Darwin Plus:

Overseas Territories Environment and Climate Fund

Annual Report

Important note *To be completed with reference to the Reporting Guidance Notes for Project Leaders:*

it is expected that this report will be about 10 pages in length, excluding annexes

Submission Deadline: 30th April 2019

Darwin Plus Project Information

Project reference	DPLUS063
Project title	The Ascension Island Ocean Sanctuary (ASIOS): planning for the Atlantic's largest marine reserve
Territory(ies)	Ascension Island
Lead organisation	Ascension Island Government
Partner institutions	University of Exeter, University of Windsor, University of Western Australia, University of Birmingham, Army Ornithological Society, South Atlantic Environmental Research Institute
Grant value	£279,122
Start/end date of project	01/04/2017 – 30/09/2019
Reporting period (e.g., Apr 2018-Mar 2019) and number (e.g., AR 1,2)	Apr 2018 – Mar 2019, AR2
Project leader name	Dr Sam Weber
Project website/blog/Twitter	
Report author(s) and date	Sam Weber, Andy Richardson & Diane Baum 8th April 2019

1.   Project overview

The creation of a large-scale MPA around Ascension Island is a flagship commitment of the UK Government's "Blue Belt" initiative, and the most high-profile conservation issue currently affecting the Territory. An important milestone was reached in January 2016 with the announcement of a "no-take" zone covering 50% of Ascension's 440,000 km^2 maritime zone. However, it was recognised that there were still substantial knowledge gaps that needed to be addressed in order to identify those areas that would benefit most from protection. A period of planning and consultation was also needed to ensure that the Territory was prepared to manage and enforce one of the world's largest marine reserves. For this reason, Ascension Island Government deferred formal designation of an MPA until 2019 while scientific data are compiled and management plans can be put in place. In April 2016, a stakeholder workshop was held at the Foreign and Commonwealth Office (FCO) with the aim of drawing up a list of priority actions needed to inform the placement of the ASIOS and ensure its long-term success. The current project was developed to deliver the roadmap agreed at that meeting. Using a range of modern scientific methods, the project aims to build an integrated understanding of Ascension's offshore pelagic ecosystem and develop evidence-based recommendations for the siting of marine reserves. Crucially, it will also plan for the legacy of the ASIOS, ensuring that the Territory learns from experiences elsewhere to deliver world-class MPA management and enforcement.

2.   Project stakeholders/partners

Year 2 of the project has involved a major phase of stakeholder engagement coinciding with the publication of the Ascension Island MPA "Evidence and Options" report (Annex 3). The Evidence and Options report was primarily intended as a decision-support tool for policy makers and sets out competing designs and management options for a large-scale MPA in Ascension's waters along with a detailed summary of the supporting scientific and economic evidence. A first draft of the report was presented to the Island Council for feedback in September 2018 (Annex 4) and a modified draft was then submitted for public consultation with UK Government, NGOs and other stakeholders in late-November and December 2018. A total of 6 consultation responses were received (Annex 5) and incorporated into the final report that was accepted by the Island Council in February 2019. During Y2 the project considerably broadened its working partnerships, including strengthening relationships with the Marine Management Organisation (MMO) and Centre for Fisheries and Aquaculture Science (Cefas) who contributed extensively to the preparation of the Evidence & Options document (Appendices 7 & 10). The project also integrated well with the JNCC-led "Natural Capital in the Caribbean and South Atlantic Overseas Territories" project which provided valuable supporting evidence for the Evidence & Options document (Appendices 5 and 8). Both MMO and Cefas continue to be heavily involved in the preparation of the MPA management plan and as part of a consortium of organisations with Great British Oceans Coalition invited to jointly host the "2019 Blue Belt Overseas Symposium"; one of the flagship outputs for Year 3 of the project. Overall, we are pleased with the level of transparency and stakeholder engagement we have achieved during the MPA planning and designation process to date and intend to continue in this spirit for the remaining six months of the project.

3.   Project Progress

3.1   Progress in carrying out project Activities

Output 2. Distributions of species impacted by commercial fisheries are mapped and modelled in order to identify key usage areas and risk areas

2.3 An "ocean atlas" containing summarized maps of physical and biological oceanographic processes within Ascension Island EEZ has been produced using open-access remote sensing data and can be accessed through the project web GIS. Available data layers include multi-year frequencies of a range of mesoscale oceanographic features thought to be of significance as foraging habitat for marine megafauna including thermal fronts, mesoscale eddies and Lagrangian coherent structures (convergent transport barriers), although the biological significance of these features in Ascension's pelagic ecosystem is not yet clear. In order to reduce complex, multi-dimensional oceanographic datasets into a format more suited to MPA planning, an established 'pelagic bioregionalisation' method was used to identify spatially discrete habitat zones sharing a common set of properties. Two distinct bioregions were supported (Annex 13), broadly corresponding to the Central South Equatorial Current in the north of the Ascension EEZ and an area of weaker, more complex circulation to the south. Historically, commercial long-lining effort has been concentrated on the boundary between these two regions

2.4 An additional 32 at-sea biodiversity surveys using baited remote underwater video systems (BRUVs) and visual census methods were carried out during a second offshore patrol and research expedition in January – February 2019 (Q4 of Y2) bringing the total number of sites surveyed to 151 (BRUVs) and 226 (visual census), respectively. The distribution of surveys and a summary of results can be browsed in the project web GIS.

2.5 A summary of spatial datasets collected during project was presented in Annexes 2 & 3 of the MPA Evidence and Options document submitted to stakeholders ahead of schedule in Q3 of Y1. Formal species distribution modelling (SDM) was necessarily limited to those taxa for which sufficient movement tracks or at-sea census data are available, including seabirds, green turtles and blue sharks (Annex 6).

Satellite tracks of green turtles have been used to define core inter-nesting habitats and oceanic migration corridors (Annex 6). A comprehensive analysis of biodiversity data collected around Ascension's outlying seamounts was completed in November 2018 (Q3 of Y2) and clearly demonstrates their significance as hotspots for pelagic megafauna (https://www.ascension-island.gov.ac/seamount-report-document/). These analyses also highlighted connectivity between seamounts and allowed us to estimate the radius of influence of these features on the pelagic ecosystem as a basis for recommending evidence-based protection buffers. SDMs using seabird tracking data have been published in the peer-reviewed literature and generally show low spatial predictability with time spent per unit area generally declining as a function of distance from the Island (Weimerskirch et al, 2005), although foraging radii differ significantly among species (Annex 6). Sufficient time was not available to carry out a detailed SDM analysis of blue shark BRUV detections for the purposes of the Evidence and Options document, although we were able to compare frequency of occurrence between proposed management zones in the joint MPA/fishery scenario (Annex 6).

Output 3. Threats to marine megafauna from commercial fisheries are quantified, including both direct (by-catch) and indirect (food chain) impacts.

3.1, 3.2 & 3.4 As detailed in the Y1 annual report, very limited license uptake by commercial vessels during the 2017 – 2019 fishing seasons and the inaccessibility of high resolution catch-effort data collected by flag state observers prior to the introduction of a new licensing regime on Ascension Island in 2015 has severely constrained our ability to conduct a detailed spatial analysis of direct threats to marine species from fisheries. Instead several coarser resolution analyses using gridded datasets produced by ICCAT and heavily summarized catch and position reports collected from licensed vessels prior to 2015 were carried out to 1) determine whether Ascension is a regional by-catch hotspot for specific species and 2) whether there are particular parts of the Ascension EEZ where risk is greater (Annex 7). The analysis concluded that with the possible exception of billfish (marlin & sailfish), the Ascension longline fishery has comparable or lower levels of bycatch when compared to the regional fishery as a whole. A more detailed analysis of marlin catch suggested that the risk posed to these species is higher within the SE quadrant of the Ascension EEZ, potentially linked to the presence of shallow water seamounts in this area, although data quality was relatively poor. Similar analyses were not possible for other pelagic species (e.g. sharks) due to un-standardized methods of recording data in the historical Ascension Island EEZ fishery.

3.3 As part of the assessment of direct threats posed to marine megafauna by fisheries a structured productivity susceptibility analysis and ecological risk assessment of 24 species of marine turtles, fish, sharks and seabirds was carried out including data on life history, reported catch, relative mortality and conservation status (see Annex 7). Results were included in the appendices of the MPA Evidence and Options document submitted to stakeholders in Q3 of Y2 (see Output 8).

3.5 – 3.7 Stable isotope analysis of all tissue and prey samples collected during the project have now been completed and compiled in a central database containing more than 500 samples from 13 species of seabirds, sharks and fish. Preliminary analyses have revealed marked ontogenetic shifts in the diets of yellowfin tuna feeding around the Island and extensive niche overlap of Ascension's larger seabird species with diets dominated by flying fish. When combined with the results of at-sea abundance surveys (Activity 2.4) these data have revealed how seabirds deplete their primary prey base as far as 200 km from the Island (Annex 15), highlighting the large foraging areas needed to sustain healthy populations. This finding, which is currently being prepared for submission to a scientific journal, represents one of the key scientific discoveries of the project and supports the precautionary approach to MPA designation taken by the Island Council (see Output 8). Faced with an accelerated timeline in the preparation of the MPA Evidence and Options document (see Section 3.2 Output 4) it was felt that preliminary analyses of stable isotope data were of lower relevance to decisions on the placement of MPA and could confuse already complex messages. As a result these data were not included in the materials circulated to stakeholders (Activity 3.7) but will provide a resource for future research and monitoring of the ASIOS.

Output 4. Optimal solutions for MPA placement are proposed based on an integration of species distribution data, threat assessments and economic costs/values within a formal marine spatial planning framework

4.1 A bio-economic analysis of the Ascension Island longline fishery has been completed in collaboration with Blue Belt project partners at Cefas and results have been incorporated into the Ascension Island MPA Evidence and Options report submitted to the Island administration in Q4 of Y2 (see Annex 8). The analysis used data from a range of sources to describe long term trends in commercial fishing license uptake, model potential drivers and forecast future profitability as a basis for assessing the long-term economic sustainability of the fishery. The analysis concluded that external drivers such as a shift in global market preferences for tuna products and the decline of the Atlantic bigeye stock have largely been responsible for a recent drop in license uptake, although more stringent licensing conditions and penalties within the Ascension Island EEZ may also have been a contributory factor. Given low forecasted future revenue from license sales largely being exceeded by the fixed costs of administering and enforcing the scheme it was concluded that the Ascension Island fishery is unlikely to be an economically-viable proposition in the short to medium term, although this situation could change if management measures introduced by ICCAT have a positive effect on the bigeye stock.

4.2 Two competing MPA designs, or scenarios, were developed and presented to stakeholders based on biodiversity and fisheries data collated and analysed during the project (Annex 3). Several different management tiers including options for a dormant fishery or withdrawal of all forms of management from the Ascension EEZ were also considered at the request of the Island Council. Each option was accompanied by a structured cost-benefit analysis comparing the level of biodiversity protection achieved, economic implications for the Island and potential reputational consequences. Given the marginal economics of the Ascension longline fishery (4.1) it was agreed that the only viable scenarios included a 100% MPA that recognised remaining uncertainties concerning the impacts of commercial fishing on Ascension's marine biodiversity and a design that protected key conservation features, met the 50% commitment made by UK Government and minimised potential lost revenue from license sales in the remaining portion. Marxan systematic conservation planning software was used as a decision support tool to identify the design that best met these criteria (Annex 3).

4.3 MPA scenarios and supporting documentation were submitted for public consultation in November 2018 (Q3 of Y2) with final proposals presented to the Island Council and Ascension Island Government in February 2019 (Q4 of Y2).

Output 5. Experimental satellite surveillance technologies are trialled as a cost-effective method for MPA compliance monitoring and enforcement.

5.1 – 5.4 The results of a two year study using synthetic aperture radar (SAR) to identify potential IUU fishing events in the Ascension Island EEZ (as detailed in Y1 annual report) have now been published in a peer reviewed manuscript co-authored by one of the original project leads (Rowlands et al. 2019) and incorporated into a risk profile used to estimate management costs for different MPA scenarios proposed in the Evidence and Options document submitted (see Annex 10). Further trials using SAR imaging for patrol asset tasking were conducted during Y2 of the project, finding 3 high-probability correlated detections within the buffer zone outside of the EEZ boundary. Limitations of satellite-based platforms within the current monitoring, control and surveillance on Ascension Island were discussed fully in the Y1 annual report and will feed into the MPA management plan that is currently in preparation.

Output 6. Pelagic biodiversity baselines are established and a robust monitoring framework is developed for evaluating the long-term conservation benefits of the ASIOS

6.1 Further at-sea biodiversity surveys using BRUVs and visual census methods were carried out around Ascension's seamounts and throughout the EEZ during an eight week offshore patrol/research cruise in Q4 of Y2, adding to baselines established during Y1 of the project. As described in the Y1 annual report, progress with establishing quarterly BRUV monitoring of inshore reference sites has been limited by the availability of a suitable vessel. AIG Conservation & Fisheries Department's RIB is now operational again following servicing in the UK but has proven to be unsuitable for deploying and retrieving bulky survey equipment, while AIGs inshore workboat is still undergoing major repairs. Operators of other potentially

suitable commercial charters have also ceased or suspended their businesses due to ongoing travel disruptions. Our ability to carry out inshore monitoring has therefore been limited to short periods when the offshore fishery patrol vessel is present on the Island and must compete with enforcement and surveillance commitments.

Output 7. International best practice is incorporated into the design and planning of the ASIOS, and experiences and knowledge gained during the project are widely shared.

7.1 & 7.3 Planning for the UK Overseas Territories "Blue Belt" Symposium is now well underway (see symposium website and registration page). The event will take place from 29th – 31st July 2019 at the University of Exeter's Cornwall campus with an expected attendance of approximately 80 people, including representatives from 11 OTs. The event has gathered considerable momentum in recent months and grown considerably in scope and scale as a result of additional travel budget transferred from underspend in previous financial years and the involvement of the Marine Management Organisation, Cefas and Great British Oceans Coalition as co-hosts. An organising committee with representation from all co-hosts has been convened and holds monthly planning meetings. In addition to broad UKOT representation, a number of international speakers and session chairs have been invited help to ensure that current thinking and best practice in large-scale MPA management are embedded in the programme. Invited guests include representatives from Big Ocean Network which will provide an opportunity to discuss UKOT integration into the network as member sites (activity 7.1).

