Report of the Scientific Committee

Bled, Slovenia, 7-19 June 2016

Annex R: Report of the *ad hoc* Working Group on Guidelines for Photo-Identification Databases

**This report is presented as it was at SC/66b.
There may be further editorial changes (e.g. updated references, tables, figures)
made before publication.**

International Whaling Commission

Bled, Slovenia, 2016

Annex R

Report of the *ad hoc* Working Group on Guidelines for Photo-identifcation Databases

Members: Olson (Chair), Jackson (Co-chair), Baker, Bell, Brownell, Cheeseman, Collins, Donovan, Double, Findlay, Galletti, Garrigue, George, Kaufman, Lindquist, Mallette, Matsuoka, Minton, Mizroch, Panigada, Ritter, Zerbini

1. INTRODUCTORY ITEMS

1.1 Opening remarks

Olson welcomed participants.

1.2 Terms of Reference

The Terms of Reference were **agreed** upon and are given in Appendix 1.

1.3 Election of Chair

Olson was elected as Chair.

1.4 Appointment of rapporteurs

Jackson and Zerbini acted as rapporteurs.

1.5 Adoption of agenda

The adopted agenda is given in Appendix 2.

2. HUMPBACK WHALE CATALOGUES

SC/66b/SH24 reported on the Antarctic Humpback Whale Catalogue, which has been maintained (with funding from the IWC) by the College of the Atlantic since 1987. In 1998 the IWC approved funding to support the expansion of this catalogue to members of the IWC, with an aim to substantially improve the accessibility and organisation of the database. The collection has been internationally collaborative from its beginning, with photographic contributions from 386 researchers and opportunistic sources. During the contract period, the Antarctic Humpback Whale Catalogue catalogued 863 photo-identification images representing 686 individual humpback whales from Antarctic and Southern Hemisphere waters, a growth of more than 27% over the previous year. These newly catalogued images were submitted by 62 individuals and research organisations. Photographic comparison of submitted photographs to the Catalogue during the contract period yielded 130 previously known individuals. These submissions bring the total number of catalogued whales identified by fluke, right dorsal fin/flank and left dorsal fin/flank photographs to 6,970, 414 and 408 respectively. Notable matches included: the first re-sighting between breeding group A and breeding group C; the first long-distance re-sighting of an individual between Brazil and South Georgia; several matches between the Antarctic Peninsula and Costa Rica and sightings of five individuals from the Peninsula to Panama; and the movement of an individual between the Peninsula and South Orkney, helping to define the limits of that feeding aggregation.

The Working Group thanked the presenter and acknowledged the substantial amount of work the paper represented. It was queried whether the increasing numbers of photographs submitted from lower latitudes to the Antarctic Catalogue is compromising matching of Antarctic photos in either time or priority. The answer to this was unknown since the paper was presented by a representative of the authors. Discussion followed on the value of maintaining catalogues with photographs from both breeding and feeding grounds while still prioritising the matching of Antarctic photographs. The topic was raised whether data from the Antarctic Catalogue was providing useful information for current assessment questions, especially considering the budgetary implications related to the AHBWC. This topic was deferred to future discussion in SH sub-committee.

3. BLUE WHALE CATALOGUES

3.1 Antarctic blue whales

SC/66b/SH11 summarised the recent findings of the Antarctic Blue Whale Catalogue, based on photo-ID data from 1991-2016. Identification photographs of individual Antarctic blue whales were collected from multiple sources, including the IWC IDCR/SOWER cruises, IWC-SORP voyages, the Institute of Cetacean Research, and naturalists and collegial scientists working in the Antarctic region. The total number of identified whales in the catalogue has reached 416, represented by 315 left sides and 306 right sides. This is 14-18% of the most recent accepted estimate of abundance of 2,280 in 1997/1998 (CV=0.36; Branch, 2007). The photo-identification data from this catalogue have produced information on inter-annual whale movement (Olson, 2012; Olson *et al*. 2013), within season sighting rates (Olson *et al*., 2015), and a pilot capture-recapture study (Olson and Kinzey, *in press*). Results of blue whale movement reported in this paper were discussed when this paper was presented in SH sub-committee.

