



**Biodiversity Challenge Funds Projects  
Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus  
Half Year Report**

<b>Project reference</b>	<b>DPLUS161</b>
<b>Project title</b>	Exploring the Drivers of Human-Shark conflict at Ascension Island
<b>Country(ies)/territory(ies)</b>	UKOT – Ascension Island
<b>Lead partner</b>	University of Exeter
<b>Partner(s)</b>	AIGCFD - Ascension Island Government Conservation and Fisheries Directorate, ZSL - Zoological Society of London, University of Windsor and University of Plymouth
<b>Project leader</b>	<i>Dr Sam Weber</i>
<b>Report date and number (e.g. HYR1)</b>	<i>HYR1</i>
<b>Project website/blog/social media</b>	

**Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).**

**Output 1: The social context of human-shark conflict on Ascension Island is characterised through a process of inclusive stakeholder engagement, ensuring that local knowledge and views are duly represented in project design and implementation.**

Following several delays to this output in Y1 (see below and AR1), a first field visit by social science leads from ZSL has now been organised between 10<sup>h</sup> to 19<sup>th</sup> of December 2023. Several cross-partner meetings have been held in the run up to this visit to agree on the aims and scope of the work, in order to ensure it does not exacerbate local human-wildlife conflicts. Draft methodology and facilitation guides have been prepared and will be circulated to all partners for approval in advance of the visit.

**Output 2: Knowledge of the behaviour and distribution of Galapagos sharks on Ascension Island is significantly enhanced and is used to evaluate a range of hypotheses proposed to explain recent increases in inshore activity.**

Work on this output for the past 6 months has primarily involved maintenance and retrieval of data from shore-based monitoring cameras, oceanographic moorings and telemetry receivers deployed at the end of Y1. No shark activity has been observed on monitoring camera systems to date and reports of shark interactions with fishers in the more accessible fishing areas (sites between AR3 and AR10 in Figure 1) along the western coastline have remained low. This is consistent with detections of acoustically-tagged individuals which have been downloaded every 6 weeks and indicate that sharks remain concentrated on the inaccessible south coast (AR14–AR19 in Figure 1), with a ‘super school’ consistently located around Pillar Bay (AR17, Figure 1).

Monthly morphological measurements and tissue sample collections have continued throughout the reporting period, focussing on these aggregation areas. A total of 70 Galapagos shark (*Carcharhinus galapagensis*) and 31 Silky sharks (*Carcharhinus falciformis*) ranging in sizes from 89cm to 190cm and 97cm to 200cm respectively were sampled from March to September. Analyses of these samples for dietary and physiological markers (stable isotopes, blood metabolites) is now underway at the University of Exeter. This has allowed the establishment of a strong physiological baseline from which to measure future changes associated with any shifts in shark distribution back into inshore conflict areas.

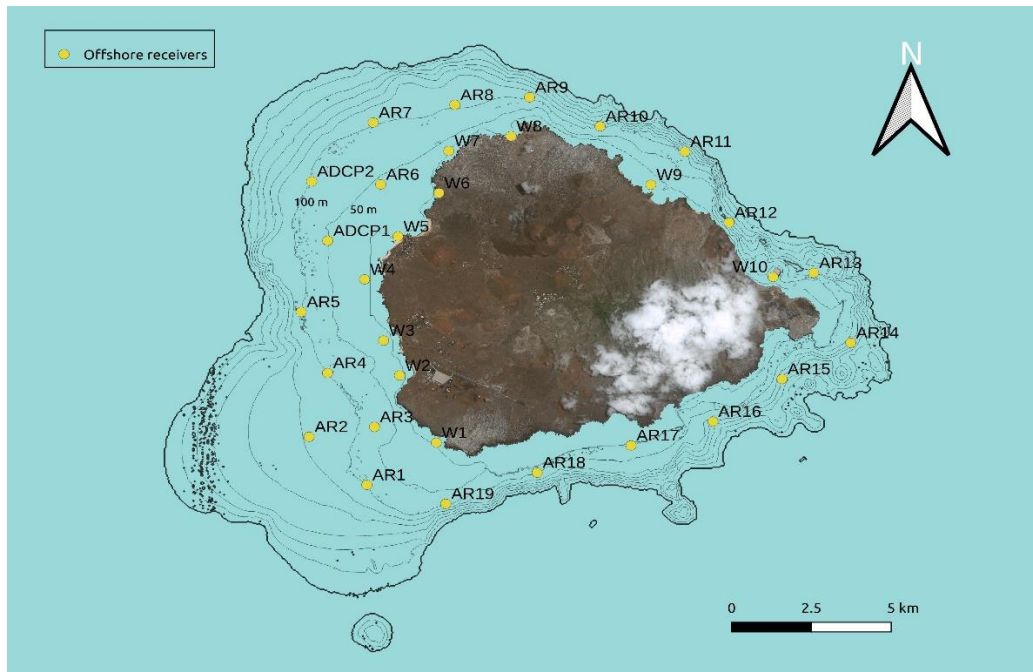


Fig 1. Ascension Island Acoustic Tracking Array deployed in Y1. Coastal receivers (<20meters) are marked W1-W10 and deep-water receivers (60 – 100 m) are marked AR1-AR19.

