INTERNATIONAL WHALING COMMISSION

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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** objectives of the SWA Right Whale CMP is the development of a database in a geographic information system context, in order to compile a sensitivity atlas. To this end, it is intended to structure the content of the GIS database using information on right whales obtained from different sources (e.g. sightings, satellite tags, monitoring activities, etc) overlap with human activities (eg. fishing, shipping, seismic exploration, oil and gas exploration etc). The achievement of this goal established at the SARW-CMP, will allow to placed possible threats this population faces on a geographic information system. The information gather within this proposal in addition to helping to comply with the CMP research focus, it certainly will has a great impact on decision makers.

. RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

CMP:This information is relevant for the CMP, since this is a research action proposed directly in the CMP, therefore its realization, in addition to contributing with research, contributes to the fulfillment 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: Subcommittee E will benefit from this data considering that the main objective of the project is to create a sensitivity atlas for the species considering environmental concerns such as: oil/gas exploration, marine debris, strandings, noise, among other human impacts, main role of subcommittee E.

WW: This proposal will inform the areas where WW occurs and other human activities that overlap with this activity.

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.

. TYPE OF PROJECT (PLEASE TICK)

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

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 but the **research** action: **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, incorporated into a GIS system 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 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 a research action proposed during the first work plan of the SWA-RW CMP and that has been a priority action until nowadays, unfortunately not yet established, highlighting its importance for the CMP.

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);
- 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;

(C) METHODOLOGICAL APPROACH/WORK PLAN/ADMINISTRATIVE DETAILS

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.

A sensitivity atlas will be produced and this will part of a peer review publication.

. TIMETABLE FOR ACTIVITIES AND OUTPUTS

Specify the timetable for project activities and expected out puts 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)	10/22	03/23
Databases permits requests	Undetermined yet (researcher)	11/22	03/23
Bibliography search	Undetermined yet (researcher)	11/22	04/23
Data transformation to a unique georeferenced system and establishment of a unique database	Undetermined yet (researcher)	11/22	06/23
Installation of the server and implementation of the necessary resources for the functioning of GeoNode.	Fullstack web developer	10/22	04/23
Webmap viewer of maps and georeferenced data using ESRI	Fullstack web developer	04/23	08/23
Web Page (NodeJS) and Dashboard development ArGIS	Fullstack web developer	08/23	10/23
Sensitivity Atlas and Peer review publication	Undetermined yet (researcher)	08/23	05/24

Expected outputs	Completion date (mm/yy)
Systematized databases	06/23
WebGis platform	08/23
Dashboard platform	10/23
Sensitivity atlas	05/24
Peer review publication	06/24

. 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	SARW-CMP Coordinator	
Miguel Iñíguez	Cethus, Argentina	
Karina Groch	Instituto Australis, Brazil	

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 and Sensitivity Atlas	12	540	6480		1620	4860		
(1) Salaries (by person)	Fullstack web Developer	12	540	6480		1620	4860		
(3) Services (by item)	ESRI licence	150	2	300		-	300		
(3) Services (by item)	Office facility	12 months	150	1800		-	-		1800
(4) Reusable equipment	Computer	1200	1	1200		-	-		1200
(8) Other									
			TOTAL	16260		3240	10020		3000

Co-funding Memo:

Source	**Purpose of Funding**	**Amount**		**Secured/Tentative?**
ICMBio/ CMA	2.2GHz four-core processor, 16GB RAM, computer	1200		Secured
ICMBio/ CMA	Office facility	1800		Secured
	TOTAL	3000		

Total value of project:	**£GBP**
Funds requested from IWC	13240
Co-funding	3000

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).

Data will be archive into Brazil government server until IWC database are able to receive these data

. 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: