children wrote on their diagrams afterwards – these were knowledge of invertebrates/vertebrates (10% of children), habitats (72.5% of children) and TIC (Traditional Industries ie fishing) (32.5 % of children). There was a decrease in number of answers for whale sharks and endemic species – this is likely as the survey at the start was conducted directly after a talk on whale sharks so 75% children put this on their sheets on the first survey. The total number of marine related facts the children wrote on the spider diagrams

increased by 43.1% since the first survey with a decrease in incorrect facts written down (by 83.5%).



Sample of some spider diagrams at start of project



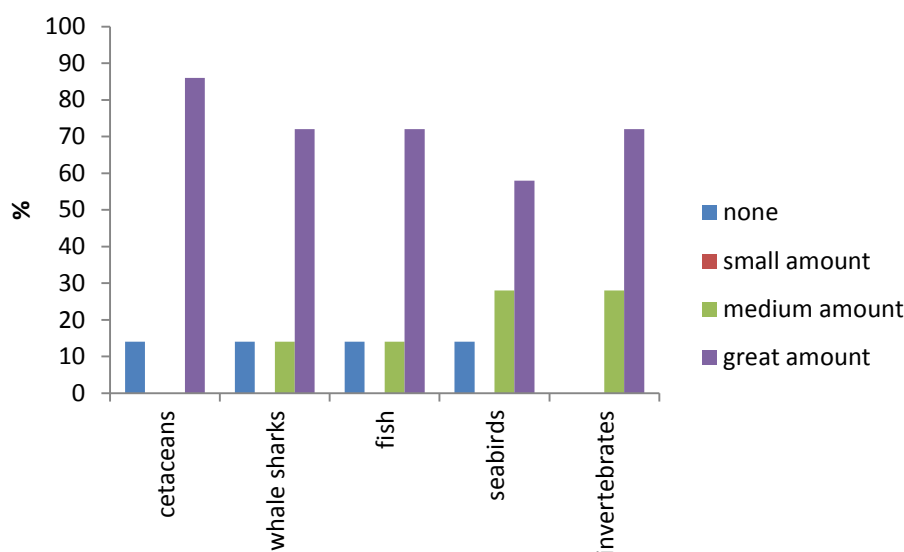
Sample of some spider diagrams near end of project

## Marine tourism operators

Awareness raising comprised: Directed meetings, workshops, involvement in surveys, newspaper articles (both local papers), radio interviews, public talks, Marine Awareness Week, educational leaflets, marine guide book produced

Survey conducted: Questionnaires were given to all five operators towards the end of the project. One operator has two partners and both completed the survey. One private guide who works on several vessels also completed the survey.

Results: 100% of operators thought it was “very important” to protect marine wildlife and all were aware of the initiatives underway by EMD, with 100% saying their knowledge and awareness had increased as a result of the Darwin marine biodiversity project. 86% rated pollution as having a very large or large impact on the marine environment, with 72% saying more should be done to mitigate against pollution. The figure below shows the % of operators and the level to which they felt their knowledge had increased directly due to the Darwin Marine biodiversity project relative to different topics.



## Tourists

Awareness raising comprised: Public talks onboard RMS, marine movie for onboard RMS, educational leaflets, marine guide book produced.