In recent months, a slow increase in the number of reports have indicated some larger sharks (approx. 1.5 to 3 meters) have started to occasionally visit popular fishing areas (AR3 and AR10 in Figure 1) and reports of depredation have occurred on rock and boat fishers' catch. While attempts have been made to record these interactions, fishers have proven to be reluctant to engage in formalised catch reporting structures, meaning data is still currently anecdotal and qualitative. An undergraduate dissertation student at the University of Exeter is currently exploring whether trends in social media activity can be used as an alternative index to track the frequency of negative interactions with sharks.

Sampling has been attempted in areas where fishers have experienced recent interactions with sharks to compare their physiological/reproductive status, however success has been limited due to the small numbers of individuals involved. Should large scale inshore movements recur in the next 6 months, further sampling will be targeted in these areas.

**Output 3: Field trials and fully costed feasibility studies of non-lethal conflict reduction measures are undertaken to assess their viability on Ascension Island.**

Trials of electronic deterrent devices (specifically Ocean Guardian) are ongoing. An experimental rig has been designed which allows recording of shark interactions with a bait stimulus in the presence or absence of an active deterrent using a stereo remote underwater video system. Trials of this system are currently ongoing using a small aggregation of sharks found in a slightly more protected area of one of the bays and have so far indicated a minimal deterrent effect.

We are currently awaiting responses from multiple suppliers of shark barrier systems that have a proven track record in providing safe swimming zones. Once detailed quotes and technical specifications are received these will be used to inform local feasibility studies.

**Output 4: The results of social and ecological research are openly shared and discussed with the Ascension Island community, and are used to assess the suitability of a range of mitigation options for ameliorating human-shark conflicts.**

Local stakeholder engagement in the project has remained strong over the past 6 months. Visiting project partners from the University of Plymouth hosted a public meeting (presentation can be found at <https://www.youtube.com/watch?v=LOr1LTs4LTc>) to share preliminary oceanography modelling results and discuss future objectives of the project. The presentation coincided with the recovery and redeployment of oceanographic monitoring equipment that has been used to monitor environmental changes around Ascension Island and ground-truthing desktop modelling of local ocean currents.

Project findings have also been disseminated via monthly Islander articles (local newspaper), including shark behaviour general safety awareness notices based on recent shark observations around popular fishing locations and potential beach access areas. Regular checks of detections on the acoustic receiver array deployed through Output 2 have also provided an early indication of movement trends of sharks around the island which has been shared with the local community.

**2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

Although some shark interactions in popular fishing areas have been reported throughout the year, there is still a very low number of sharks in comparison to previous years (2017-2022) in these areas. If large scale inshore movements do not recur over the next 12 months this will significantly limit our ability to infer drivers of previous behaviours that fuelled human-shark conflicts. We will continue to closely monitor shark movements over the next 6 months and consult with the Darwin Secretariat to agree on a revised workplan and log frame if necessary.

As detailed in AR1, activities related to Output 1 (exploring social context of human-shark conflict) have been repeatedly postponed while several logistical and methodological issues were resolved. A key consideration has been to ensure that stakeholder interviews are objective and inclusive while not re-igniting human-shark conflict and associated interpersonal conflicts within the Ascension Island community. Achieving this balance has required extensive consultation between local leads in Ascension Government and project social scientists to agree on the aims and scope of the work, which has inevitably delayed implementation. This has been compounded by infrequent (monthly) flights to Ascension Island during Y1 of the project no aligning with partner availability. As detailed above, these challenges now appear to have been resolved with bi-weekly flights to Ascension resuming in Y2 Q2, a draft methodology approved by all project partners, and an initial field visit by social science partners from ZSL organised for Y2Q3. We are therefore confident that progress on this output can be made during the next quarter.

**3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?**

Discussed with NIRAS: No

Formal Change Request submitted:	No
Received confirmation of change acceptance	No
Change request reference if known:	

**4a. Please confirm your actual spend in this financial year to date (i.e. from 1 April 2023 – 30 September 2023)**

Actual spend: £ [REDACTED]

**4b. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?**

Yes  No  Estimated underspend: [REDACTED]

**4c. If yes, then you need to consider your project budget needs carefully.** Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. **Please DO NOT send these in the same email as your report.**

**NB:** if you expect an underspend, do not claim anything more than you expect to spend this financial year.

**5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?**

**If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.**

**All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.**

**Please note:** Any planned modifications to your project schedule/workplan can be discussed in this report but **should also** be raised with NIRAS through a Change Request. **Please DO NOT send these in the same email.**

Please send your **completed report by email** to [BCF-Reports@niras.com](mailto:BCF-Reports@niras.com). The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**