7.4 As detailed in Y1 annual report, best practice related to large scale MPA planning and management has already comprehensively summarised in a set of IUCN Best Practice Guidelines launched at the 2017 IMPAC4 conference attended by project staff. This document is currently being used as a valuable reference manual during the preparation of the ASIOS management plan. The chair and deputy chair of the IUCN large scale marine protected area task force who authored the guidelines have also confirmed their attendance at the UKOT Blue Belt symposium in Y3 of project as speakers and session chairs, which will further ensure that best practice is embedded into future planning.

7.5 Limited progress has been made in the production of project documentaries. The original intention had been to film and edit these in-house as in previous projects; however the quantity and quality of footage gathered during demanding fieldwork schedules has not been sufficient to do this. The high cost and minimum one month duration of visits to Ascension Island following the suspension of weekly civilian flights from the UK in 2017 has also limited our ability to engage the services of professional filmmakers. As a possible solution, the project team have approached a UK-based production company to produce a short film at the Blue Belt Symposium in Y3 of the project, featuring interviews and stock footage of the UKOTs marine environments, and submitted a bid to the University of Exeter impact fund to cover associated costs.

7.6 Six presentations were given locally in Q3 of Y2, on the topic of MPA's, and the designation and evidence process regarding the Ascension MPA, with prominent featuring of the ASIOS project activities. Presentation formats depended greatly on the target audience, with formal presentations to employing organisations, to interactive talks and discussion activities with school-age students. There was considerable engagement and enthusiasm from school visits and presentations, with a mixed energy from the wider community at public presentations, though the consensus was overwhelmingly in favour of some form of MPA within Ascension's waters.

In March 2019 (Q4 of Y2) the project team attended the 2019 St Helena Conference: "Natural Capital in the South Atlantic" to present project outputs (Annex 14) and participate in a regional Blue Belt stakeholder workshop organised by the Marine Management Organisation (see https://st-helena-conference.com/speakers-2019/).

In February 2019 Dr Weber also spoke at the Darwin Plus Advisory Group meeting to present key project outputs and share experiences in managing Darwin projects more generally (Annex 15). Several peer-reviewed papers linked to project activities have now been published with project staff as contributing authors (Barnes et al 2018; Reynolds et al. 2019; Rowlands et al 2019) with a further three presenting core scientific outputs currently in various stages of preparation.

Output 8. The ASIOS is formally designated and management structures are established to ensure its long-term success.

8.1 – 8.3 An Ascension Island "MPA Evidence and Options" documented has been prepared, made available for public consultation and formally submitted to the Island Council (see online and Annex 3). Consultation responses were received from 6 institutions including the Royal Society for Protection of Birds, Great British Oceans Coalition and Pew Charitable Trust and incorporated into the final document. In February 2019 the Island Council voted in favour of designating an MPA covering the entirety of the Ascension Island EEZ option, subject to guaranteed long-term funding from the UK Government to cover management costs.

8.4 An MPA management plan is legally required before designation can occur and is currently being developed by an AIG-led working group that includes partners from the Marine Management Organisation, University of Exeter and Cefas. A first draft of the goals and objectives for the site along with appropriate indicators for monitoring has been circulated for comment and the plan is now in its second iteration with a target completion date of June 2019 (Q1 of Y3).

3.2   Progress towards project Outputs

Output 1. Information systems for managing and disseminating spatial datasets gathered during the project are established and local conservation managers are trained in their use

Databases for managing spatial datasets collected and collated during the project have been created and are in routine use by Ascension Island Government Conservation Department (see screenshots below).
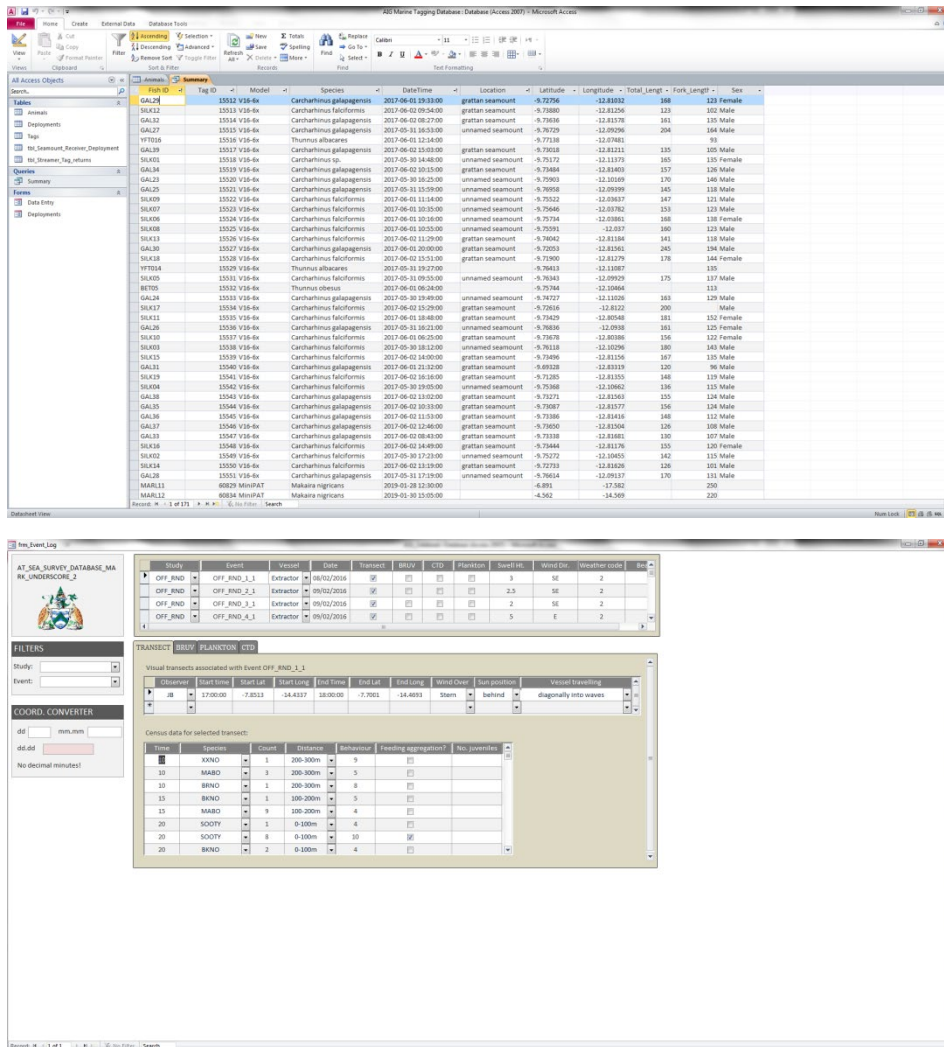
These databases have also been linked to a public-facing web GIS. Further updates to the system have been carried out during Y2 including the addition of oceanographic maps and data from at-sea biodiversity surveys. The web GIS portal was not used as extensively as planned during the stakeholder consultation phase of the MPA designation in process, in part because the accelerated timeframe for this objective did not allow for full updates of the system, but also because it was felt that the range of spatial information contained within it would have been unintelligible for the target audience without an accompanying written narrative. Nonetheless, the web GIS has proven to be valuable as a data organisation and visualisation tool and has demonstrated its potential as a repository for a wide range of spatial datasets relating to Ascension Island's marine environment and its management. Currently the system architecture is not conducive to easy updates by multiple stakeholders. No budget for a dedicated webserver was included in the project and the web GIS is instead hosted on one of the University of Exeter's main departmental servers which is closed to external database connections for security purposes. This prevents offsite updates of databases and makes maintenance of the service clumsy. We had originally considered that the system would be hosted locally on Ascension Island but internet bandwidth and reliability is not sufficient to serve an outward facing web portal. Future data management and visualisation needs are currently being considered as part of the MPA management planning process and could include migrating the existing spatial database system and web GIS front end to a dedicated cloud server that can be updated easily from anywhere in the world. This solution would require a small amount of start-up funding and ongoing maintenance, but could be integrated into plans for expansion of regional data management services through the IMS-GIS hub and would probably provide the best legacy option.

