

SC/68B/RP/04

SH - Reconciling a long-term photo-id
database for blue whales in Chilean
Patagonia

IWC



INTERNATIONAL
WHALING COMMISSION

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PROJECT PROPOSAL REQUEST

1. PROPOSAL TITLE

Reconciling a long-term photo-id database for blue whales in Chilean Patagonia

2. 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.

In 2006 the Scientific Committee of the IWC agreed to initiate an in-depth assessment of Southern Hemisphere blue whales and in 2008, the Committee endorsed a proposal to establish a central web-based catalogue of blue whale identification photographs, known as the Southern Hemisphere Blue Whale Catalogue (SHBWC). Due to differential priorities, our research team at Centro Ballena Azul and Universidad Austral de Chile (based in Valdivia, Chile) has not been able to devote dedicated time to reconcile our 10+ years of blue whale photo-id work in northern Patagonia and put forward these data to the SHBWC. In due consideration that the in-depth assessment is to be finalized over the next few years, we hope that through this proposal we obtain minimal resources to secure the time of dedicated personnel to achieve the consolidation of this database.

3. RELEVANT IWC SCIENTIFIC COMMITTEE GROUPS OR SUB-GROUPS

List all the IWC Scientific Committee groups or sub-groups that the outcomes of this work would be relevant to and provide a brief (1-2 lines) explanation of how it would contribute more widely to their ongoing programmes of work. Where possible, do not simply list only the sub-committee within which or for which the project proposal was generated.

A Comprehensive Assessment of non-Antarctic Southern Hemisphere blue whales is being prepared by the SC, and is expected to finalize within the next two years. Thus, this research proposal would certainly be relevant to the next SC groups (sub-groups):

- SH Sub-committee on Other Southern Hemisphere Whale Stocks
- PH Ad hoc Working Group on Photo-Id
- ASI Standing Working Group on Abundance Estimates, Stock Status and Int Cruises
- IA Sub-committee on In-depth Assessments

4. TYPE OF PROJECT (PLEASE TICK)

Research project	
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Modelling	
Workshop/meeting	
Database creation/maintenance	X
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 2006 the Scientific Committee of the International Whaling Commission (IWC, 2007) agreed to initiate an in-depth assessment of Southern Hemisphere blue whales and in 2008, the Committee endorsed a proposal to establish a central web-based catalogue of blue whale identification photographs (IWC, 2009).

The Southern Hemisphere Blue Whale Catalogue (SHBWC) is an international collaborative effort to facilitate cross-regional comparisons of individual blue whale photo-identification catalogues. Catalogues currently maintained in the SHBWC include those from waters off Antarctica, Chile, Peru, Ecuador/Galapagos, in the Eastern Tropical Pacific (ETP), off southeastern Australia, Western Australia, Timor Leste, New Zealand, Southern Africa, Madagascar and Sri Lanka.

A total of 1,773 blue whales are currently held in the SHBWC (Galetti-Vernazani et al. 2020 SC/68b/SH11). Thus, the SHBWC has become the largest repository of Southern Hemisphere blue whale photo-identifications. In this sense, the Committee has supported ongoing work compiling the SHBWC to use it to conduct capture-recapture analyses of abundance.

Moreover, the SC encouraged the completion of photo-ID catalogue matching and quality coding in the southeast Pacific, to enable abundance estimation (SC/68a/Rep).

Thus, considering the above, progress on the Southern Hemisphere blue whale catalogue is required in order to complete the southeast Pacific (Chilean) blue whale assessment, by enabling estimation of regional abundance. An assessment model was explored in 2016, (Item 5.3.1.2, IWC, 2017a), notwithstanding the abundance dataset was not spatially representative of the Chilean coast and the Committee decided to delay the assessment while the catalogue is enlarged.

Since our initial discovery of a blue whale feeding and nursing ground in southern Chile during 2003 (Hucke-Gaete et al. 2003), we devoted early efforts into photo-id, acoustics and genetics, among others and later on, our efforts turned to satellite tagging. During this 17+ year period our team has been able to produce considerable amount of knowledge regarding the Chilean blue whale population but has not been able to collaborate on international efforts such as the Southern Hemisphere Blue Whale Catalogue (SHBWC). It has always been our intent to do so, but funds to hire existing dedicated personnel has lacked. During this pandemic contingency we might have the chance to reconcile data obtained during more than a decade (2003-2015) and it is our hope to finally deliver this dataset in such a way that it becomes useful for further analyses within the framework of the IWC.

(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.

Our main objective is to consolidate a 12-year photo-id catalogue of blue whales obtained off northern Patagonia between 2003 and 2015. Our main deliverable will be to fully upload the UACH-CBA catalogue by December 2020 to the SHBWC.

(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.

Initial sorting and cataloguing have already been achieved for several of the field seasons available. However, at this point we aim at completing and double-checking the conformation of the database, following IWC standards as indicated in Olson, Jackson & Donovan (2017) and Olson et al. 2018 (unpublished).

The original curator of the database will be hired to dedicate time into re-checking all available data and conforming the consolidated database. All matches will be double-checked and confirmed by two other experienced photo-id researchers (RHG (PI) and JPT-F).

