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: 30 April

Darwin Plus Project Information

Project Ref Number	DPLUS027
Project Title	Marine Spatial Planning for the Falkland Islands
Territory(ies)	Falkland Islands
Contract Holder Institution	South Atlantic Environmental Research Institute
Partner Institutions	BirdLife International; Falklands Conservation; British Antarctic Survey; Falkland Islands Government (FIG) Fisheries Department; Shallow Marine Surveys Group (SMSG).
Grant Value	151,572
Start/end date of project	1 July 2014 / 30 June 2016
Reporting period (e.g., Apr 2015-Mar 2016) and number (e.g., AR 1,2)	July 2014-March 2015
Project Leader	Dr Paul Brickle
Project website	http://south-atlantic-research.org/research/current-research/80-marine-spatial-planning-falkland-islands
Report author and date	Dr Amélie Augé (Project Manager), 26 March 2015

1. Project Overview

The Falkland Islands marine environment (Fig. 1), while not being pristine as it has been exploited for several centuries, is a considerably untouched part of the world compared to more populated or exploited marine environments, and still harbours many areas that remain in close to pristine condition. This is recognised by the Falkland Islanders and the international community. The regional context is that the Falkland Islands marine environment has been mainly unspoilt, with a thriving wealth of marine organisms, including endangered species.

There is currently no marine spatial planning (MSP) around the Falkland Islands with the exception of seasonal fishing closure areas and the exclusion of industrial fishing 3 nautical miles from shore. The Falkland Islands Exclusive Economic Zone (EEZ) is rich in marine biodiversity, including globally threatened seabirds and marine mammals. There is an increasing level of human activities in the ocean around the Falkland Islands, in particular for oil exploration, but also for shipping traffic, commercial fishing and tourism. The need to identify and manage areas sensitive to risks of conflicts between different human uses and/or with marine wildlife and values has been identified as a priority for FIG. Marine spatial planning (MSP) is a tool used to resolve these conflicts and ensure sustainable use of the marine environment.

The aims of the Darwin Plus-funded project called ‘Marine Spatial Planning for the Falkland Islands’ is to initiate the process of MSP in the Falkland Islands’ EEZ (Fig. 2) with two main goals:

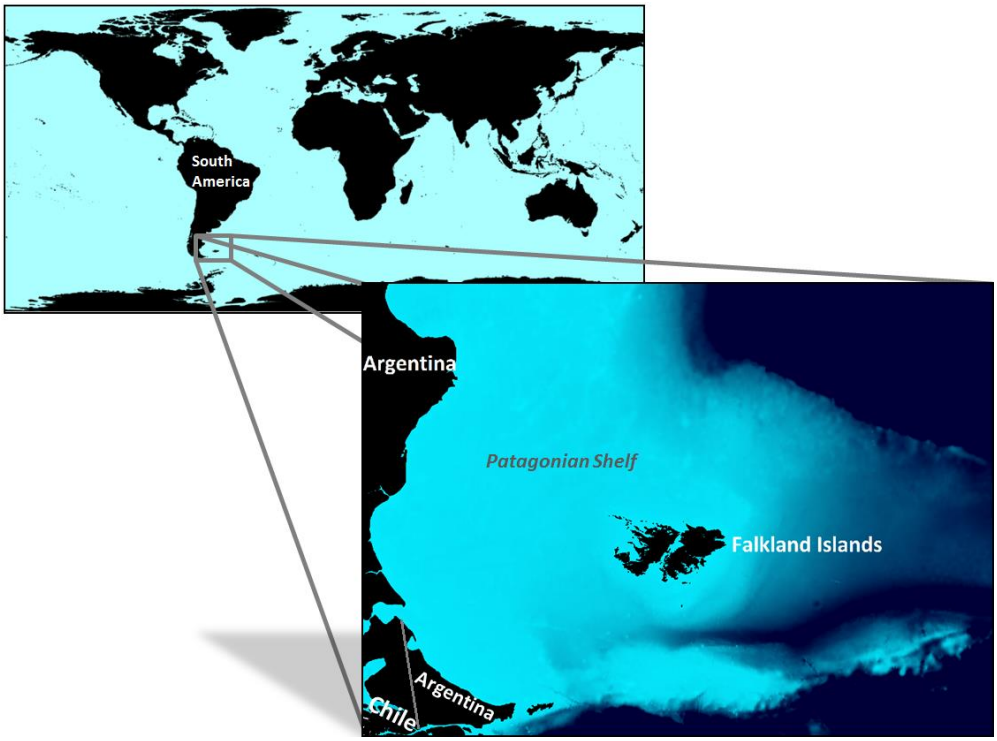


Figure 1. Location of the Falkland Islands on the Patagonian shelf

- Mapping and analytical goal: Identifying areas used by humans and wildlife, most important ecological areas and zones of conflicts. This goal involves gathering all available spatial data on the marine environment of the Falkland Islands and assessing the major data gaps for efficient planning. Data are mapped in a Geographic Information System (GIS) to work on spatial analyses for identification of overlap areas and areas of highest ecological significance. A sub-study of this goal is also to re-analyse together all satellite tracking and sighting data of seabirds and marine mammals available in order to identify the main data gaps for the management of this group of species. Another sub-study of this goal is to map the marine coastal cultural ecosystem services of the Falkland Islands in order to include these values in the MSP process framework.

- Policy goal: Involving local and international stakeholders in the initial MSP process and data gathering, and producing a framework for FIG to facilitate further steps towards implementation of MSP and associated legislation. This goal involves a large component of public communication and engagement with the local population and stakeholders and reviews of best-practice via literature reviews and workshops with MSP experts and local stakeholders.