Output 2. Distributions of species impacted by commercial fisheries are mapped and modelled in order to identify key usage areas and risk areas

The project has exceeded its original targets in terms of numbers of marine megafauna tagged (312 individuals representing 17 species; Annex 6 and project web GIS) and numbers of at-sea abundance surveys carried out (226 visual census; 151 BRUV surveys). All planned oceanographic data layers have also been produced, including composite maps of mesoscale oceanographic features such as thermal fronts, convergent transport barriers and eddies based on 10 - 15 years of remote-sensing data (Output 2.2; web GIS). Oceanographic datasets were integrated using a bioregionalisation analysis to identify spatially discrete pelagic habitat zones within the Ascension Island EEZ (see Progress section 2.3, Annex 13); however the ecological significance of these zones for marine megafauna is currently unclear and they were not used extensively in the MPA planning process. Results of telemetry studies and at-sea survey data have been used to demonstrate the importance of Ascension Island's near shore environment and it's outlying seamounts as hotpots for pelagic biodiversity and recommend suitable protection buffers which were incorporated into MPA planning (Annex 3). The principle migration corridor used by the Island's globally-important green turtle nesting population and the foraging ranges of key breeding seabird species were also mapped and used to inform these plans (Annex 6). Due to an accelerated timeline for submitting MPA proposals to the Island Council we were unable to finalise species distribution models (SDMs) for many species (See Output 4); however, those analyses which could be completed indicate that proximity to topographic features is the main predictor of abundance and diversity for many marine megavertebrates which was captured in proposed feature buffers (seabirds, turtles, carcharinid sharks; Annex 6). In offshore areas, sample sizes of tagged animals and/or numbers of at-sea records were generally too low to permit formal environmental niche modelling. The only exception is blue sharks, which were the most common oceanic shark species observed in both BRUV surveys and in fisheries by-catch. Although we were unable to complete a blue shark SDM in time for incorporation in the Evidence & Options report, we were able to compare abundances between proposed management zones which supported visual inspection of the data suggesting a broadly uniform distribution with no clear hotspots of abundance (Annex 6 and web GIS).

Output 3. Threats to marine megafauna from commercial fisheries are quantified, including both direct (by-catch) and indirect (food chain) impacts.

All available fisheries data collected in the Ascension Island EEZ has now been collated, analysed and incorporated into the MPA Evidence & Options report and MPA scenarios presented to stakeholders in Q3 of Y2 (Annex 3). The depth of analysis that was possible was severely limited by the lack of high resolution catch-effort data for the Ascension Island EEZ. This is due to both the inaccessibility of set-level data collected by flag state observers prior to 2015 (which are held by foreign fishing authorities) and the limited license uptake by commercial fishing vessels (two in Y2 of the project) since 2015 which, along with ongoing air access issues on Ascension Island, has prevented the deployment of local observers during the project (Output 3.1). In the absence of high-resolution data, analyses of fishing distribution and direct threats have been forced to rely on spatially and taxonomically summarised data available from ICCAT and weekly catch reports submitted by vessels operating in the Ascension Island EEZ. These analyses demonstrate that 1) that commercial fishing exhibits a spatially and seasonally predictable distribution, being primarily concentrated in the NW of the EEZ between December and February; 2) that Ascension Island does not appear to be a regional by-catch hotspot of any species; 3) that marlin and blue shark make up the majority of recorded by-catch; and 4) that marlin bycatch per unit effort appears to be highest in the south-eastern quadrant of the EEZ (see Annex 7). A ranked risk assessment of direct threats posed by fisheries to 24 species of marine turtles, fish, sharks and seabirds was compiled and included in the MPA Evidence & Options report (Output 3.2; Annex 7). A number of important findings have also been made with regard to possible indirect threats posed by fisheries to seabirds (Output 3.4). Using stable isotope data, project partners have been able to demonstrate long-term change in the diet of sooty terns breeding at Ascension Island from fish-dominated to squid dominated coinciding with an apparent population collapse of this species, potentially caused by a regional decline in the large pelagic fish species they associate with (Reynolds et al. 2019). Research carried out during the project has also revealed that seabirds nesting at Ascension Island deplete their prey resource over a very large marine area (as far as 200km from the Island), highlighting the large expanses of functioning ocean needed to sustain healthy

populations (see Annex 3). Both of these findings support the precautionary approach to MPA designation recently voted for by councilors (Output 8).

Output 4. Optimal solutions for MPA placement are proposed based on an integration of species distribution data, threat assessments and economic costs/values within a formal marine spatial planning framework

This output has now been completed ahead of schedule. In 2019 an MPA evidence and options report was submitted to the Island Council and the Ascension Island Government following a one month public consultation (see Annexes 3, 4 and 5). The report proposed several competing MPA designs along with an assessment of the ecological, economic and reputational implications associated with each and was accompanied by a considerable body of supporting evidence spread across 11 appendices. Mounting political pressure to ensure that MPA designation could occur within the first half of 2019 meant that production of the Evidence & Options report was brought forward by approximately five months compared to the original project timeline (from Q1 of Y3 to Q2 of Y4). This rescheduling had inevitable consequences for work planned for the second half of Y2; for example, we were unable to carry out species distribution modelling to the depth we would have liked. Nevertheless, we are content that the scientific evidence presented in the Evidence & Options document reflects the state of knowledge at the current time and met the expectations of policy makers. While data collected during the project clearly highlighted the conservation value of features such as seamounts and Ascension Island, for the majority of pelagic species threatened by fisheries, encounter rates were either too low or their distributions too unpredictable to single out specific areas for protection. Given these reaming uncertainties the precautionary 100% MPA option favoured by councillors was probably the right outcome (see Output 8). Economic analyses presented in the report (Output 4.1) were particularly influential in informing this decision, showing that a residual commercial fishery operating in a portion of Ascension Island's EEZ is unlikely to be profitable in the short to medium term once fixed costs of management are discounted (Annexes 8 and 9).