Preliminarily, we have 4,500 digital photos to re-check, start the quality sorting process and identify within-year matches. An early estimate of 223 individually photo-identified blue whales (including within-year matches) has been obtained.

(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.

We have considerable amounts of high-quality images and footage (drone and Gopros) which can happily be shared with the IWC for outreach purposes which can be discussed further.

6. 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)
Re-check the entire photographic database to extract upper quality images and photo-associated field data.	Jorge Ruiz (JR)	06/20	07/20
Identification of individual blue whales using left and right flanks, including the dorsal fin.	JR	08/20	08/20
Double-check ids	Rodrigo Hucke (RH)	08/20	09/20
Image quality coding	RH, JR, JPT-F	09/20	09/20
Database build-up	RH, JR, JPT-F	10/20	11/20
Prepare uploading of photos to SHBWC	RH	12/20	12/20

Expected outputs	Completion date (mm/yy)
Upload full UACH-CBA catalogue to SHBWC	12/20

7. 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
Rodrigo Hucke-Gaete (PI)	Universidad Austral de Chile / Blue Whale Center (Chile)	
Jorge Ruiz	Blue Whale Center (Chile)	
Juan Pablo Torres-Florez	Centro Nacional de Pesquisa e Conservação de Mamíferos Aquáticos CMA/ICMBio (Brazil); Blue Whale Center (Chile)	

8. TOTAL BUDGET

Breakdown into: (1) salaries/wages (include name/position of each individual and breakdown of time and duties i; (2) travel/subsistence expenses (breakdown by person and justification) unless for IPs for workshops where a total estimate based on an average for the total number of IPs is acceptable; (3) services (e.g. aircraft/vessel time, consultancy fees, ARGOS fees, etc.); (4) reusable capital equipment (e.g. reusable equipment such as a hydrophone, cameras, etc. Note that this equipment will have to be registered at the IWC Secretariat and will remain property of the IWC at the end of the project), (5) expendable capital equipment (e.g. consumables, tags, stationery), (6) shipping costs, (7) insurance costs, (8) in kind co-funding (specify whether other funding is available for personnel/name, equipment, venues, etc.). Note that "Overheads" are not admissible. Add as many rows as you need to the table below.

Type	Detailed description	Cost in GB pounds
(1) Salaries (by person)	Hire dedicated time of professional (120 hours- divided in 2.5 months) in order to check the photographic database and identified new individuals.	2,000
(2) Travel/subsistence (by person or est. total for IPs)		0
(3) Services (by item)		0
(4) Reusable equipment		0
(5) Consumables		0
(6) Shipping (by Item)		0
(7) Insurance (by item)		0
(8) Co-funding		0
(9) Other		0

Total		2,000
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9. 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).

The data will be available though the SHBWC platform.

10. PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	Yes, all field work was carried out under permit from the Chilean Undersecretariat of Fisheries to RH.
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	N/A

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

Appendix 2 – 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 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	Sup	
<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 - Not at all 2 - Poorly 3 - Reasonably or over the longer term 4 - Well or over the medium term 5 - Excellently or to almost immediate effect		
<p><u>Note:</u> 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 in a sub-group would only be developed if in their estimation scores were of 4 or above.</p>				
<i>Approach and methodology</i>				
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?	<p>1 - Feasibility unrealistic & poor methodology or not properly addressed</p> <p>2 - Feasibility & methodology acceptable but would benefit from some substantial amendments</p> <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>2 - Low chance of success/better approaches available</p> <p>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>		
5a	Are objectives of the research likely to be achieved within the proposed time-frame?	<p>1 - No or unlikely</p> <p>2 - Partially or potentially ambitious</p> <p>3 - Yes with some minor suggestions</p> <p>4 - Yes</p>		
5b	Are any proposed intermediary targets timely and achievable?	<p>1 - No or unlikely</p> <p>2 - Partially</p> <p>3 - Probably</p> <p>4 - Yes</p>		
5c	Is the proposed time-frame/work necessary (e.g. can the project produce results in a shorter time period)?	<p>1 - No or unlikely</p> <p>2 - Partially</p> <p>3 - Probably</p> <p>4 - Yes</p>		
5d	Is the sample size adequate to achieve the stated objectives?	<p>1 - Not demonstrated/not properly addressed</p> <p>2 - No or unlikely (too low/too high)</p> <p>3 - Probably (additional analysis needed)</p> <p>4 - Yes</p>		
6	Is the project likely to affect adversely the population(s) involved?	<p>1 - Not properly addressed/ unknown</p> <p>2 - Yes severely</p> <p>3 - Possibly at a low level</p> <p>4 - No</p>		
6a	IF YES, are analyses provided on simulations of the effects using different time-frames for the project if applicable?	<p>1 - No</p> <p>2 - Partially</p> <p>3 - Yes</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 further sub-group would only be developed if in their estimation scores were of 3 or above.

Project team and Project management

7	To what extent does the team have the relevant expertise, experience, and balance?	1 – Poor or not demonstrated 2 – Sufficient 3 - Very good 4 - Excellent		
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 3 - Fully or requiring only minor suggestions or not applicable		
<i>Value for Money</i>				
10	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		
11	Have sufficient links been made to the wider research community/other organisations/capacity building.	1 – No 2 – Some but significant amendments needed 3 – Yes but with some minor additions 4 – Yes or not applicable		