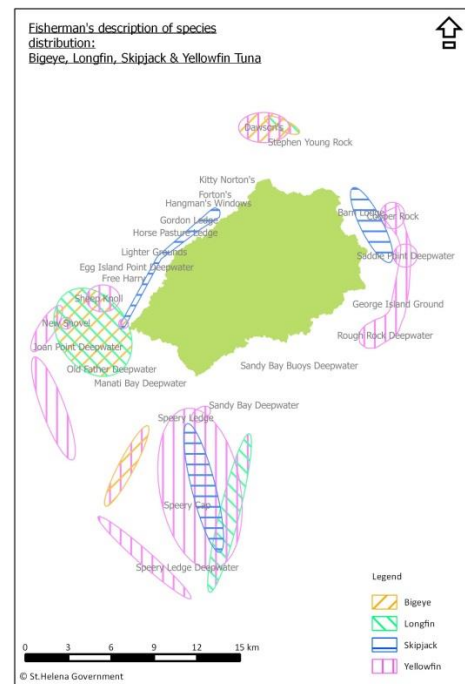
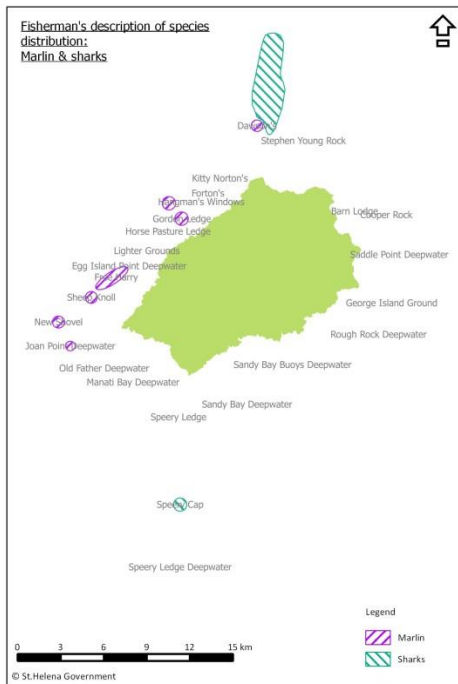
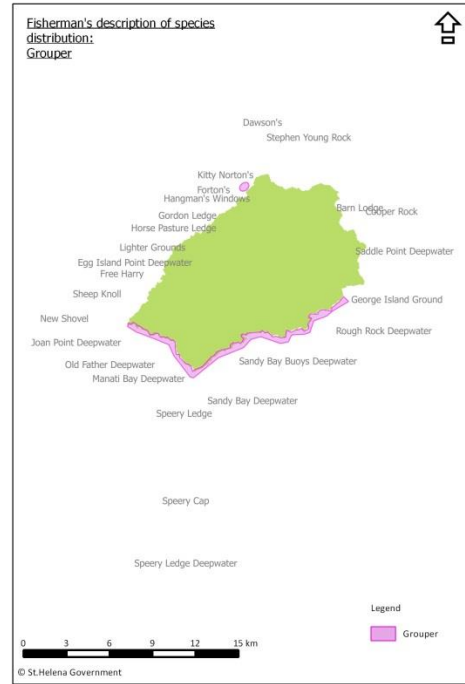
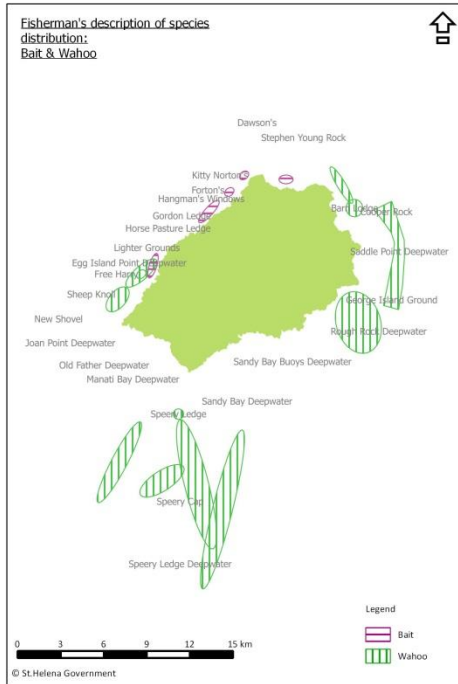
Survey conducted: Questions regarding use of marine environment whilst on holiday and reasons for visiting (and if they would recommend the marine activities) added to the general tourism questionnaire which the tourism department gives to visiting tourists.

Results: 30 people completed the questionnaire and of those 10 said they had taken part in marine activities (diving or snorkelling). All rated these activities as a 4 or 5 out of 5. Records from marine tour operators highlighted an increase from 2 trips in summer 2012/2013 (one of which was the marine section staff) to 50 trips in 2014 due to the increased awareness of whale sharks created by this project. The leaflets, marine video and book were only produced by the end of the project so further awareness amongst tourists will be generated post project.

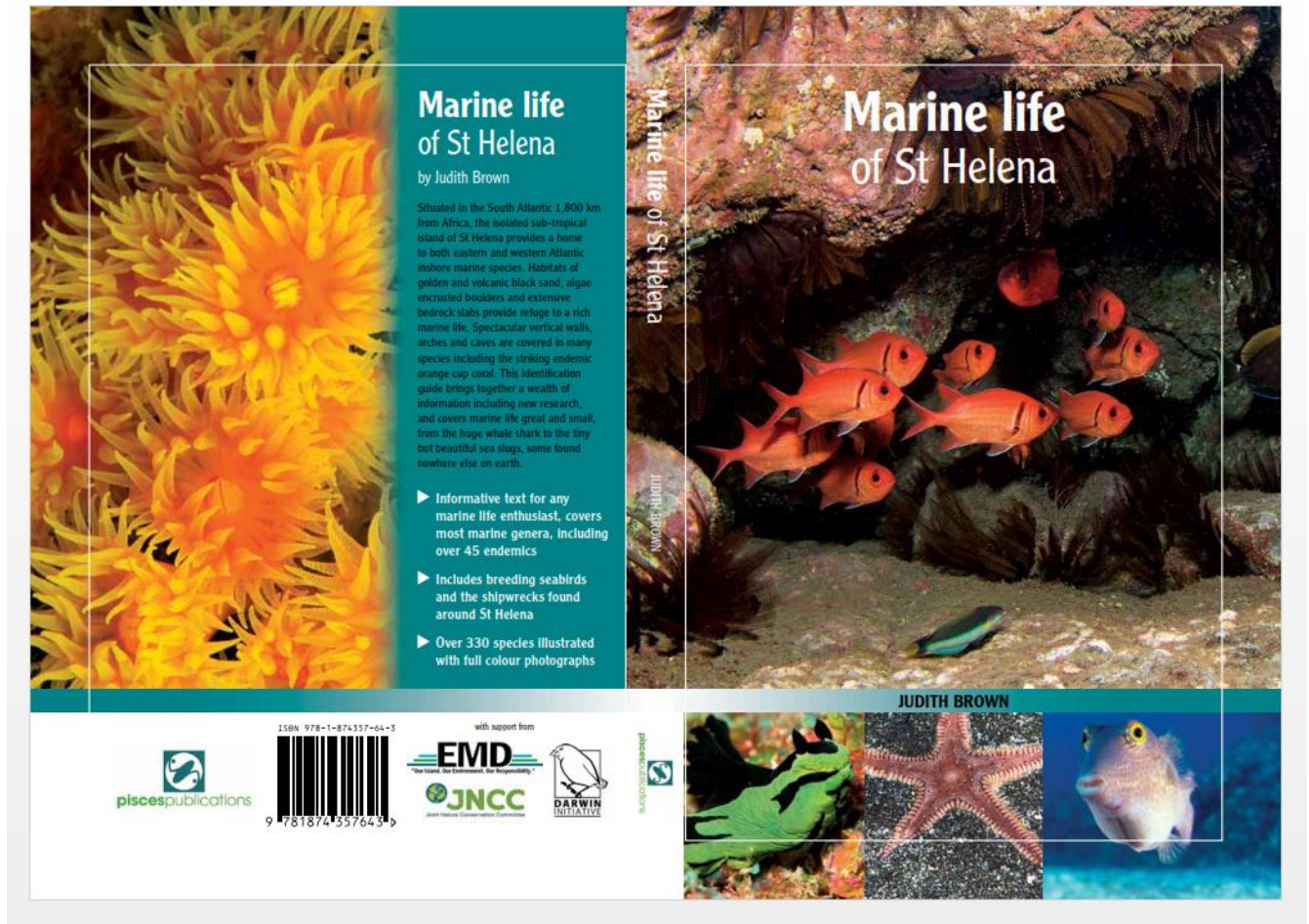




# Annex 10 Fishermen distribution maps of commercial species



# Annex 11 Marine life guide to St Helena (front and back covers)



## Annex 12 Section of minutes from Council meeting regarding MMP

### 14.3 Marine Management Plan

Dr Judith Brown gave a Power Point presentation on the Marine Management Plan which is part of the Environmental Protection Ordinance due to be presented to ENRC later this year. This will give the Governor-in-Council the power to declare Marine Protected Areas in St Helena Waters

There have been various meetings and consultations with stakeholders throughout 2013-14. There has also been a public consultation workshop on 12 August 2014 and a meeting with the Chairman of the Fisherman's Association on 15 August 2014 to discuss the plan and regulations.

This plan will have a positive environmental impact with the aim to protect the marine flora and fauna within St Helena's waters. It will also contribute to National Goal 3 of the St Helena Sustainable Development Plan *'Effective management of the environment'* and St Helena's Natural Environment Management Plan, *'Safeguard St Helena's environment both terrestrial and marine for future generations through effective environmental management including through improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity'*

Major benefits will be sustainable management of the island's natural marine resources which will improve conservation management, improved species and provide an enhanced tourist experience.

Dr Brown explained the important species in need of protection and said that CITES regulations of trade in certain species will be extended to St Helena as part of the EPO in the near future. Because St Helena has a pristine marine habitat, old cars are no longer recommended for artificial reefs. An IUCN Marine Protected Area Category VI is proposed for the entire 200nm EFZ. Several regulations will form part of this including a ban on bottom trawling, certain fish species are to be protected from taking for aquariums, removal of guano will not be permitted and the use of droppers during spawning season will not be allowed. A policy is being formalised for sand extraction and beetle stone harvesting. Lots Wife Ponds is proposed as a IUCN MPA category III and as part of this fishing in these ponds will be prohibited. To protect the endemic Melliss's conger no sand extraction will be allowed around Egg Island. Due to the globally significant bird populations there will be restricted access to Egg and Speery Islands.

A member asked about tuna's being listed as endangered species and was told that they can only be taken by licence and quotas will be set by ICCAT.

Members agreed to the draft Marine Management Plan and proposed Marine Protected Areas in principle.

# Annex 13 Marine Management Plan



St Helena  
Government

## St Helena Marine Management Plan



Environmental Management Division

Saint Helena Government

August 2014

Work for this report has been grant aided by the Darwin Initiative through UK Government funding



Marine Management Plan

### Document history

Marine Management Plan  
Environmental Management Division

This document has been issued and amended as follows:

Rev	Date	Description	Prepared by	Checked by	Approved by
00	01-08-14	First Draft for review	J Brown	E Gligobath, D Duncan, G Benjamin	



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Marine Management Plan

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