This year, 17 new individual Antarctic blue whales were identified from 260 photographs collected opportunistically in the years 2005-2016. The 17 new identifications provide a considerable contribution to the Antarctic Blue Whale

Catalogue. In addition to the sizable number of new identifications, 14 of the identifications came from Areas underrepresented in the catalogue, Areas I and II. In recent summer seasons, there are anecdotal reports that blue whales are occurring more frequently now at South Georgia and in the Drake Passage. It is hoped this will provide the opportunity for identification photographs to be collected opportunistically in the future from these areas. The caveat with opportunistic photos is quality. Often it is the case that the vessel of opportunity is unable to follow blue whales and the photographs are obtained at a distance too far to determine detail needed for individual identification. Yet all opportunistic photographers are encouraged to obtain photographs regardless. The photographs of highly distinctive individuals, even taken at a distance, can be useful (if later matched) for information on movement even if the photo would be excluded from capture-recapture analysis.

A cornerstone of the Antarctic Blue Whale Project is to generate new estimates of abundance using photo-ID data for capture-recapture analysis (Bell, 2015; Peel *et al*., 2015). The most recent accepted estimate of abundance (Branch, 2007) is based on line-transect data now over 18 years old. The continued collection of identification photographs from the Antarctic will provide data toward a set eventually large enough to obtain new estimates of abundance. This subpopulation of blue whales remains on the IUCN Red List as Critically Endangered.

The question was raised whether the photo-ID were ready to be used in a capture-recapture study. The author explained that to date, the number of re-captures is low (15 recaptures from 416 individuals), too low for a feasible capture-recapture study yet. A pilot study (Olson and Kinzey, *in press*) based on the photo-ID data from the SOWER cruises (only) had a similar small proportion of recaptures and the CI's were large. More samples and recaptures are needed to produce viable estimate. It was commented that a power analysis was conducted for IWC-SORP that determined 50 identifications per year over 10 years would be needed to produce an abundance estimate (Kelly *et al*., 2012). It was highlighted that large ship surveys are becoming increasingly difficult to fund so the importance of ships of opportunity, citizen science, catalogue sharing and other collaborative efforts such as SORP are important for the collection of photo-identification data.

3.2 Southern Hemisphere Blue Whale Catalogue

SC/66b/SH26 presents advancements of the Southern Hemisphere Blue Whale Catalogue (SHBWC) between June 2015 and May 2016. Currently the SHBWC includes a total of 1,381 individual blue whale photo-identifications (photo-IDs) that include areas off Antarctica, Chile, Peru, Ecuador-Galapagos, Eastern Tropical Pacific (ETP), Australia, Timor Leste, New Zealand, Madagascar and Sri Lanka. In 2015-2016, the catalogue increased 30% with the addition of new photo-IDs. Regional matching process within the Australia and New Zealand region has been finalised with all the photo-IDs received prior to 2016. Five whales were re-sighted within all three areas of Australia but no matches were found between Australia and New Zealand blue whales. Details are given in SC/66b/SH27. Between region comparisons of Antarctica, ETP and South East Pacific have also been finalised and no matches were found. Over the years the IWC required that the SHBWC update and improve its software; major improvements in the software have been implemented and finalised. The author suggested that future work should include to start the matching process with new photo-ID's received and conduct comparisons between Australian and New Zealand catalogues with Antarctica as well as with Chile and ETP.

SC/66b/SH27 is a companion paper to SC/66b/SH26 and was presented immediately following. It reports results from the Southern Hemisphere Blue Whale Catalogue's on comparisons of photo-ID data collected from Australia and New Zealand regions. 431 photo-identified blue whales from four different research groups working in the Perth Canyon (west Australia), Geographe Bay (west Australia), Bonney Upwelling (southern Australia) and around New Zealand were compared. Five whales were re-sighted between different areas and years. Matches have been found within all three areas of Australia but no matches have been found with New Zealand blue whales. Blue whales sighted in Perth Canyon, Geographe Bay and Bonney Upwelling were subsequently re-sighted in the other Australian areas, representing a high level of connectivity between these areas and thus, making a stronger case for the hypothesis of one distinct population for Australian whales. These results are consistent with genetic data that shows blue whales from Perth Canyon, Bonney Upwelling and Geographe Bay are part of the same stock. While genetic analyses and morphological descriptions have found that New Zealand blue whales are similar to those found in Australia, the work in SC/66B/SH27 found no matches. However, the small sample size from New Zealand still prevents conclusions being drawn about its possible isolation from the Australian population.