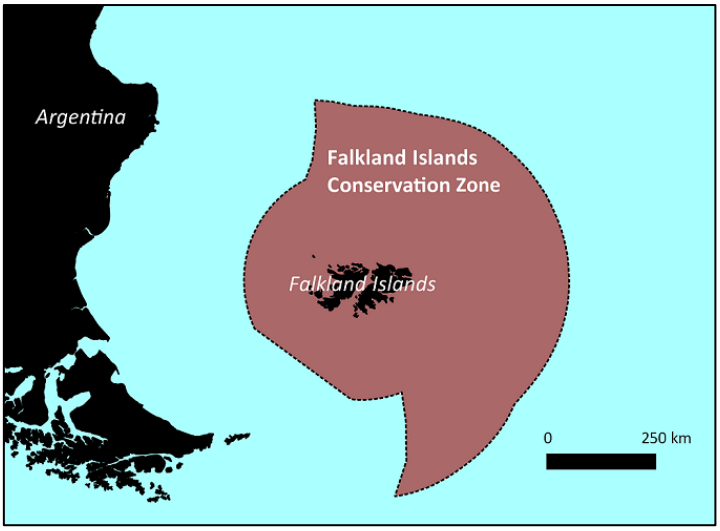


Figure 2: The Falkland Islands' Exclusive Economic Zone, locally called Conservation Zone

The project will contribute towards integrated land and sea zoning and management for the Falkland Islands at the same time as providing local capacity building in MSP through stakeholder engagement and public communication. The project addresses the highest priority areas within the Falkland Islands Biodiversity Strategy (FIBioS), particularly coastal and marine species and ecosystems. The project will also contribute towards potential ratification of the Convention on Biological Diversity (CBD) by the Falkland Islands as it will provide the means for FIG to identify potential Marine Managed Areas, including candidate marine reserves. The results of the project will provide guidance for other UKOTs addressing similar topics in the future.

Open-access computer programs (free and available for anyone to download from the internet and use) are used in this project to allow any interested stakeholders to look at the data and results. This will also ensure that the data, references and information produced by this project can be available for use by anyone in the future, independently of access to expensive software.

2. Project Progress

2.1 Progress in carrying out project activities

Following approval, the project timeline was slightly amended to acknowledge the project officer's start date of July 2014. The project was moved 3 months back and now has a start date of July 2014 and finish date of June 2016. All outputs and budget lines were edited accordingly as per Project Plan in Annex 1. All planned project activities are being carried on time and completed as per this Project Plan. A few adjustments were also made to this plan in order to reflect appropriate research methodologies. Changes apply to metadata and data collation, workshop #2 and data analyses. The metadata catalogue and collation of spatial data will be worked on as long as the GIS platform outputs because these two steps are completely related (for instance shipping data will not be available until July 2015 to obtain a full year of data, and outputs of the multi-species megafauna analysis will not be available until approximately September 2015). Workshop #2 will take place in April 2015 rather that the next quarter because final analyses cannot start until research partners have been consulted. The data analyses were moved later to rectify this and are now starting after workshop #2 (although preliminary trial analyses were conducted before and used as a discussion starter for the workshop).

The updated project plan can be found in Annex 1 at the end of this report.

2.2 Project support to environmental and/or climate outcomes in the UKOT's

The project is gathering and analysing all available spatial data and identifying crucial gaps for marine environmental management of the Falkland Islands. This information is distributed to the Government through meetings and reports and will help the Government make decisions regarding proposed research proposals and decision making for marine management.

In the last 9 months, many Government staff and local stakeholders have been briefed about or involved in the MSP project. This in-country capacity building has led to several stakeholders being exposed to the concepts of MSP for the first time and have shown great interest in this process to ensure long-term sustainable use of the rich marine environment of the Falkland Islands.

2.3 Progress towards project outputs

Progress towards achieving expected outputs are all on track (Tab. 1). The expected outputs for the next year are challenging but it is so far foreseen that the project will deliver all outputs in the timeframe, at the exception of some scientific publications that may take longer to finalise and the spatial database that will need updated as new data becomes available in the near

Table 1 List of outputs for the MSP project with timeframe and status as at 31 March 2015

Output #	Description	Timeframe	Status
1	*Increased data availability. Data review, identification, collation, storage and curation*		
1.1	Project officer recruitment	2014: Q2	Completed
1.2	Review of extant data relevant to MSP in the Falkland Islands	2014: Q2	Completed
1.3	Creation of metadata catalogue	2014:Q3 to 2015:Q3	In progress
1.4	Collation, assimilation and creation of project specific geospatial databases	2014:Q3 to 2015:Q3	In progress
2	*Best practice review*		
2.1	Review circulated to project partners and stakeholders for comment. Posted on website	2014: Q3	Completed, scientific paper in progress
3	*Stakeholder workshop 1*		
3.1	Workshop report produced, circulated to stakeholders and posted on website	2014: Q3	Completed
4	*GIS platform*		
4.1	Build to accommodate data in the metadata catalogue	2014:Q3 to 2015:Q4	On track (IMS/GIS Data Centre)
4.2	Map examples of specific data	2014: Q3 to 2016:Q1	On track

future to ensure best-available information if the Government is to undertake and implement MSP in the Falkland Islands. Due to the change of start date to July 2014, this annual report corresponds to only 3 quarters 2014:Q1, Q2 and Q3 covering the period July 2014 to March 2015, and corresponding outputs

An in-depth review of spatial data available for MSP in the Falkland Islands was conducted using a combination of meetings with stakeholders, internet searches, and literature review. A metadata catalogue was created and all data gathered as part of the MSP process will feed in this catalogue so they are available for spatial analyses for the MSP process. This process is ongoing and data will be added when they are obtained. The catalogue will also feed in the South Atlantic IMS/GIS Data Centre where metadata will be available for consultation to anyone via an internet search. The GIS platform is created using QGIS and allows producing maps for stakeholder engagement and upcoming spatial analyses. Examples of data and the metadata can be found in the first public report.

A review of MSP best-practice was conducted and references were compiled in a Zotero library and presented at the workshop. Notable references include the following and formed a good basis for MSP practice in the Falkland Islands.

