

SC/67b/RP32

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SH - Southern hemisphere blue whale  
catalogue 2019-2020



INTERNATIONAL  
WHALING COMMISSION



## PROJECT PROPOSAL REQUEST

### 1. PROPOSAL TITLE

*Please provide the title of the project or the name of the workshop/meeting.*

Southern Hemisphere Blue Whale Catalogue 2019/2020

### 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.*

The Southern Hemisphere Blue Whale Catalogue (SHBWC) is an international collaborative effort to facilitate cross-regional comparison of blue whale photo-identifications catalogues.

To date more than 1,500 individual blue whales have been contributed to the SHBWC from researchers groups working on areas off Antarctica, Chile, Peru, Ecuador-Galapagos, Eastern Tropical Pacific, Australia, Timor Leste, New Zealand, Madagascar and Sri Lanka.

Therefore the SHBWC has become the largest repository of Southern Hemisphere blue whale photo-identifications.

Results of comparisons among different regions will improve the understanding of basic questions relating to blue whale populations in the Southern Hemisphere such as defining population boundaries, migratory routes, visual health assessments, and to model abundance estimates. The results will greatly contribute primarily to the IWC Southern Hemisphere blue whales assessments.

### 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.*

- **Southern Hemisphere Sub-Committee:** is currently conducting the Southern Hemisphere blue whale assessments and the SHBWC would provide important information regarding connectivity. Furthermore, the SHBWC has a specially designed tool to facilitate the development of abundance estimates that may be useful for assessment.
- **Ad hoc Working Group on Guidelines for Photo-identification Databases:** the SHBWC is currently one of the major IWC photoID catalogues and therefore its work and database management has been a central part to the work of this ad-hoc working group.
- **Standing Working Group on Environmental Concerns:** the SHBWC also includes data on skin lesions. While not considered part of this 2019-2020 proposal, the catalogue will provide a comprehensive collection of photographs on skin lesions that may be used in the future to conduct visual health assessment for all Southern Hemisphere blue whale populations.

#### 4. TYPE OF PROJECT (PLEASE TICK)

Research project	
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.*

Collaboration among blue whale researchers and sharing of photo-identification catalogues is critical to better understand population boundaries, connectivity, migratory movements and abundance estimates among others. In 2006 the Scientific Committee of the International Whaling Commission 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. Since then, the Southern Hemisphere Blue Whale Catalogue (SHBWC) has been developed and continual improvements have been made during these years. Researchers working on different Southern Hemisphere blue whale populations have continued to join the catalogue and the SHBWC is currently the largest blue whale photo-identification database.

The Scientific Committee has systematically supported the ongoing work of the SHBWC and each year (from 2009 to 2018) has recommended the continuation of this important work as it will provide useful and relevant information for future assessments of blue whales.

In 2010, the Scientific Committee first supported the matching process but from 2011 to 2013 assessment of humpback whales was prioritized and funding for SHBWC was considerably reduced; this allowed software improvements, database maintenance and finalize matching already undertaken.

In 2012 the Scientific Committee specifically encouraged contributions of regional catalogues not yet in the Southern Hemisphere Blue Whale Catalogue to join. Therefore, by 2014 considerable contributions of regional catalogues were received, particularly from the Australian region. At that time, the Scientific Committee was finalizing Southern Hemisphere humpback whale assessment and considering to review available information on Southern Hemisphere blue whales to determine feasibility of conducting area-based assessments. Therefore matching process within the SHBWC was resumed in 2015 yielding important information on inter-matches between regions.

## (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.*

In 2018, matches of photo-IDs contributed from Australia, New Zealand and Sri Lanka are being finalized. Therefore, next priority will then be given to compare photo-IDs from Eastern Tropical Pacific and South America. If possible, comparisons between regions should start.

In addition, software improvements will be necessary in order to fully comply with the IWC photo-ID database guidelines being developed by the *ad-hoc* working group on Guidelines for Photo-identification Databases. In particular, the priority for this period will be to develop a tool to integrate the IWC photo-ID catalogue guidelines on photo-quality in order to be consistent and implement the same criteria for rating the quality of the photographs. Other improvements suggested by the IWC include the inclusion of TAG data (name and number), age class and biopsy label, development of matching reports, list of members and definition of regions, among others, but will be addressed after priority improvements are implemented.

Finally, because a large number of new improvements to the SHBWC software have been implemented, it will be necessary to update the 2016 user manual.

Therefore specific objectives for 2019-2020 are:

- Conduct matching with new photos for SE Pacific (South America, ETP)
- Conduct matching with new photos for Antarctica
- Conduct matching with new photos for Australia, New Zealand and Sri Lanka (if new entries are available)
- Compare photos between Australian/NewZealand/Indonesia and Antarctica
- Compare photos between SE Pacific and Antarctica
- Integrate new IWC database requirements into SHBWC software
- Update the user manual

Note that depending on the future uploading of new photographs, matching process could be re-schedule to give priority to matching within a region over matching between different regions.

## (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).*

### **Uploading of photographs:**

Contributors to the catalogue that have been granted a user ID are responsible to directly upload their photos to their catalogues. Only the best left, right and fluke photos for each whaleID with its associated data should be uploaded. Additional photographs that will complement the whaleID are also welcome.

### **Matching process:**

Individual blue whales are identifiable from unique patterns of mottling on both sides of the body near the dorsal fin (Sears et al., 1990) and in some cases, permanent scars can be used to identify or confirm individuals.

At least two experienced matchers are appointed to be responsible for all comparisons. Multiple matchers, as long as experienced, have the advantage of the work being conducted by someone if others have commitments.

An agreement between matchers and the appropriate regional SHBWC coordinator is developed in order to determine e.g. what photos will be matched, time frame, and scheduled check-in to assess progress.

When a match is found, catalogue owners will be contacted and informed of the finding. If approved by both parties, the information will be used for publication. For IWC assessment purposes, this information can also

be disclosed in unpublished papers, co-authored by contributors, which contribute to the Committee work (IWC Data availability agreement).

**Software improvements:**

Curator of the catalogue work with IT people directly to upgrade software and integrate any IWC requirements.

**(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.*

Annual progress report on the SHBWC as well as papers reporting results from matching process are presented to the Scientific Committee of the IWC.

Peer reviewed publications and press releases may also be considered when matches are found.

**6. 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)
Regional matching process with new contributions from Eastern Tropical Pacific and South America	Barbara Galletti & Paula Olson	09/18	12/19
Regional matching process with new contributions from Antarctica	Paula Olson	01/19	04/20
Matching process between catalogues of Australia/New Zealand/Indonesia and Antarctica regions	Paula Olson & Chandra Salgado-Kent	01/20	12/20
Matching process between catalogues of ETP/South America region and Antarctica regions	Barbara Galletti & Paula Olson	01/20	12/20
Software improvements	Barbara Galletti	01/19	12/20
Update User Manual	Barbara Galletti, Paula Olson & Chandra Salgado-Kent	01/20	03/20
SHBWC progress report 2019	Barbara Galletti, Paula Olson & Chandra Salgado-Kent	05/19	05/19
SHBWC progress report 2020	Barbara Galletti, Paula Olson & Chandra Salgado-Kent	05/20	05/20

Expected outputs	Completion date (mm/yy)
Finalize regional matching process within South America and ETP	12/19
Finalize regional matching process within Antarctica	04/20
Start matching process between Australia/New Zealand/Sri Lanka and Antarctica	12/20
Start matching process between SE Pacific and Antarctica	12/20
Preliminary report on matching progress 2019	05/19
Preliminary report on matching progress 2020	05/20
Possible peer-review publication on matching results	04/20
Increasing photo-identification database	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
Bárbara Galletti	Centro de Conservacion Cetacea	SHBWC curator and regional coordinator
Paula Olson	NOAA	Regional coordinator
Chandra Salgado-Kent	CMST Curtin University	Regional coordinator
Peter Gill	Blue Whale Study Inc.	Contributor
Chris Burton	Western Whale Research	Contributor
Curt Jenner	Center for Whale Research Western Australia	Contributor
Mike Double	Australian Antarctic Division	Contributor
Luciana Moller	Flinders University	Contributor
Asha de Vos	Sri Lanka Blue whale Project	Contributor
Ken Findlay	Mammal Research Institute Whale Unit, University of Pretoria	Contributor
Gustavo Chiang	Fundacion MERI	Contributor
Leigh Torres	Oregon State University, Marine Mammal Institute	Contributor
Maja Nimak-Wood	Cardline	Contributor
Rodrigo Huckle-Gaete	Centro Ballena Azul	Contributor
Maria Jose Perez	Centro de Investigacion Eutropia	Contributor
Kimberly Goetz	National Institute of Water and Atmospheric research Ltd	Contributor

