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PROJECT PROPOSAL REQUEST

PROPOSAL TITLE

Development of a GIS (meta) database on information on human activities that might have an adverse impact on Southern Right Whales

BRIEF OVERVIEW OF THE PROPOSAL AND ITS EXPECTED OUTCOME

Give a very brief overview (max 150 words) on your proposal and its expected outcomes. Use bullet point to list outcomes. Be succinct and clear as this may be used to summarise your project for the report.

One of the two research actions of the SWA Right Whale CMP is the development of a database in a geographic information system context, to finally compile a sensitivity atlas. To this end, it is intended to structure the content of the GIS database (or metadatabase) using information on right whales obtained from sightings, satellite tags, monitoring activities, researches over time, among others, in conjunction with a compilation of existing sources of information on human activities (eg, fishing, shipping, seismic exploration, oil and gas exploration, and development information). This proposal, although ambitious, is of great importance as it will allow to place the knowledge about this population together with possible threats on a geographical format. This information certainly can be used by decision makers for spatial planning policies as well as to be used in the event of any environmental disaster (e.g. oil spills).

RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

CMP: This information will be relevant to the CMP, as it is directly related to the working plan of this CMP. Thus considering that there is sparse information about the threats and possible human impact on this population, gathering all the information into a spatial analysis will strengthen the different actions of the CMP.

SH: The information obtained through this database will be relevant to the SH objectives. The information gathered here will be important to future SRW assessments.

E: Information gathered during this project, will be of great value to the E sub-committee. This is especially true, because the main object of the project is to create a sensitivity atlas for the species considering environmental concerns such as: gas/oil exploration, marine debris, stranding events, noise, among other human impacts, main role of the E sub-committee.

WW: One of the main focus of WW sub-committee understands the impact Whale watching have on cetaceans, thus this project will be benefit from WW data, and its correlation with other data (e.g. biological data) which can be used to understand possible impacts of this activity in the breeding areas of the species.

HIM: The information gathered during this project will support HIM subcommittee activities. Some of the major threats this population could face in a short future will be related with Entanglements and ship strikes.

GDR: Although this project aims to develop a GIS sensitivity atlas, for the development of this Atlas, it will be necessary to establish different databases (each one will be a layer of the GIS). Once these database (s) have been established and conformed, it is expected that they will be linked to the IWC, Standing Steering Group on Data Bases.

TYPE OF PROJECT (PLEASE TICK)

Research project	
Modelling	
Workshop/meeting	
Database creation/maintenance	X
Compilation work/editing (<i>e.g. on whalewatching regulations, SOCER, etc.</i>)	
Other (<i>please specify below</i>)	

5. BRIEF DESCRIPTION OF THE PROPOSAL AND ITS CONNECTION WITH SCIENTIFIC COMMITTEE RECOMMENDATIONS (DO NOT EXCEED 1500 WORDS)

(A) BACKGROUND, RATIONALE, AND RELEVANCE TO THE PRIORITIES IDENTIFIED BY THE IWC SCIENTIFIC COMMITTEE:

Provide a clear explanation of the background and rationale for the proposal and its relevance to Scientific Committee identified priorities. Clearly identify the most relevant and recent Scientific Committee recommendations.

In 2012, following the recommendations of the IWC and particularly considering the SRW unexplained die-off of right whale calves in Argentinean waters, a Conservation Management Plan (CMP) drafted by Argentina, Brazil, Chile and Uruguay was endorsed by the IWC64 (IWC/64/CC7 Rev 1). This plan started to be implemented after a first workshop held in Buenos Aires, 2013 (IWC65/2014).

Nine high priority actions were originally identified for this CMP (IWC/64/CC7 Rev 1). Of the nine actions identified, almost all have advanced to some degree except the action that refers to the: **Development of a GIS database on information on human activities that might have an adverse impact on whales**. Although information about human activities that could have an adverse impact on the population of SWA-RW has been identified, this information has not been systematized and established in a database.