The Working Group congratulated the author on the substantial amount of work these papers represent. The question was raised about catalogues that had joined the SHBWC and signed the agreement but still had not uploaded their photos. Galletti explained that the SHBWC was waiting for photographs from the New Zealand region in particular to be uploaded. The Working Group **encouraged** New Zealand researchers to contribute their catalogues.

3.2.1 Updates on items related to the SHBWC from 2015

Jackson presented a follow-up on items from 2015 regarding the SHBWC.

(1) A new Terms of Reference, including an added clause requiring the submission of date and location data, was reviewed and accepted unanimously by the Working Group (Appendix 3). In reference to the data sharing agreement, the question was raised whether there was a time limit on waiting for a reply from the data owner of shared photo match, if that person was in the field, for example. It was confirmed that there was no time limit, as the data sharing agreement clearly states that approval by both parties must be obtained before proceeding with publication.

(2) The Discussion Forum within the online SHBWC has been created as a Wiki page. Galletti has not used it yet; Donovan offered assistance from the Secretariat if needed.

(3) The English user manual has been updated. Galletti and Olson are continuing to work on improvements.

(4) Plans are underway to migrate the Catalogue to the IWC server although the move has some complications because of differing platforms. Guidance from the IWC Secretariat and IT specialists working with Galletti will facilitate the move. This item has a budgetary implication because of the differing server platforms.

4. OTHER WHALE PHOTO-ID CATALOGUES

SC/66b/SH6 reported on a project involving building and operating a web-based marine mammal photo-ID crowd-sourcing platform named Happywhale.com. In the pilot season, the project processed in excess of 30,000 images contributed by citizen scientists, documenting 1,912 sightings containing 23 cetacean species. Individual ID efforts were focused on humpback whales, documenting 616 individuals, 126 of which were matched to existing catalogues in the northeastern North Pacific and off the Antarctic Peninsula. The project has developed automated and semi-automated image management systems and quality control standards to generate a dataset from publicly sourced images open for collaborative scientific use. The pilot season showed strong potential to effectively document marine mammal populations in areas such as the Antarctic and high Arctic frequented by wildlife tour vessels but where research cruises are limited, and to document populations, associations and movements at very high resolution in coastal areas with whale watching tour industries. Feedback to contributors has been a major feature of this project, which has often resulted in increased enthusiasm and improved data quality for subsequent submissions.

The Working Group welcomed this work. Responding to questions, the author explained that users can see the images in happywhale.com that they submitted. Contributors are told when a match of 'their' humpback whale is made by Happywhale.com. However, science recipients of photographic data (from Happywhale.com) are not required to communicate back what they find. The Happywhale.com photos and data have gone to the Antarctic Humpback Whale Catalogue (SC/66B/SH24) and the Antarctic Blue Whale Catalogue (SC/66B/SH11). Soon Happywhale.com will be implementing a globe/species/date range search facility.

5. GUIDELINES FOR IWC DATABASES AND CATALOGUES

5.1 Photo-identification guidelines document

This agenda item refers to a set of guidelines that the Scientific Committee has requested the Working Group develop in support of IWC work conducting cetacean population assessments through photo-ID databases.

The document is intended to provide guidance for photo-identification catalogues contributing photos and data to the IWC and/or being funded by the IWC. The aim is that catalogues adhere to common standards for photograph subject and quality, data submission and reporting, at a level sufficient to allow the IWC to meet its population assessment goals.

SC/66B/DB01 is the draft of the guidelines that the Working Group reviewed, discussed, and edited.

5.1.1 Guidelines background

The IWC has a history of using photo-identification catalogues to assist with its work. It has supported the development of photo-identification catalogues for a number of completed and on-going whale population assessments, including Southern Hemisphere humpback whales, Southern Hemisphere blue whales, and Pacific gray whales. (See also Report of the International Whaling Commission, Special Issue 12, 1990.) The IWC has supported two types of photo-identification catalogues, 1) those that are used for assessment, and 2) those that can be termed 'repository.' Repository catalogues are supported for the usefulness of their photographic data but the catalogues are not currently being used by the IWC in an assessment. (A current example of a repository catalogue is the Antarctic Humpback Whale Catalogue.) Catalogues can move from one status to another during the progress of assessments.

Photo-identification catalogues are usually compiled from regional surveys in an area that is only part of the range of the focal species. The effective study and management of whales at the population level benefits from a comprehensive spatial coverage. These are wide ranging animals that travel across regional and international boundaries and comprehensive research and management depends on the collaboration among researchers as well as governments.