- Ahler, Charles, and Fanny Douvere. Visions for a Sea Change. Report of the First International Workshop on Marine Spatial Planning. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides, 46: ICAM Dossier, 3. Paris, France., 2007.
- Douvere, Fanny, and Charles N. Ehler. "New Perspectives on Sea Use Management: Initial Findings from European Experience with Marine Spatial Planning." Journal of Environmental Management 90, no. 1 (January 2009): 77–88. doi:10.1016/j.jenvman.2008.07.004.
- Flannery, Wesley, and Micheál Ó Cinnéide. "A Roadmap for Marine Spatial Planning: A Critical Examination of the European Commission's Guiding Principles Based on Their Application in the Clyde MSP Pilot Project." Marine Policy 36, no. 1 (January 2012): 265–71. doi:10.1016/j.marpol.2011.06.003.
- Guerry, Anne D., Mary H. Ruckelshaus, Katie K. Arkema, Joey R. Bernhardt, Gregory Guannel, Choong-Ki Kim, Matthew Marsik, et al. "Modeling Benefits from Nature: Using Ecosystem Services to Inform Coastal and Marine Spatial Planning." International Journal of Biodiversity Science, Ecosystem Services & Management 8, no. 1–2 (2012): 107–21.
- Halpern, Benjamin S., Jordan Diamond, Steve Gaines, Stefan Gelcich, Mary Gleason, Simon Jennings, Sarah Lester, et al. "Near-Term Priorities for the Science, Policy and Practice of Coastal and Marine Spatial Planning (CMSP)." Marine Policy 36, no. 1 (2012): 198–205.

- Shucksmith, Rachel, Lorraine Gray, Christina Kelly, and Jacqueline F. Tweddle. "Regional Marine Spatial Planning – The Data Collection and Mapping Process." Marine Policy 50 (2014): 1–9.

Part of this review is being turned into a scientific publication, currently under preparation. The tentative title of this publication will be "*Marine Spatial Planning for sub-polar isolated islands: Frontiers for ocean management*" and its main points are:
"*Sub-polar isolated islands are either uninhabited or scarcely populated and of small to very small sizes. However, the combined marine area under the jurisdiction of these islands or their countries represents over 9% of the total world's ocean under jurisdiction from a nation (as opposite to international waters). The marine environments around these islands are rich, unique and productive and are now in the reach of large scale exploitation (fisheries, oil and gas exploration) due to technological advances in the last decades. Consequently, despite an apparent default protection due to small human permanent presence and some of the islands' marine area being under some kind of management with Marine Protected Areas (with various degrees of protection), management is required to ensure the sustainable use of the large area of sea that these islands encompass as part of their EEZ. By identifying the characteristics that these islands have in common, we present a suite of considerations and best practice solutions for managers from Governments who look after these island*s."

The first MSP workshop in the Falkland Islands, called "*MSP for the Falkland Islands: Setting the scene*" took place on 24 and 25 November 2014 in Stanley and gathered 12 representatives of all local stakeholder groups in the Falkland Islands on the first day from 8.30am to 12.30pm and 9 local and international scientists, experts in the Falkland Islands and/or MSP (with a teleconference link to Cambridge, UK) on the second day from 9am to 2pm. A workshop report was produced, distributed and published on the project webpage.

Extra activities were conducted to ensure the MSP process can proceed as per best practice. As community engagement is an important part of the process but were little planned for in the original work plan, a public session was organised where 18 people from the community were explained MSP, shown MSP examples and consulted about the process of MSP for the Falkland Islands and their values of the marine environment. A report was produced for the session, distributed to stakeholders and published on the project's webpage. Further community engagement events will be conducted during the project.

As part of an output for the next year, a large effort was made in this first year to request satellite tracking and sighting data of seabirds and marine mammals within the Falkland Islands' EEZ in collaboration with BirdLife International for the seabird data. This process was very successful with a very high positive response rate (approx. 95% of requests were accepted) that will be worked on at an upcoming workshop in April and analysed in the next quarters to identify critical areas for marine megafauna as an input to the MSP process.

Similarly, as part of an output for the next year, large effort was made to organise two upcoming consecutive workshops for the project that will take place in Cambridge from 13 to 17 April 2015. The first workshop will gather approximately 25 data owners of megafauna data over 2 days to work on the multi-species analyses and work on the methodology to identify critical areas for this group. The second workshop will gather approximately 20 MSP experts and Falkland Islands representatives to work on prioritisation of spatial analyses on data available for MSP and discuss policy best-practice for MSP to help inform FIG with their process as part of the project outcome consisting of a framework for MSP.

2.4 Progress towards the project outcome

The progress detailed in the other parts of this report demonstrate good development towards the project outcomes in this first 9 months. The project outcomes are on track for being achieved.

2.5 Monitoring of risks

The four risks identified in the original proposal have all been reduced:

- *Wrong project officer appointed or suitably qualified person not found.* A suitable project officer has taken up the position less than 2 months after receiving the offer for the position and is leading the project
- *Co-partners/stakeholders fail to provide assistance*. All partners have provided assistance as requested
- *Co-funding via FIG Environmental Planning Department Environmental Studies Budget*. The FIG ESB has approved a £15,000 grant towards a research proposal towards using existing data available to map a preliminary cetacean distribution around the Falkland Islands, one of the main data gap identified during the review of available data, for efficient MSP. The research proposal can be found in Annex 4.
- *Some of the data are only held in hard copy and will take more time to convert*. Some data are in hard copy and have taken longer to adapt, however, this is not the majority of the data and is not an issue.
- *Some of the collaborators are unable to make one or more of the workshops*. The inability of some collaborators to attend some meetings has been addressed and is not an issue. Reports are produced for each workshop and feedbacks is sought and incorporated. Absent collaborators are also contacted in person or on skype to obtain further feedbacks if needed.