The collection of these data in a single database and its subsequent digitization in GIS format will provide a valuable tool for the establishment of a sensitivity map for the population. This tool will be of great importance for the conservation of this population, considering that the areas with the presence of the species are inserted in areas with great human impact such as: seismic activity, oil/gas exploration, ship traffic, ports, among others. This information, together with information obtained from satellite tags, sightings and other biological information, will contribute to understand which are the areas most impacted by human activities and will help to map in the future the establishment of spatial planning policies, in which the species is inserted.

Therefore, being this an action proposed during the first work plan of the SWA-RW CMP, and not yet established, its importance is evident. This last, considering even more the increased human activities in the area without considering the possible effects on the SWA-RW population (e.g. salmon farming in southern Chile, seismic exploration in Brazil, Argentina and Uruguay, among others).

Considering that the management and conservation plans are based on a series of recommendations by the Scientific Committee and Conservation Committee, compliance with the actions proposed in the conservation plans are in accordance with the priorities of both committees.

(B) SPECIFIC OBJECTIVES OR TOR AND DELIVERABLES/OUTCOMES:

Provide the specific objectives and the expected deliverables. In the case of workshops and meetings, include the Terms of Reference (ToR) and expected outcomes.

Specific Objectives:

- Search of public and private databases on human activities in the region of the four range countries;
- Permits request for the use of databases when required (private databases);
- Development of the database of human impacts in the four countries of the CMP range;
- Search for bibliography data (published literature, literature presented in the SC of the IWC, master's and doctoral thesis, validated conference presentations) on the presence of right whales from satellite tags, boat-based sightings, land sightings, plane sightings, whale-watching among others;
- Transformation of the data to a unique format of geographic coordinates;
- Establishment of a geographic information system (GIS), using different layers for each data set;
- A WebGIS, to view and consult the geospatialized data;
- A Web Page to host these resources;
- A sensitivity Atlas for the SWA-RW population.

Future specific objectives:

- Development of a software for storage and georeferencing of decentralized data that does not have a specific pattern such as PDFs, Excel files, scientific articles, etc.;
- Creation of an API for the collection and delivery of data from other research platforms and data, such as those established by the IWC databases;

Specify the methods to be applied (novel methods require more explanation than standard ones) and the broad workplan – the detailed timetable appears under Item 5 below.

In the case of workshops and meetings, include the broad work plan including any pre-requisites for the workshop/meeting to take place (apart from funding, e.g. completed analyses, papers etc.) and administrative details (e.g. location, dates, number of participants).

Database information

- The search for information in public and private databases, bibliographic information and transformation to a single coordinate system, will be developed by a researcher with knowledge of the species and the use of geographic information systems (GIS).

GIS web based platform

- Establishment of a georeferencing system and management of geospatial information on the web. For this it is planning to use GeoNode. GeoNode is a web software that was developed to manage geospatial information and can be extended or integrated with other applications. The software is open source and was created using the Django framework for the Python programming language, the software also has a responsive interface based on Twitter Bootstrap and jQuery user interface frameworks. This resource will provide users with the possibility to search for georeferenced data from research projects that have been stored on the platform through the upload of documents and files that contain information relevant to a particular location or geospatial area.

WebGis Dashboard will be developed with ESRI Arcgis for the web.

Finally, NodeJS will be used to create the site that will host the GIS resources and any other resources of this CMP.

(D) SUGGESTIONS FOR OUTREACH

Please, note that successful proponents will be requested to produce ad hoc material that will be used by the IWC Secretariat for dissemination and outreach.

The project will be contained in a web page with a dashboard, which will undoubtedly be the main source of dissemination of the project. In addition to being an initiative of the CMP coordination in conjunction with the sub-coordinators of the range countries, the final result of the project will be disseminated by the respective sub-coordinators of each range country through the respective governments.

TIMETABLE FOR ACTIVITIES AND OUTPUTS

Specify the timetable for project activities and expected outputs separately. For projects with multiple distinct elements please indicate interim goals and timeframes. Add as many rows as you need to the tables below. If publications are an expected output please note whether you will submit the manuscript to the IWC's Journal of Cetacean Research and Management.