Output 5. Experimental satellite surveillance technologies are trialled as a cost-effective method for MPA compliance monitoring and enforcement.

The level of potential IUU fishing in Ascension Island's EEZ has now been assessed over a two year period and results have been incorporated into a peer-reviewed manuscript and into the MPA Evidence & Options report submitted to stakeholders in Q3 of Y2 (Annex 9). Real time intelligence using synthetic aperture radar (SAR) has been used to target patrol vessel movements to areas of possible illegal activity, although no interceptions have been made to date. Trials using satellite based platforms have highlighted a number of deficiencies with the current patrol charter, in particular speed and on-board communications which limit its effectiveness as an enforcement vessel. A business case is currently being developed for a more suitable vessel to support both surveillance and research/monitoring objectives going forward and will be discussed with regional stakeholders at a side-event at the Blue Belt Symposium in July 2019.

Output 6. Pelagic biodiversity baselines are established and a robust monitoring framework is developed for evaluating the long-term conservation benefits of the ASIOS.

A first draft of the ASIOS MPA management plan has been produced (see Output 8) and includes performance indicators which will form the basis for monitoring going forward. The ASIOS project has established protocols using standard methods for monitoring pelagic species including visual surveys, baited remote underwater video and hydroacoustics, as well as production of robust data management to hold information. Excellent biodiversity baselines have been established for seamount features in the Ascension Island EEZ, facilitating their use as 'ocean observatories' for monitoring long-term change in an otherwise pelagic, open-water system. AIG's future capacity to monitor its pelagic ecosystem will depend heavily on the availability of a suitable offshore-capable vessel, for which discussions are ongoing, alongside a planned side-meeting for the Blue Belt Symposium in Y3 of the project to develop business case for a shared research/patrol asset in St Helena, Ascension and Tristan da Cunha.

Output 7. International best practice is incorporated into the design and planning of the ASIOS, and experiences and knowledge gained during the project are widely shared.

The IUCN launched a [comprehensive review of best practice in large-scale MPA monitoring](#) within wider guideline announcements at IMPAC4 in 2017, this inclusive document effectively delivering many of the activities planned for this output. These internationally accepted guidelines are being used as a reference manual in the preparation of the Ascension Island MPA management plan (Output 8.4), which includes indicators to guide monitoring. During a side-event at IMPAC4, ASIOS project staff were able to join a meeting of the Big Ocean Network, and while Ascension Island's membership cannot be formalised until after designation; there was considerable enthusiasm from Big Ocean Network that Ascension does so, and the process for Ascension joining is underway. Additionally, representatives from Big Ocean Network have confirmed their attendance at the UKOT Blue Belt Symposium in Y3 of the project which will provide an opportunity to finalise Ascension's membership and further disseminate updates from the network.

Public engagement on the ASIOS project and wider MPA issue through local presentations in Y2, as well as wider online dissemination and invitation for feedback on the MPA Evidence and Options document. The MPAS remains very much a topic of interest locally, with opinion being in favour of an MPA within Ascension's waters. Wider awareness of the Ascension Island MPA designation was clear when the situation was highlighted as part of the BBC's Blue Planet Live week in March 2019.

Output 8. The ASIOS is formally designated and management structures are put in place to ensure its long-term success

As described in more detail for Output 4, MPA options have now been presented to the Island Council who have provisionally voted in favour of a 100% MPA subject to gaining satisfactory assurances on long term financial support (Output 8.1). The adoption of a 5 year management plan and formation of an MPA steering group is not scheduled until Q2 of Y3; however a working draft of the management plan is currently in preparation and has been commented on several times by core project partners with the aim of setting key objectives and indicators.

3.3   Progress towards the project Outcome

In February 2019 the Island Council voted in favour of the designation of a 100% MPA covering the entirety of Ascension Island's 440,000 km^2 exclusive economic zone, subject to guaranteed long-term funding from the UK Government to cover management costs (Annex 4). This decision by councillors was taken based on the range of scientific and economic evidence presented to them in the MPA Evidence and Options document and judged to provide the best long-term outcome both for biodiversity and for the Island (Annex 4; *Note: Approved minutes from the formal Island Council meeting on the MPA held on 28th February 2019 will be available from 16th May 2019 at [this location](#)*). In the [2019 Spring Statement](#) the Chancellor of Exchequer provided strong indication that the UK Government "will support the call from the Ascension Island Council to designate 443,000 square kilometres of its waters as a Marine Protected Area" and we are therefore confident that the project will achieve its ultimate goal of establishing the Atlantic's largest "no-take" MPA in Ascension's waters before September 2019. Work is now underway to finalise an MPA management and monitoring plan which is legally required before this designation can occur.

3.4   Monitoring of assumptions

The project has relatively few critical assumptions and monitoring of these has been relatively straightforward. In the original project application it was recognised that our ability to quantify and model by-catch risks robustly was contingent upon being able to deploy fishery observers on licensed commercial vessels and accessing historical, high-resolution observer data held by foreign fishing authorities. As outlined in previous sections and in the Y1 annual report, these assumptions have not held. License uptake has been very limited, with only a single commercial vessel operating in Ascension's EEZ during Y1 & Y2 of the project and at a time when observers could not be deployed. Despite our best efforts to obtain archive observer data through ICCAT, these have also not been forthcoming. Instead a scaled back analysis has been carried out using geographically and taxonomically summarised data recorded by St Helena Government (who formerly managed the Ascension fishery) along with the small amount of high-resolution data available from more recent years (Annex 7).

3.5   Project support to environmental and/or climate outcomes in the UKOTs

Year 2 of the project has brought us to the verge of achieving the project's ultimate objective of establishing an evidence-based, large scale marine protected area in Ascension Island's waters (see 3.3). The imminent designation of the Ascension Island Ocean Sanctuary will establish the largest "no-take" MPA in the Atlantic Ocean and represents an important milestone in efforts to conserve the Island's biodiversity; and one that stands to considerably raise its profile on the world stage. The potential conservation impacts of MPA designation are unlikely to become apparent for many years; however scientific work carried out during the project has highlighted many of the key features that the MPA will protect and established a level of transparency and objectivity in the designation and decision-making process that is unusual for a large-scale, pelagic MPA of this kind.

4.   Monitoring and evaluation

Project M&E has largely proceeded as described in the Year 1 annual report through regular (ca. monthly) teleconferences involving the core project partners (AIG, University of Exeter, MMO and Cefas). The submission of the Evidence & Options report in Q3 of Y2 was an important milestone in the project and was the main focus for M&E activities in Y2. Political pressure to publish this document several months ahead of schedule required some coordinated reorganisation of activities in the second half of Y2 and joint decisions on which areas to prioritise. While this shortened timeframe meant some analyses needed to be scaled back (see previous sections), we feel that the body of evidence submitted to decision makers provided a sufficiently detailed and balanced account of the state of knowledge of Ascension's marine ecosystem and fishery to allow them to make an informed decision regarding the placement of a large-scale MPA.