## 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 2019	Cost in GB pounds 2020
(1) Salaries (by person)	Matching of new photo-ID from South America and ETP (742hr in 2018 already granted and 759hr in 2019)	13,810	0
	Matching of new photo-ID from Antarctica (99hr in 2019 and 99hrs in 2020)	1,798	1,798
	Comparisons between Antarctica and Australia/NewZeland/SriLanka (302 hrs in 2020)		5,000
	Comparisons between Antarctica and South America/ETP (302 hrs in 2020)		5,000
(2) Travel/subsistence (by person or est. total for IPs)			
(3) Services (by item)	Software improvements and database maintenance	3,000	3,000
(4) Reusable equipment			
(5) Consumables			
(6) Shipping (by Item)			
(7) Insurance (by item)			
(8) Co-funding			
(9) Other			
<b>Total</b>		<b>18,608</b>	<b>15,798</b>

## 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](mailto:secretariat@iwc.int)).

All data is uploaded to the SHBWC, a repository catalogue that is available to all contributors and can also be used for IWC purposes. When registering to the SHBWC, contributors signed the data sharing agreement that includes the IWC data sharing agreement. Currently the SHBWC is being migrated to an IWC server.

## 10. PERMITS (PLEASE TICK)

Do you have the necessary permits to carry out the field work and have animal welfare considerations been appropriately considered?	Not applicable
Do you have the appropriate permits (e.g. CITES) for the import/export of any samples?	Not applicable

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 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	Supporting Remarks	
<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		
<b>Note:</b> 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 further evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 4 or above.				
<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?	1 - Feasibility unrealistic & poor methodology or not properly addressed 2 - Feasibility & methodology acceptable but would benefit from some substantial amendments		



		3 - Feasibility & methodology good, some small changes beneficial 4 - Feasibility & methodology excellent or a highly promising innovative approach to an important question facing the Committee		
5	What is the likelihood of success based on the proposed overall approach and methodology?	1 - No chance of success 2 - Low chance of success/better approaches available 3 - Medium chance of success/some changes to the approach necessary 4 - High chance of success/little or no changes to the approach necessary		
5a	Are objectives of the research likely to be achieved within the proposed time-frame?	1 - No or unlikely 2 - Partially or potentially ambitious 3 - Yes with some minor suggestions 4 - Yes		
5b	Are any proposed intermediary targets timely and achievable?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes		
5c	Is the proposed time-frame/work necessary (e.g. can the project produce results in a shorter time period)?	1 - No or unlikely 2 - Partially 3 - Probably 4 - Yes		
5d	Is the sample size adequate to achieve the stated objectives?	1 - Not demonstrated/not properly addressed 2 - No or unlikely (too low/too high) 3 - Probably (additional analysis needed) 4 - Yes		
6	Is the project likely to affect adversely the population(s) involved?	1 - Not properly addressed/ unknown 2 - Yes severely 3 - Possibly at a low level 4 - No		
6a	<b>IF YES</b> , are analyses provided on simulations of the effects using different time-frames for the project if applicable?	1 - No 2 - Partially 3 - Yes		
<b>Note:</b> 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 evaluation. Of course, proposals within a sub-group would only be developed if in their estimation scores were of 3 or above.				
<b>Project team and Project management</b>				

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		
<b>Value for Money</b>				
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		