Activity to be undertaken	Key person(s)	Start(mm/yy)	Finish (mm/yy)
Databases search	Undetermined yet (researcher)	10/21	01/22

Databases permits requests	Undetermined yet (researcher)	11/21	01/22
Bibliography search	Undetermined yet (researcher)	11/21	02/22
Data transformation to a unique georeferenced system and establishment of a unique database	Undetermined yet (researcher)	03/22	04/22
Installation of the server and implementation of the necessary resources for the functioning of GeoNode.	Fullstack web developer	12/21	05/22
Webmap viewer of maps and georeferenced data using ESRI	Fullstack web developer	05/22	07/22
Web Page (NodeJS) and Dashboard development ArGIS	Fullstack web developer	07/22	09/22
Sensitivity Atlas	Undetermined yet (researcher)	09/22	02/23

Expected outputs	Completion date (mm/yy)
Systematized databases	04/22
WebGis platform	07/22
Dashboard platform	11/22
Sensitivity atlas	01/23

RESEARCHERS' (OR STEERING GROUP) NAME(S) AND AFFILIATION

Please, also specify if the project team has any direct connection (e.g. same research group or institute, collaborator on common project) with people involved or likely to be involved in taking the funding decision (e.g. IWC SC heads of delegations, SC convenors, etc.). Add as many rows as you need to the table below.

Name	Affiliation	Connection with decision
Juan Pablo Torres-Florez	ICMBio/CMA, Brazil	
Miguel Iñíguez	Cethus, Argentina	
Karina Groch	Instituto Australis, Brazil	
Cecilia Passadore	Vida Silvestre, Uruguay	
Barbara Galletti-Vernazanni	Centro Conservacion Cetacea, Chile	

TOTAL BUDGET

PROJECT BUDGET					Please indicate when funds will be needed		
	Description	Cost per unit	Number of units	Total Cost £GBP	2022	2023 +	Co-funding
(1) Salaries (by person)	Researcher for database establishment	12	540	6480	5400	1080	1080
(1) Salaries (by person)	Fullstack web Developer	12	880	10560	5400	5160	2160
(1) Salaries (by person)	Researcher Sensitivity Atlas	12	200	2400	-	2400	2400
(3) Services (by item)	ESRI licence	150	2	300	-	300	
(3) Services (by item)	Office facility	12 months	150	1800	1800	-	1800
(4) Reusable equipment	Computer	1200	1	1200	1200	-	1200
(8) Other							
TOTAL				22740	13800	8940	8640

Co-funding Memo:

Source	Purpose of Funding	Amount
ICMBio/CMA	2.2GHz four-core processor, 16GB RAM, computer	1200
ICMBio/CMA	Researcher	2160
Aqualie	Office facility	1800
ONG	We are waiting for an NGO to accept a proposal	3480
TOTAL		8640

Total value of project:	£GBP
Funds requested from IWC	14100
Co-funding	8640
TOTAL	22740

DATA ARCHIVING/SHARING

Please state your plans for data archiving and sharing. Note that data collected primarily under IWC grants are considered publicly available after an agreed period of time for publication of papers, usually about two years. The work of the IWC depends on the voluntary contribution of data to the various databases and catalogues IWC supports. Please consult the Secretariat (secretariat@iwc.int).

Platform will be archived and hope to be hosted at the IWC servers once the project is finished.

PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	NA
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	NA

If 'Yes' please provide further details and enclose copies where appropriate:

DRAFT SCORING SHEET

If a project presents multiple primary objectives which are achieved using sub-projects, a sheet should be used to evaluate each single sub-project. Note that not all criteria are equally applicable depending on the nature of the project (e.g. field work versus workshops).

IWC SCIENTIFIC COMMITTEE PROPOSALS FOR FUNDING - REVIEW CRITERIA - TEST				
TITLE OF THE PROJECT/sub-projects:				
PRINCIPAL INVESTIGATOR:				
Key criteria	Explanation of scoring	Score	Su	
<i>Relevance to Scientific Committee priorities</i>				
1	How well aligned are the scientific outcomes of the project/activity with the current SC priority areas?	1. - Not aligned/poorly aligned (e.g. too vague or generic reference to general SC priorities) 2. - Reasonably aligned (e.g. some aspects may be vague or links are not clear) 3. - Well aligned (e.g. outcomes clearly deliver in the most part on priority areas, may also address longer term or potential future issues). 4. - Closely aligned (e.g. of interest for multiple sub-groups or delivers on specific SC high priority topics/recommendations in the immediate or short term).		
2	To what extent will the outcomes of the project/activity contribute to improvements in the conservation and management of cetaceans?	1 - N o t a t a l l l 2 - P o o r l y 3 - R e a s o n		