5.   Lessons learnt

As detailed in the Y1 annual report, project promotion and visibility has suffered somewhat from not having dedicated team members assigned to these roles and it has not been possible to meaningfully improve this situation under heavy workloads in Y2 of the project. Future projects will consider including a clear communications strategy with dedicated staff resource to implement it.

6.   Actions taken in response to previous reviews (if applicable)

No substantial comments or concerns were raised by the reviewer following the Y1 annual report, although it was noted that the project was overly complex in terms of the numbers of outputs and indicators which complicates monitoring and evaluation. Overall we agree with this assessment. In many ways the ASIOS project became an umbrella for diverse work streams leading towards designation. While we still feel that a majority of these outputs were important to achieving the overall goal, we have not been able to address all of the areas in the depth that we would have liked with the time available. Some outputs more peripheral to the main goal (e.g. pelagic food chain mapping) that required no dedicated resourcing from the project could have been continued in parallel outside of the project which would have reduced reporting and monitoring loads.

7.   Other comments on progress not covered elsewhere

N/A

8.   Sustainability and legacy

The project will culminate in the designation of one of the world's largest marine reserves and is therefore assured of a sustained impact on biodiversity conservation in the Territory. The project has already made substantial contributions to our understanding of Ascension's offshore, pelagic ecosystem and shallow-water seamounts – habitats that were virtually unexplored a few years ago – and efforts have been made to engage the local community and wider audiences in these discoveries wherever possible. The project team has also gained first-hand experience of policing and monitoring large ocean areas and had opportunities to network with large-scale MPA managers and enforcement specialists from around the world, which has noticeably strengthened local capacity for marine management. Offshore patrols are organised almost exclusively by local staff within AIG and many valuable lessons have been learned which will ensure that future management frameworks are robust and achievable. Many of these lessons are currently being integrated into the management plan and monitoring framework for the ASIOS which will be vital for cementing the legacy of the project.

9.   Darwin identity

Darwin branding and acknowledgement of Darwin funding has been incorporated into publicly-available outputs wherever possible. This has included prominent positioning of the Darwin logo in project reports (Annexes 6 and 7) conference presentations (Annexes 10 and 11), and in the Blue Belt Symposium website (http://bluebeltsymposium.org.uk/). The review of the Y1 annual report noted that use of the Darwin logo could be improved and was lacking from certain outputs, such as the project web GIS. Unfortunately the software used to publish the WebGIS has limited customisation options and only allows the use of a single logo without modifying the underlying html. We have, however, acknowledged Darwin support in the metadata of published maps. As outlined in section 5 and in the Y1 annual report, we feel that project's publicity and visibility have sometimes been overlooked during the delivery of the 'core' outputs. Nevertheless, Darwin has been the principal external funder of conservation initiatives on Ascension Island in recent years and the Initiative's name, brand and mission are already familiar to many island residents, particularly those associated with Government.

10.   Project Expenditure

Table 1: Project expenditure <u>during the reporting period</u> (1 April 2018 – 31 March 2019)

Project spend (indicative) in this financial year	2018/19 D+ Grant (£)	2018/19 Total actual D+ Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items				
Others (Vessel charter)				
TOTAL				

Annex 1:   Report of progress and achievements against Logical Framework for Financial Year 2018-2019 – <u>if appropriate</u>

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
Impact **The project aims to significantly enhance the conservation and sustainable use of marine biodiversity in the central tropical Atlantic through the planning, designation and resourcing of the region's largest marine reserve.**			
Outcome **The designation of a large-scale marine protected area (MPA) at Ascension Island, underpinned by strong science and long-term monitoring and enforcement capabilities.**	**0.1.** By Q1 of Y3, **at least 220,000 km² of ocean is protected within a Category 1 MPA** based on the outcomes of a data-driven marine spatial planning exercise **0.2.** By Q2 of Y3, Ascension Island Government has **the necessary plans, monitoring tools and international support network to manage its MPA effectively**, and to develop its potential as an Ocean Observatory	Formal designation of the ASIOS is not planned until Y3; however, the Island Council voted in favour of designating an MPA covering the entirety of the Ascension Island EEZ (443,000 km²), subject to guaranteed long-term funding from the UK Government to cover management costs. This has been supported, in principle, by the UK Government in the 2019 Spring Statement.	Finalisation of the MPA management plan and associated monitoring frameworks is a priority for Y3 of the project and is a legal requirement before designation can occur.
Output 1. Information systems for managing and disseminating spatial datasets gathered during the project are established and local conservation managers are trained in their use.	**1.1** By Q1 of Y1, a **GIS-linked spatial database system is created** for hosting telemetry and at-sea survey data, remote sensing layers, fishery information (vessel locations, catch reports), and other datasets relevant to the designation and future monitoring of the ASIOS; and,	The Web GIS system and spatial database backend has been built and is publicly accessible at http://asios.cles.ex.ac.uk. Further updates to the system have been carried out during Y2 (see section 3.1), and remaining data layers will be uploaded before the end of the project.	

	1.2. a **public-facing Web GIS is created** for displaying and browsing marine spatial data online.	
1.1. Creation of a PostGIS database and QGIS/MS Access user interfaces for managing spatial data gathered during the project		Completed (see Output 1). Population of the databases is ongoing and will continue during Y3
1.2. Creation of a public-facing web GIS interface for disseminating spatial data gathered during the project (using QGIS/LizMap)		Completed (see Output 1). Population of the web GIS is ongoing and will continue during Y3.
1.3. Training day for AIG staff on the operation and maintenance of the spatial database and web GIS system		AIG staff have contributed to the design of the web GIS and have been shown how to operate it. Data input is currently managed by the Project Leader to ensure data integrity, but further training will be provided in Y3
Output 2. Distributions of species impacted by commercial fisheries are mapped and modelled in order to identify key usage areas and risk areas.	**2.1.** By Q4 of Y2**, telemetry data for >300 seabirds, sharks, billfish, tuna and turtles are collated, collected and analysed** in conjunction with environmental data to map key foraging areas and migration routes, and model species' distributions over multiyear timescales	Tracking data for 312 individuals representing 17 different species of marine vertebrate are now stored in the ASIOS tagging databases and results of spatial analyses have been presented in the MPA Evidence & Options document submitted to stakeholders in Q4 of Y2 (see Annex 3), in addition to published papers described in the Y1 annual report. Many tracks can also be browsed using an interactive Marine Vertebrate Tracking Map hosted on the project Web GIS.
	2.2. Composite ocean **front and eddy maps** of Ascension's EEZ are constructed using the previous **5 years of remote-sensing data** by Q3 of Y1 to identify any persistent or seasonally-persistent habitat zones that may be candidates for protection (also feeds into **2.1**)	Completed (see Sections 3.1 & 3.2). Composite maps of mesoscale front and eddy frequency based on 2006 – 2017 years of remote sensing data have been compiled in collaboration with NEODAAS and can be viewed in the project Web GIS. These maps have been integrated with a range of other oceanographic data layers in a pelagic bioregionalisation analysis aimed at identifying discrete habitat zones, or bioregions, within the Ascension EEZ.
	2.3. By Q4 of Y2, **at-sea abundance surveys** for marine megafauna and important prey taxa (e.g. zooplankton and flying fish) are carried out at **> 100 sites** using vessel-based visual	The project has substantially exceeded its original target, with 151 BRUV, 226 vessel-based visual transects and 135 zooplankton tows now completed. All BRUV and visual census data have now been processed and analysed and results can be viewed in the project web GIS. Results have been incorporated into a major