Further risks identified to the project, following the first 9 months of the research, are:

- *Time-consuming process and analyses to adapt spatial data available from various sources in a single homogenised format to allow spatial analyses for MSP*. Now that the range of data has been reviewed and numerous data are in completely incompatible formats, this risk is high and may have medium impact on the project. To reduce the risk, a strict data priority list was drawn during the first workshop to avoid spending time on less important data for this first step towards MSP. The other data could be analysed and added in a later step to MSP but not during the lifetime of the project.
- *Challenging spatial analyses that may be difficult to conduct during the lifetime of the project*. Similarly, clear prioritisation, in the light of time constraint, will be made at the second workshop regarding which analyses will be critical to ensure the outputs are reached. This will allow reaching the outcome, with some limitations. Further analyses can be conducted in the next step towards MSP after the project finishes.
- *Logistical challenge to organise the third workshop in the Falkland Islands with the limited resources and expensive infrastructure*. In order to limit the risk, a workshop organiser will be specifically employed for this task for 2 to 3 months on a part-time basis before the workshop and the workshop will be combined with a workshop for another research project in order to share costs of transports and logistics (this has already been conducted for workshop #2 that will take place in Cambridge in April 2015).

3. Project Stakeholders

A steering committee was put together at the inception of the project to ensure that the key stakeholders of the project were represented on the committee. This committee is composed of the following representatives:

- Dr Paul Brewin (SMSG)
- Mr Ken Humphrey (Falkland Islands Petroleum Licenses Association, FIPLA)
- Mr Malcolm Jamieson (FIG Fisheries Department)
- Dr Ben Lascelles (BridLife International)
- Lt Cdr Bill Dawson (Royal Navy)
- Mr Andy Pollard (Falkland Islands Fishing Companies Association, FIFCA)
- Mr Nick Rendell (FIG Environmental Department)
- Dr Andy Stanworth (Falklands Conservation)
- Dr Phil Trathan (British Antarctic Survey)

The committee has met every 3 months in the last 9 months (on 4/08/14, on 14/10/14 and on 22/01/14) and the next meeting is organised for 21/05/15 (due to overseas workshops and meetings in April, this next meeting had to be moved to a later date). These steering committee meetings involve verbal presentation of progress and a small report is prepared before each meeting summarising progresses, challenges, expenses, and planned work for the next quarter, and is distributed to each member. A minute of the meeting is also produced and distributed to the members for comments. All documents related to these steering committee meetings can be found on the dropbox at the link https://www.dropbox.com/sh/fy0clg4v89p128p/AADyXGvsAQuQDQQZZT7pshLya?dl=0. The committee monitors the project, its progress and upcoming activities to ensure they follow the proposal and work towards achieving the overarching aims of the project.

Over 50 long (1hr of more) meetings/briefings (in person or on skype) about MSP for the Falkland Islands have taken with a total of 35 different local and international stakeholders over the last 9 months. Annex 2 contains examples of such meetings or briefings. Numerous other short meetings or email exchanges occurred with close to 100 local and international stakeholders briefed personally avbout the MSP project. Many of these have provided feedbacks or expertise for the project. Annex 3 contains the list of all stakeholders briefed on the Marine Spatial Planning project.

The project was also presented with short presentations (15 mins) at a public talk in Stanley on 5 August 2014, at the the Falkland Islands Science Symposium on 19 January 2015, where numerous local stakeholders were present, and at the Environmental Committee meeting on 19 February 2015.

Challenges have arisen with a few local stakeholders in the fishing industry. There have been some concerns about the MSP process and the level of legislation with potential loss of fishing grounds (current or potential) that it may bring. The project leaders have involved the fishing industry since the initiation of the project, including having the representative of the Falkland Islands Fishing Company Association (FIFCA) on the steering committee, and had several meetings with representatives of this group to explain MSP and any issues that they may feel. The team will be working further on ensuring that this stakeholder group is engaged and interested in the MSP project.

4. Monitoring and evaluation

This is described in the other sections of this report. The steering committee is the main monitoring mechanism to ensure the project contributes to the project outcome.

5. Lessons learnt

In the last 9 months, several lessons were learnt and have allowed light changes to be made to the methodologies and approaches. Noticeably, stakeholder engagement will involve more targeted meetings from next quarter, where fishing companies and members of the legislative assembly in particular, will be invited to be updated on the development of the MSP project. Organising workshops has proven highly time-consuming, in particular when it involves overseas participants, and therefore, a logistic coordinator will be employed to ensure the project mapping and analyses is not affected by highly demanding workshop organisation.

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

Not applicable

7. Other comments on progress not covered elsewhere

The design of the project has been enhanced in the last 9 months following the initial work. The review of data available has identified several data gaps that would be crucial to efficient MSP. Prioritisation of these gaps revealed that some gaps could be filled by short studies that can

produce inputs on time to be reported on during the project. Several small research grant proposals and applications were submitted to resource for the following projects (that will involve a graduate volunteer or a research assistant to be filled during the lifetime of the project or shortly after and feed in the MSP):

- Mapping whale distribution around the Falkland Islands from existing data (successfully funded through the FIG ESB)
- Mapping marine cultural ecosystem services of the Falkland Islands (student and research assistant applications submitted to the Marine Stewardship Council and Shackleton scholarship schemes)

Other small studies are also being drawn to try and fill as many data gaps as possible if they can be achieved in a short timeframe and based on existing data or knowledge, at least as an initial step towards filling these crucial gaps.

Larger proposals are also being developed to fill in gaps that will not be possible to fill within the lifetime of the project. For instance, a proposal is being developed for a project to study the near-shore dolphin distribution and habitat use in collaboration with several local and international scientists. Results of such a study are crucial because there is currently very little knowledge of important areas for these species, most likely to be affected by increased use of the marine environment around the Falkland Islands due to their small range and site fidelity.

The outputs from the project are another project called 'The GAP project' looking at the risks from oil development around the Falkland Islands for marine megafauna and conducted by colleagues at SAERI. The two projects work in collaboration for this aspect. The MSP project has gathered metadata for all tracking and sighting datasets of marine mammals and seabirds in Falkland Islands waters and this information is made available to the GAP project so that they can request the data from the data owners separately. The MSP project has also provided assistance with fieldwork for penguin tracking data for the GAP project that have now been passed on the MSP project and will be incorporated in the analyses to identify critical areas for marine megafauna. The two projects are also sharing the costs for MSP workshop # 2 in Cambridge so that the projects can gather more experts at lesser cost than available to a single project budget. The synergies between the 2 projects will follow into analyses and the areas identified from the risk analysis from the GAP project should also feed in the MSP process and framework.