		<p>a b l y o r o v e r t h e l o n g e r t e r m 4 - W e l l o r o v e r t h e m e d i u m t e r m 5 - E x c e l l e n t l y o r t o a l m o</br></p>		
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		s t i m m e d i a t e e f f e c t		
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Note: if in each of the two above key criteria under this section the project does not score singularly at least 2 points, do not proceed within a sub-group would only be developed if in their estimation scores were of 4 or above.

Approach and methodology

3	What degree of scientific merit/value is there in carrying out the work?	1 - Not demonstrated or of low scientific value 2 - Useful/basic scientific value 3.- Very good scientific value 4.- Excellent/innovative scientific value		
4	Is the proposed methodology scientifically sound and feasible in terms of field and analytical methods?	1. - Feasibility unrealistic & poor methodology or not properly addressed 2. - Feasibility & methodology acceptable but would benefit from some substantial amendments		

		<p>3. - Feasibility & methodology good, some small changes beneficial</p> <p>4. - Feasibility & methodology excellent or a highly promising innovative approach to an important question facing the Committee</p>		
5	What is the likelihood of success based on the proposed overall approach and methodology?	<p>1.- No chance of success</p> <p>1. - Low chance of success/better approaches available 3 - Medium chance of success/some changes to the approach necessary</p> <p>4 - High chance of success/little or no changes to the approach necessary</p>		
5 a	Are objectives of the research likely to be achieved within the proposed time- frame?	<p>1.- No or unlikely</p> <p>1. - Partially or potentially ambitious 3 - Yes with some minor suggestions 4 - Yes</p>		
5 b	Are any proposed intermediary targets timely and achievable?	<p>1 - N o o r u n l i k e l y</p> <p>2 - P a r t i a l l y</p> <p>3.- Probably</p> <p>4.- Yes</p>		

<p>5 c</p>	<p>Is the proposed time-frame/work necessary (e.g. can the project produce results in a shorter time period)?</p>	<p>1 - N o o r u n l i k e l y 2 - P a r t i a l l y 3.- Probably 4.- Yes</p>		
<p>5 d</p>	<p>Is the sample size adequate to achieve the stated objectives?</p>	<p>1 – Not demonstrated/not properly addressed 2 – No or unlikely (too low/too high) 3 – Probably (additional analysis needed) 4 - Yes</p>		
<p>6</p>	<p>Is the project likely to affect adversely the population(s) involved?</p>	<p>1 - Not properly addressed/ unknown 2 - Yes severely 3 - P o s s i b l y a t a l l o w l e v e l 4 - N o</p>		

6 a	<p>IF YES, are analyses provided on simulations of the effects using different time-frames for the project if applicable?</p>	<p>1.- No 2.- Partially 3.- Yes</p>		
<p>Note: if in each of the above key criteria under this section the project does not score singularly at least 2 points, do not proceed in full within a sub-group would only be developed if in their estimation scores were of 3 or above.</p>				
<p><i>Project team and Project management</i></p>				

7	To what extent does the team have the relevant expertise, experience, and balance?	1 - P O O R r o n o t d e m o n s t r a t e d 2 - S u f f i c i e n t 3 - V e r y g o o d 4 - E x c e l l e n t	
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8	Contingency plan: To what extent have potential problems/risks been considered and appropriate mitigation proposed?	1.- Poor or not demonstrated 2.- Sufficient but could be improved 1. - Fully or requiring only minor suggestions or not applicable	
Value for Money			
1 0	Does the project represent good value for money?	1 – No or significant amendments would be needed 2 – Yes but with some minor amendments 3 – Yes	
1 1	Have sufficient links been made to the wider research community/other organisations/capacity building.	1.- No 1. - Some but significant amendments needed 3 – Yes but with some minor additions 4 – Yes or not applicable	