	surveys, plankton tows and baited remote underwater video systems (BRUVs) to identify and ground truth potential hotspot areas	study of Ascension's seamounts and into the MPA evidence documents submitted to stakeholders.
	2.4 By Q4 of Y2, the **importance and radius of influence of Ascension Island and its offshore seamounts as aggregation areas for pelagic biodiversity are established** using telemetry (**2.1**) and at-sea survey data (**2.3**) to develop recommendations for MPA placement and sizing	Completed. Results of a major study of the pelagic biodiversity of Ascension's shallow water seamounts are reported here and have been incorporated into the MPA designs presented to stakeholders in the Evidence & Options document (see Annex 3). Results of tracking studies carried out around Ascension Island itself were also summarised in this document (see Annex 6) and informed the size of protection buffers placed around the Island.
2.1. Collate and analyse existing tracking data for marine turtles and seabirds to identify key foraging habitats and migration routes		Existing tracking data have been collated and analyses to extract home ranges, foraging areas and migration routes are largely complete. The majority of tracks and derived datasets can now be viewed on the project Web GIS. Finalisation and publication of these analyses will take place during Y2.
2.2 Conduct further tracking of tunas, sharks, seabirds and billfish, particularly in offshore areas and around seamounts, to address taxonomic and spatial gaps in species distribution data		2.2.1. Technical issues with tags and welfare concerns were raised surrounding the safe use of harnesses in the deployment of geolocators meant that tagging of sooty terns during Y2 of the project was limited, with only 12 tags deployed overall. An opportunistic expedition concerning the previously untracked brown booby at Ascension Island was carried out in Q3 of Y2 using T&S and salary underspend (see expedition report in Annex 12).
		2.2.5. Two additional Atlantic blue marlin and one sailfish were tagged with pop-up satellite archival tags during Y2 of the project although data from these tags was not available to incorporate into the MPA Evidence & Options report.
2.3. Use remote-sensing data to identify and map persistent frontal systems, eddies and other bio-aggregating oceanographic features in Ascension Island's EFZ as potential high-value habitats for conservation		Completed. See summary for Output 2 and section 3.1.

2.4. Undertake at-sea abundance surveys of marine megafauna and important prey taxa (e.g. zooplankton and flying fish) to identify and ground truth potential 'biodiversity hotspots' and link these to environmental drivers		32 at-sea abundance surveys were carried out during a 4-week offshore research and patrol cruise in Q4 of Y2 (see Output 2 and section 3.1).
2.5. Analyse telemetry and at-sea abundance data (**2.4**) in conjunction with environmental variables (**2.3**) to estimate movement parameters and residence times, and construct species distribution models (SDMs) for predicting long-term distribution dynamics		See sections 3.1 & 3.2
Output 3. Threats to marine megafauna from commercial fisheries are quantified, including both direct (by-catch) and indirect (food chain) impacts	**3.1.** At least **10% local observer coverage** is established in the commercial fishery for the **duration of the project** and is used to validate vessel catch reporting	At the application stage it was recognised that the ability to deliver this output was contingent upon fishing vessels purchasing licenses at a time when observers could be deployed. As in Y1 of the project, only a single commercial fishing license was sold during Y2 and ongoing air access issues on Ascension Island meant that it was not possible to bring in international observers (see section 7). Flag-state observer data were provided and the project team was able to board for a mandatory inspection.
	3.2. By Q1 of Y2, a **ranked risk assessment** is produced identifying those species most threatened by commercial fisheries following a synthesis of all available fishery data and relevant ecological information	Completed (see Annex 7)
	3.3. By Q2 of Y2, **the distribution of commercial fishing effort, catch and by-catch in Ascension's EFZ** in all years for which data exist are mapped and, where possible, modelled as a function of environmental covariates to identify any specific areas or habitat zones with elevated risk to individual species and broader taxa	Available catch and effort data from the Ascension longline fishery have been collated and analysed and results were summarised in the Evidence & Options document submitted to stakeholders (Annex 3). The distribution of historic fishing effort was incorporated into the MPA design process as a cost layer to try and maximise the economic viability of any future fishery within a mixed protection-production scenario (Annex 8). Despite a concerted effort to obtain high resolution catch and effort data held by foreign fishing authorities, including through contacts at ICCAT, this has not been forthcoming.

	3.4 By Q3 of Y2, the diets and trophic positions of at least **seven species of tuna, seabirds and sharks** as well as all key prey taxa are characterised as a basis for mapping Ascension's pelagic food web and modelling the impacts of fisheries (and fishery closures) on food web dynamics.	As detailed in sections 3.1 & 3.2, work on indirect threats was scaled back due to an accelerated deadline for submitting MPA designs to stakeholders. Results of a study on the diets of sooty terns and potential impacts of overfishing have been published in a manuscript in Global Change Biology with important implications for MPA designation ([Reynolds et al. 2019](#)). More than 500 table isotope samples from 13 species of marine vertebrate and their prey have now been analysed and incorporated into a central database which will allow future trophic studies.
Activities 3.1 – 3.6		See progress reports for Outputs 3.1–3.4
Output 4. Optimal solutions for MPA placement are proposed based on an integration of species distribution data, threat assessments and economic costs/values within a formal marine spatial planning framework	**4.1** By Q3 of Y2, a **bio-economic analysis of Ascension's commercial long line fishery** has been conducted to assess its long-term viability under different future management scenarios	Completed (see Annex 8)
	4.2 By Q4 of Y2 an **MPA options report is produced** based on results and recommendations from outputs 2, 3 and 4 and circulated for stakeholder review prior to AIG submitting to Council for final decision	Completed (see [online](#), Annex 3 and Sections 3.1 & 3.2)
4.1 Carry out a bio-economic analysis of Ascension's commercial longline fishery to model spatio-temporal variation in fishing values, investigate factors influencing license uptake, and assess the long-term economic viability of the fishery under different management scenarios, considering alternative economic models where appropriate		Completed (as above)
4.2 Use systematic conservation planning software to identify MPA designs that optimise biodiversity conservation objectives and sustainable financing from fisheries under different sets of assumptions and constraints		Marxan conservation planning software was used as a decision-support tool to identify possible MPA designs as part of the preparation of the Evidence & Options document (see Annex 3).
4.3. Report the findings and proposed MPA boundaries from Outputs 2, 3 4.1 and 4.2, and circulate to stakeholders for peer-review		Completed (as above)