8. Sustainability

The efforts made to promote the work and increase interest and capacity can be found in the progress, outputs and stakeholders sections of this report in more details.

There has also been a number of media coverage of the project and its work towards marine management in the Falkland Islands through MSP including those summarise in Tab. 2.

The project will provide the most important tools for the Government to be able to start the process of working on implementing MSP in the Falkland Islands if they wish to do so. However, there will be further data to be added and more analyses and stakeholder engagement to conduct after the end of the project. The project's aim is to initiate the process. The Government and stakeholders have shown great interest in MSP and the data gathering and analyses steps has been of high interest. Further work will however be necessary to lead to the necessary material for implementation of MSP in the Falkland Islands and sustain the process in the future, including updating and adding data in the MSP process in the long-term to update management with best-available knowledge.

Table 2 Examples of media coverage of the project from July 2014 to March 2015

Date	Media type	Organisation	Subject
05/08/2014	Seminar	FIG	Presenting the MSP project and upcoming stakeholder workshops and public consultation
22/10/2014	TV	FITV	Presenting MSP project and upcoming public consultation session
23/10/2014	Radio	FIRS	Presenting MSP project and upcoming public consultation session
24/10/2014	Newspaper	Penguin News	Short presentation of upcoming public consultation session
04/11/2014	Radio	FIRS	Interview after the first public consultation of MSP for the Falklands
15/11/2014	Magazine	Otago University, New Zealand	Small piece about the project officer and the MSP project in the quarterly magazine of the university
01/12/2014	Newsletter	International society for Behavioural Ecology	Small piece in the bi-annual newsletter of the Society
19/01/2015	Radio	FIRS	Talking about the importance of science for marine management as part of the MSP project
05/02/2015	Newspaper	Various Chilean papers	Talked about the MSP project and its aims and processes
11/02/2015	Newspaper	Various Paraguayan papers	Talked about the MSP project and its aims and processes

9. Darwin Identity

The Darwin logo is included in most material distributed or presented, including on the project's webpage, published report, and all power point presentations given. The Darwin Initiative project is clearly recognised and is not part of any wider programme. The Darwin Initiative is well-known in the Falkland Islands and all stakeholders understand the source and aim of Darwin Plus projects.

10. Project Expenditure

See Tab. 3.

11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

With planned increasing levels of human activities in the ocean and coasts around the Falkland Islands, the Falkland Islands Government (FIG) has identified land and sea planning as a priority. There is currently no marine management issues around the Falkland Islands and the marine environment is well managed and in good condition. Therefore, instead of having an issue to resolve, FIG with its current interest in Marine Spatial Planning (MSP), is leading the way in term of precautionary management and planning of the marine environment. With MSP in place, when economic or recreational activities plan to expand, the Government will then be able to use the MSP outcomes to ensure that activities are placed in the most appropriate areas. This will help streamlining processes for new or expanding marine economic activities while ensuring the rich and culturally-important marine environment is adequately protected.

Table 3 Project expenditure during the reporting period (1 April 2014 – 31 March 2015)

Project spend (indicative) in this financial year	2014/15 Grant (£)	2014/15 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs				
Consultancy costs				
Overhead Costs				
Travel and subsistence				Some costs for the April workshop had to be incurred in this year, for flight bookings, and this increased the budget for travel for this financial year.
Operating Costs				
Capital items				The budgeted expenses (in particular computer and accessories) were less costly than planned and therefore this part of the budget was underspent this first year.
Others				These include advertisement for public events, postage fees, transaction fees, deposits for venue hire
TOTAL	**46,504**	**46,880**	**+1%**	
***This was mentionned to Defra (the workshop takes place in mid-April).				

The Darwin Plus project *Marine Spatial Planning for the Falkland Islands* has initiated discussions on MSP within Government and local stakeholders, with the help of international recognised experts. The first MSP public consultation and local stakeholder workshop took place in November 2014 and has led to increased interest in the concepts of MSP in most of the attendees. The Vision for MSP elicited from the Falkland Islanders during the workshop is to enable:

"*Well managed marine and coastal areas and resources of the Falkland Islands to support sustainable economic development whilst protecting our biodiversity and wild unspoilt areas, and supporting the safe use of the sea and celebration of our maritime heritage*."
This is combined with the following objectives to fill to reach this Vision, as elicited and endorsed by the local stakeholders:

'1. Facilitate the responsible and sustainable development of current and new economic activities to contribute to the national economy
2. Identify and safeguard the most ecologically important and unspoilt marine and coastal areas, many of which are of global significance
3. Enable the provision of safe and appropriate internal and international sea links for Islanders and business development

4. Celebrate and maintain the maritime Falkland Islands' identity, including via the protection of historically and culturally important areas
5. Facilitate the enjoyment provided by marine and coastal areas for current and future recreational activities'

The project will contribute to achieving these objectives by providing the scientific data and analyses necessary and a framework for MSP to bring the information together and recommend methodologies to identify for management through an MSP process. The project will therefore contribute to the Government's aim of maintaining a world-renowned marine environment management stewardship and leadership in precautionary management to ensure sustainable use of this environment in the future.

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.	x
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.	No
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.	x
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.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes via feedbacks on reports
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	

Annex 1: Updated project plan

In black: Outputs active during the quarters reported on in this report, and in grey, upcoming outputs in future quarters. Note that the project started in July 2014.