Output 5. Experimental satellite surveillance technologies are trialled as a cost-effective method for MPA compliance monitoring and enforcement.	**5.1** By Q4 of Y2, the level of **Illegal, Unlicensed and Unreported (IUU) fishing** in Ascension's EFZ has been estimated over a **2 year period** and, where possible, has been verified by targeted patrol vessel deployments.	Locations of possible illegal fishing events identified using synthetic aperture radar (SAR) are now available for two years (2016-2017) and have been published in the peer-reviewed literature, although none of these has yet been verified by the patrol vessel (see section 3.2). Unfortunately SAR imagery was not available in Q4 of Y1 due to a change in service provider. The project team was successful in securing this intelligence tool through the Blue Belt partner MMO for the patrol period within Y2.
5.1 Identify and map potential Illegal, Unreported and Unregulated fishing in Ascension's EFZ using nocturnal light signatures from vessels and SAR imaging overlaid with local AIS/VMS data		SAR imaging for part or all of the Ascension Island EEZ was available for 39 days in January-February 2019 to support offshore vessel patrol activities, with intelligence reports being coordinated through the Blue Belt partner MMO. Uncorrelated VMS/SAR detections were in evidence during the 2019 patrol period, confined to the buffer one outside of the Ascension Island EEZ boundary.
5.2 Report the findings of vessel detection trials to local marine managers with recommendations for future deployment of the technology		Results of satellite surveillance have been incorporated into an IUU fishing risk assessment and management costing exercise undertaken as part of the preparation of the MPA Evidence & Options report (see Annex 9)
5.3 Trial targeted patrol vessel deployments using near-real-time vessel detection to ground-truth the technology and test its application as an enforcement tool		Attempts to intercept illegal fishing vessels using intelligence from SAR imaging have so far been unsuccessful for reasons explained in the Y1 annual report. These experiences have highlighted a number of deficiencies in the current patrol vessel and a business case for a fit-for-purpose patrol asset is being prepared as part of the management planning process.
5.4 Train local users in the operation of vessel detection systems for long-term self-sufficiency in compliance monitoring and enforcement.		This activity was primarily in relation to light-based vessel detection services which are unfortunately inappropriate for Ascension Island (see Y1 annual report)
Output 6. Pelagic biodiversity baselines are established and a robust monitoring framework is developed for evaluating the long-term conservation benefits of the ASIOS	**6.1.** By Q1 of Y1 at least **10 fixed BRUV monitoring sites** have been established for assessing trends in the abundance and diversity of key pelagic species, such as sharks. By Q4 of Y2, baselines have been drawn using seasonally stratified **surveys over a 2 year period**	Fixed monitoring sites have now been established on the summits of three shallow water seamounts and these were re-surveyed during an offshore research and patrol cruise in Q4 of Y2. Good abundance and diversity baselines are now available for the pelagic megafauna communities associated with these features which will enable future monitoring (see Annex 3). Ongoing infrastructure and access issues at Ascension Island has continued to impede the establishment and quarterly surveys of inshore monitoring sites due to limited inshore vessel and fuel availability. However, negotiations are currently underway for access to an

		offshore-capable vessel to permit repeated monitoring surveys of seamounts and similar features, as well as a suitable platform for inshore equipment deployments.
	6.2. By Q4 of Y2, best practice in pelagic MPA monitoring has been reviewed and incorporated into a **'good monitoring framework'** that is appropriate for Ascension Island's needs and resources (see also **7.3**)	A comprehensive review of best practice in large-scale MPA monitoring was included in the [IUCN guidelines](#) launched at IMPAC4 in 2017 and effectively delivers many of the activities planned for this output. The guidelines are currently being used as a reference manual in the preparation of the ASIOS management plan, which includes indicators to guide monitoring.
6.1 Identify suitable pelagic monitoring sites in inshore areas and on seamounts, and initiate quarterly (inshore) and annual (seamount) BRUV surveys to establish baselines of abundance and community composition		See general progress report for Output 6.1
6.2 Trial targeted monitoring of dynamic open-ocean habitats using near-real-time front and eddy mapping to direct BRUV deployments and vessel-based abundance surveys		Trials were conducted during the 2018 offshore research and patrol cruise in Q4 of Y1 supported by near-real-time ocean front mapping provided by NEODAAS (see Y1 annual report). Real-time oceanographic data collected during surveys failed to detect any pronounced ocean fronts at targeted locations suggesting that the method may not be viable in highly dynamic pelagic systems with generally weak frontal systems. These data are not currently publicly accessible and publication is of lower priority than other scientific outputs, but we will work with NEODAAS to ensure that lessons learned from these trials are placed in the public domain in due course.
Output 7. International best practice is incorporated into the design and planning of the ASIOS, and experiences and knowledge gained during the project are widely shared	**7.1.** Ascension Island Government joins the Big Ocean Network and representatives attend **at least one major international MPA symposium by Q4 of Y1** to present plans and receive feedback	Membership of Big Ocean Network cannot be formalised until after designation; however the connections have been made and the process for Ascension joining is well underway. Representatives from Big Ocean Network have confirmed their attendance at the UKOT Blue Belt Symposium in Y3 of the project which will provide an opportunity to finalise Ascension's membership.
	7.2. UoE and AIG host a **UKOT "Blue Belts" conference** in Q2 of Y3 as a forum for strengthening links, promoting collaborations and improving knowledge transfer between Territories	Planning for the 2019 Blue Belt Overseas symposium is now well underway with confirmed participants from 11 UK Overseas Territories. A cross-sectorial organising committee including representatives from conservation NGOs and the UK Government's Blue Belt programme has been convened to ensure that the symposium agenda and delegation reflects the diversity of views and approaches

	responsible for managing large-scale MPAs	towards marine management in the UKOTs. See section 3.1 and [symposium website](#) for further details.
	7.3. By Q4 of Y2, a **literature review of best practice in large-scale MPA design and management** has been produced and incorporated into plans for the ASIOS	See 6.2
7.1. AIG engages with peer-learning networks, including joining Big Ocean Managers Network		Representatives from Big Ocean Network to attend Blue Belt Symposium in Y3
7.6 Publicise and disseminate project activities and findings through social media, local newspaper articles, scientific blogs, peer-reviewed publications, online repositories and public lectures		
Output 8. Threats to marine megafauna from commercial fisheries are quantified, including both direct (by-catch) and indirect (food chain) impacts.	**8.1.** By Q1 of Y3, proposed **MPA boundaries and regulations are presented to the Island Council** for recommendation to the Governor.	Completed (see Annex 3)
	8.2. By Q2 of Y3, **AIG adopts a 5 year MPA management plan**, guided by Outputs 2–7	A first draft of the MPA management plan objectives and indicators has been produced and circulated among key project partners. The plan will be finalised in advance of formal designation in Q1 of Y3.
	8.3. By Q2 of Y3, a **working group of local and international stakeholders** is formed to provide coordinated, long-term scientific, political and fundraising support and steering.	Not due to commence until Y3; however the Blue Belt Overseas Symposium in July 2019 provides a clear opportunity to convene the working group.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed) - <u>if appropriate</u>

N.B. if your application's logframe is presented in a different format in your application, please transpose into the below template. Please feel free to contact Darwin-Projects@ltsi.co.uk if you have any questions regarding this.

Annex 3 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	
Have you completed the Project Expenditure table fully?	
Do not include claim forms or other communications with this report.	