	Activity	No of Months	2014				2015				2016			
			~~Q1~~	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	~~Q2~~	~~Q3~~
Output 1	**Increased data availability. Data review, identification, collation, storage and curation.**												
1.1	Project Officer Recruitment	1											
1.2	Review of extant data relevant to MSP in the Falkland Islands	3											
1.3	Creation of metadata catalogue	14											
1.4	Collation, assimilation and creation of project specific geospatial databases	14											
Output 2	**Best Practise Review**												
2.1	Review circulated to project partners and stakeholders for comment. Project report posted on Websites	2											
Output 3	**Stakeholder Workshop 1**												
3.1	Workshop report produced and circulated for comment; workshop report posted on website	0.5											
Output 4	**GIS Platform**												
4.1	Build to accommodate data identified in the metadata catalogue and Stakeholder Workshop	14											
4.2	Map examples of specific data that would directly contribute to aims i.e. coastlines, habitats, resource extraction (fisheries/minerals), tracking data, seabird, mammal data, and physical data etc.	14											
Output 5	**Data Analyses**												
5.1	Re-examination of satellite track and logging data from seabids and mammals to gain new data on ecologically important areas coastally in in open ocean	10											
5.2	Report developed for circulation – develop into a peer review paper	3											
Output 6	**Stakeholder Workshop 2**												
6.1	Workshop report produced and circulated for comment; workshop report posted on website	1											
Output 7	**Second main phase of data analyses**												
7.1	Map current and newly acquired data to provide a "bioregionalisation" of the Falkland Islands EEZ	6											
Output 8	**Stakeholder workshop 3**												
8.1	Workshop report produced and circulated for comment; workshop report posted on website	1											
Output 9	**Final Project Report and Policy Paper**												
	Final project report to Darwin and FIG. A policy paper produced to FIG's Environment Committee, the Policy Department and Executive Council	3											

Annex 2: Selection of examples of long (over one hour) meetings or briefings with stakeholders on MSP for the Falkland Islands

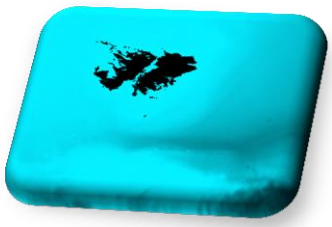
Meeting with	Organisation	Organisation type	Type	Date	Time	Topic
All main local stakeholders	Various	Various	In person	14-19/07/14	Various	Introduction meeting as the project officer and start of the MSP project
Bill Dawson	Royal Navy	UK Government	In person	13/08/2014	1 hr	Discussing the marine operations of MOD around the Falklands
Dr Grant Munro	Local researcher	Falklands stakeholder	In person	21/08/2014	2 hrs	Discussing available data on cetaceans distribution in the Falklands' EEZ
Dr Paul Brewin	FIG Fisheries Dpt	Falklands Government	In person	12/09/2014	2 hrs	Discussing data available on fisheries and marine environmental data
Nick Rendell	FIG Environmental Planning Dpt	Falklands Government	In person	29/09/2014	1 hr	Presenting the MSP project and cetacean stranding database
Andy Pollard	FIFCA	Falklands stakeholder	In person	30/09/2014	1.5 hrs	Presenting the MSP process and discussing upcoming public consultation session
Dr Ben Lascelles	BirdLife International	International researcher	On skype	08/10/2014	1 hr	Discussing data request through the BirdLife database
Roddy Cordeiro	FIG Mineral Resources Dpt	Falklands Government	In person	29/10/2014	1 hr	Updating on MSP progress and upcoming workshop
Mark Street	Sure Falklands	Falklands stakeholder	In person	20/11/2014	1 hr	Requesting AIS data for MSP
Dr Alistair Baylis	Deakin University. Australia	International researcher	On skype	03/12/2014	1 hr	Requesting pinniped tracking data for inclusion in the MSP process
Dr Andy Stanworth and Sarah Crofts	Falklands Conservation	Falklands stakeholder	In person	17/12/2014	1 hr	Discussing FC data for inclusion in MSP project and MOU for use of that data
Dr Paulo Catry	Lisbon University, Portugal	International researcher	In person	16-19/12/14 and 8-9/01/15	6 days	Paulo was invited to spend a week working with me (and GAP project) on black-browed albatross tracking data as a trial for larger study to identify crucail areas for seabirds to feed in MSP project (at start and end of his fieldwork)
Dr Kate Sherren	Dalhousie University, Canada	International researcher	In person	22/01/2015	1.5 hrs	Discussing study to map marine cultural ecosystem services to feed in MSP project
Prof. Scott Baker	Oregon State University, USA	International researcher	In person	22/01/2015	1 hr	Discussing potential project to fill in near-shore cetacean distribution data gap as identified through MSP project
Jamie Fotheringham	FIG Policy Unit	Falklands Government	In person	03/02/2015		Discussing upcoming MSP workshop, legisltaion for MSP in the Falklands
Malcolm Jamieson	FIG Fisheries Dpt	Falklands Government	In person	10/02/2015	2 hrs	Presenting data on anchoring and shipping for him to check and discussing marine legislation for shipping
Michael Poole, Jan Cheek and Phyl Rendell	Members of the Legislative Assembly	Falklands Government	In person	10/02/2015	1 hr	Updating on the MSP project and upcoming workshops
Dr Scott Baker, Sarah Crofts, Dr Grant Munro	Oregon State Univeristy, USA and Falklands Conservation	International and local researchers	In person and on skype	18/02/2015	1.5 hrs	Discussing proposal and funding for potential project to fill in near-shore cetacean distribution data gap as identified through MSP project
Esther Bertram	Falklands Conservation	Falklands stakeholder	In person	18/02/2015	1 hr	Presenting the MSP project ot the new FC CEO
John Barton, Malcolm Jamieson and Dr Paul Brewin	FIG Fisheries Dpt	Falklands Government	In person	24/03/2015	1.5 hrs	Discussing upcoming workshop and fisheries management in the Falklands
Sally Poncet	Local researcher	Falklands stakeholder	In person	27/03/2015	1 hr	Discussing the inclusion of land-based values (tussac islands) in the MSP process

Annex 3: List of all stakeholders briefed in person, on skype, phone or email exchanges about the project

Name	***Organisation***	***Country***
Adam Cockwell	*Workboat Services*	*Falklands*
Adrean Schiavini	*CADIC*	*Argentina*
Al Baylis	*Deakin University*	*Australia*
Alan Evans	*UNCLOS, National Oceanography Centre*	*UK*
Alastair Baylis	*Deakin University*	*Australia*
Alec Taylor	*RSPB*	*UK*
Alex Rogers	*University of Oxford*	*UK*
Alexander Arkhipkin	*FI Fisheries Department*	*Falklands*
Andrea Clausen	*FI Tourism Board*	*Falklands*
Andrea Raya Rey	*CADIC*	*Argentina*
Andy Black	*FI community*	*Falklands*
Andy Pollard	*FIFCA*	*Falklands*
Andy Stanworth	*Falkands Conservation*	*Falklands*
Anne Saunders	*ACAP (JNCC)*	*Falklands*
April Hedd	*Memorial University*	*Canada*
Ben Lascelles	*BridLife International*	*UK*
Ben Lascelles	*BirdLife*	*UK*
Bill Dawson	*Royal Navy*	*Falklands*
Blanca Figuerola	*University of Barcelona*	*Spain*
Bob Furness	*Glasgow University*	*UK*
Chris May	*FI Inshore crab fishery*	*Falklands*
Clare Cockwell	*Falklands Conservation*	*Falklands*
Claudio Campagna	*Wildlife Conservation Society*	*Argentina*
Corine Paice	*Deep sea trawlers*	*Falklands*
Damon Stanwell-smith	*NIRAS*	*UK*
Dave Thompson	*St Andrews University*	*UK*
Dee Boersma	*University of Washington*	*USA*
Esther Bertram	*Falklands Conservation*	*Falklands*
Ewan Wakfield	*University of Glasgow*	*UK*
Fanny Douvere	*UNESCO*	*France*
Filippo Galimberti	*Elephant Seal Research Group*	*Italy*
Flavio Quintana	*University of Barcelona*	*Spain*
Ginger Rebstock	*University of Washington*	*USA*
Graham Harris	*Wildlife Conservation Society*	*Argentina*
Grant Munro	*FI community*	*Falklands*
Hannah Thomas	*UNEP-WCMC*	*UK*
Helen Oatley	*Department of Conservation*	*New Zealand*
Helen Stevens	*Natural England*	*UK*
Iain Staniland	*BAS*	*UK*
Jacob Gonzales-Solis	*University of Barcelona*	*Spain*
James Blair	*New York City University*	*USA*
Jamie Fotheringham	*Director Policy Unit*	*Falklands*
Jan Cheek	*MLA Trade and Industry*	*Falklands*
Jaume Forcada	*BAS*	*UK*
Javier Arata	*Institutio Antarctico Chileno*	*Chile*
John Croxall	*Birdlife International*	*UK*
Jon Barton	*FIG Fisheries*	*Falklands*
Jose Granadeiro	*CESAM*	*Portugal*
Juan Masello	*Justus-Liebig-Universität*	*Germany*
Judith Brown	*Fisheries Director*	*Ascension Island*
Kate Sherren	*Dalhousie University*	*Canada*
Katrin Ludynia	*University of Cape Town*	*South Africa*
Ken Humphrey	*FIPLA*	*Falklands*
Ken Passfield	*FI community*	*Falklands*
Klemens Pütz	*Antarctic Research Trust*	*Germany*
Liz Galley	*Mara Environmental*	*UK*
Louise Lieberknecht	*GoBe*	*UK*

Name	***Organisation***	***Country***
Malcolm Jamieson	*Fisheries Department*	*Falklands*
Maria Dias	*BirdLife International*	*UK*
Marine Quitin	*FI community*	*Falklands*
Mark Spadling	*The Nature Conservancy*	*UK*
Martin Collins	*South Georgia Governement*	*Falklands*
Matt Gubbins	*Scottish Gvt*	*UK*
Megan Tierney	*SAERI*	*Falklands*
Michael Harte	*Oregon State University*	*USA Oregon*
Michael Poole	*MLA Policy and Public Relations*	*Falklands*
Nathan McNally	*FI community*	*Falklands*
Nick Rendell	*Environmental Planning*	*Falklands*
Nicola Weber	*Conservation Office*	*Ascension Island*
Norman Ratcliffe	*BAS*	*UK*
Paul Brewin	*Shallow Marine Survey Group*	*Falklands*
Paul Brickle	*SAERI*	*Falklands*
Paulo Catry	*ISPA*	*Portugal*
Petra Quilfeldt	*Justus Liebig University Giessen*	*Germany*
Phil Trathan	*British Antarctic Survey*	*UK*
Phyl Rendell	*MLA Natural Resources*	*Falklands*
Rachel Shucksmith	*NAFC Marine Centre*	*Shetlands*
Richard Phillips	*BAS*	*UK*
Roddy Cordeiro	*Mineral Resources*	*Falklands*
Ronnie MacLennan-Baird	*FI Radio*	*Falklands*
Sally Poncet	*FI community*	*Falklands*
Sandra Tyler-Haywood	*Government House*	*Falklands*
Sarah Crofts	*Falklands Conservation*	*Falklands*
Scott Baker	*Oregon State University*	*USA*
Scott Davidson	*FCO*	*UK*
Scott Shaffer	*San Jose State University*	*USA*
Simona Sanvito	*Elephant Seal Research Group*	*Italy*
Stuart Wallace	*Fortuna fishing company*	*Falklands*
Sukey Cameron	*FIGO*	*UK*
Susie Grant	*BAS*	*UK*
Tara Pelembe	*JNCC*	*UK*
Tony Weighell	*JNCC*	*UK*
William Montevecchi	*Memorial University*	*Canada*

Annex 4: Research proposal for short complimentary study to map Mysticetes' distribution using available knowledge



RESEARCH PROPOSAL

Marine Spatial Planning for the Falkland Islands

Filling an important ecological gap for efficient planning:
Mapping whale distribution around the Falkland Islands using available knowledge

Proposal for a short research project funded by the Environmental Studies Budget
Prepared by Dr Amélie Augé
7 February 2015

Background and significance of the study

The Falkland Islands and their Economic Exclusive Zone (EEZ) are used by many seabirds and pinnipeds for breeding and foraging (White et al. 2002). However, for many years, a key element of the rich biodiversity of the Islands had almost disappeared: the baleen whales. Large-scale commercial whaling took place at several locations on the Falkland Islands and in its marine area in the 19th and 20th centuries and the number of whales migrating through, feeding in or breeding around the Falkland Islands was reduced to very low numbers (Hart 2006). However, in the last two decades, an increase in whale sightings has been anecdotally recorded by locals indicating that the whale populations are recovering. Historic stranding records and at-sea sightings have revealed that at least seven species of baleen whales use the marine area of the Falkland Islands (Otley 2012). Nowadays, due to global protection of whales, there have been increased whale populations all around the world (Scott et al. 2005). This is also occurring around the Falkland Islands. The sheltered bays around the Falkland Islands are similar to breeding grounds used by several species of baleen whales in other sub-Antarctic islands (Rayment et al. 2012). This indicates that they could, in the future, host whale breeding grounds. However, there is currently very little scientific knowledge about the baleen whales of the Falkland Islands.

Baleen whales are important to the Falkland Islands and their inhabitants. Historically, whaling has been an economic incentive for populating and settling the islands. Nowadays, whale bones are displayed proudly on most of the house fronts in town and in camp. Whales also procure a sense of happiness to the community as people enjoy watching whales from shore or boats. Economically, whale watching is a tourism attraction in many parts of the world, and recovering Falklands' whale numbers may mean that the islands could also become a hot spot for ecotourism for whale watching along with viewing penguins and other marine species, already abundant on the islands.

Baleen whales can be affected by a range of marine human activities, in particular shipping (Berman-Kowalewski et al. 2010; Williams and O'Hara 2010)(Williams and O'Hara 2010). Some economic marine activities may also be negatively affected by the presence of large whales when their related infrastructures (such as aquaculture, fishing gear or cables) are implemented in important whale areas. There is a need to carefully plan to avoid such issues. Therefore, Marine Spatial Planning benefits for the inclusion of information and mapping of whale distribution (Petruny, Wright, and Smith 2014).

There is currently no consolidated knowledge of the historical or contemporary distribution, number and recovery rate of the baleen whale population of the Falkland Islands. There has also never been a study gathering all data on historical numbers (via whaling records for instance). The only extent of our knowledge of the Falkland Islands' baleen whales come from disparate sources from the stranding

database, the at-sea offshore sightings (JNCC surveys, fishery observers' sightings) and some scattered whaling records.

The Falklands Government is looking at developing Marine Spatial Planning (MSP). The predicted future economic developments such as oil and gas and tourism need to be properly managed to ensure limited impacts on the globally important biodiversity of the Falkland Islands, including baleen whales. As part of the Darwin Plus project "Marine Spatial Planning for the Falkland Islands", it has been identified that distribution and important areas for whales are a major data gap. This can be filled through a short study that will allow to produce an input layer of whale distribution and most important areas, in particular in inshore waters (that can be later refined as more data become available). SAERI in collaboration with Prof. Scott Baker and Dr Grant Munro are developing a research proposal to study the inshore dolphins' genetics, distribution and habitat use in order to fill in this knowledge gap, critical to MSP. The very limited current knowledge on baleen whales of the Falkland Islands and their potential current recovery is another major gaps identified to deliver efficient planning. **This project will start filling some of this knowledge gap and produce the first comprehensive whale distribution map, knowledge that will be critical to support efficient Marine Spatial Planning.**

Aims of the project

This project main aim is to:

1. Map the current recovery and distribution of large whales around the Falkland Islands

A secondary aim is to:

2. Estimating historical species diversity, distribution and numbers and the recovery rate of the whale populations around the Falkland Islands

The results from this initial project should provide a platform for MSP and also for further research by providing a literature review and compilation of data, quantitative and spatial. Results will be available to use for:

1. Marine Spatial Planning for the Falkland Islands

And can also be available later for:

2. Monitoring the Falklands' whale population as a baseline for future work
3. Identifying areas and leading the way for future whale research projects around the Falkland Islands
4. Recording local knowledge that will be lost soon if it is not securely published and archived
5. Gather potential historical and current data on other cetacean species during the search

Proposed work plan

The project officer will be supervised by and report to Dr Amélie Augé and will be based at SAERI for the duration of the project (7 months). The project should be finalised by the end of 2015 or shortly after. During the months 1 to 4, the officer will conduct the literature review and interviews and the collation of all data. During the months 5 to 7, the officer will create the final GIS datasets and write a scientific publication about the main finding.

The project officer's responsibility will be to conduct a literature review and record people's local knowledge. In order to obtain data, he or she will:

- Search the Falkland Islands archives for commercial whaling anecdotes and historical whale sightings recorded in the literature
- Search all online sources and locate books and reports needed (and whether relevant sections can be scanned and emailed)
- Interview all current and past FIGAS pilots and obtain and scan copies of their past whale sighting records (*note: these records have already been obtained and will be good to monitor recovery*)
- Interview helicopter pilots for sightings of whales and if there have been any records made in the past
- Interview operators of tourism operators and whale-watch tours in particular

- Interview captains and crew of local transport boats (Concordia, The Condor, etc)
- Interview or remotely survey (for instance using Survey Monkey) other marine users (sailors, pot fishermen, military officers, tourism operators)
- Connect with the New Island Trust to obtain whaling records
- Connect with the UK National History Museum and US museums to identify where whaling records from the Falkland Islands can be found
- Talk to or survey locals, in Stanley and in camp, to record anecdotal sightings of whales, historically and current
- Check reports from seismic vessels and oil surveys for marine mammal sigthings

The method to organise the literature review and data will be to:

1. Create a database to record all data on the different species
2. Create a Zotero database to record and store all references and results of interviews, surveys etc
3. Digitalise all data that can be spatially assigned in a GIS to produce a map of historical and current coastal sightings for the coastal area, possibly a recovery pattern
4. In a GIS, combine the coastal current sightings with the sightings from the JNCC dataset of offshore sightings

Expected outputs

- GIS layer of current distribution of whales as input into the MSP process
- Open-access database of all used references and people interviewed
- Scientific publication

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