In the application of photo-identification catalogues to understanding broader ecological patterns, it is often necessary to combine ('reconcile') catalogues between research groups. The comparison of photo-identification catalogues between regions can reveal whale movement patterns, migration routes, and determine breeding and feeding area linkages. Using photo-identification data from throughout a species or population's range allows for a greater understanding of population structure and provides data for a more comprehensive abundance estimate.

When reviewing this background material, it was queried if the IWC currently has any photo-ID databases. Donovan explained that currently two photo-ID databases are supported with financial contributions: the Antarctic Humpback Whale Catalogue and the Southern Hemisphere Blue Whale Catalogue. He expects the IWC to be doing more with

photo-ID databases in the future, for example, the photo catalogues generated by the POWER cruises and it's important to provide consistent guidance for future submissions.

The selection of representative references for the background material to the guidelines was discussed and **agreed** upon. The references will include a short bibliography highlighting broadly collaborative photo-identification work occurring across ocean basins.

5.1.2 Data access for shared catalogues

For population assessments where the IWC uses multiple catalogues but has not developed a reconciled single catalogue, the contributed catalogue (photos and data) are not directly available to all Committee members or even shared among the different contributors. In such cases, the IWC uses analyses from the multiple catalogues for its assessment only, and even where reconciled data are developed, the combined dataset is usually not freely available to all. However, any scientist (including catalogue holders of contributed data) may submit a request for access to the data to the data owner(s) through the IWC and its broad data availability process (Procedure B). Such requests are handled on a case-by-case basis and the IWC (as a neutral entity) works to facilitate an appropriate data sharing agreement, although the ultimate decision remains with the data owner. Data sharing agreements are in place for the established IWC-supported collaborative catalogues: the Antarctic Humpback Whale Catalogue and the Southern Hemisphere Blue Whale Catalogue.

There was discussion recounting examples of data sharing agreements from other collaborative catalogues and photo-identification projects. The Working Group **agreed** upon the content of the section of the guidelines related to data access.

5.1.3 Photo subjects for large whales

Initially, the guidelines will be oriented toward large whale species. The specific photo subjects (e.g. left and right side with dorsal fin; fluke; etc.) are listed for 11 species: blue whale, fin whale, sei whale, Brydes whale, Omura's whale, minke whale, humpback whale, gray whale, right whale, bowhead whale, sperm whale.

5.1.4 Catalogue organisation and internal reconciliation

Recommendations in the draft guidelines to organise a catalogue by grouping photographs based on similar natural markings to facilitate the inter-matching process generated discussion. Working Group members found it challenging to come to consensus regarding ways to match and organise photographs and to make a recommendation for this. Agreement was reached with the addition of text that will clarify that this concept relates to sorting photographs for matching, not formally numbering or cataloguing individuals.

In order to be used in population assessments, photo-identification catalogues need to be fully reconciled internally. This has been a problem in the past with submissions to the SHBWC.

The inter-matching of photographs can be conducted manually (by eye) or computer-assisted (generally custom software and often species specific). Using the by-eye method, photographs can be compared in printed format, electronic format or a combination of both formats. It is recognised that this step varies by species, by catalogue size, and by the staffing and funding resources available to the catalogue. All methods are valid as long as a clean dataset is produced. Inter-matches must be unequivocal.

5.1.5 Image quality coding

The quality coding of photographs is undertaken by most catalogues (e.g. Friday *et al*., 2000) to ensure (as much as possible) that there is an equal probability that matches will be recognised and to reduce the amount of bias highly distinctive or indistinctive individuals might otherwise produce. It was recognised that the ideal situation when creating a database of photographs for analysis is to have one coder (or a small team of coders trained together) to code all of the photos. It was also recognised that this is not always practical when working with large collaborative catalogues. However the effects of bias when pooling catalogues, due to subjectivity related to photo quality coding, needs to be explored. The language in the guidelines will be adapted to reflect this. The importance of clarifying the difference between photo quality and distinctiveness will be added to the guidelines.

5.1.6 Submissions to the IWC – Images and associated data

It was determined that the requested format for photographs will be the highest quality Jpg available. It is expected that a catalogue holder will retain the original photo (whether RAW or other format). The use of gps-logging devices or the integration of gps data using software is encouraged but not required.

Data are to be submitted as a flat file (i.e. in Excel). Specifics regarding the order of column headings will be determined on a case-by-case basis. Associated data will include a whale identification no.; image label; photo subject (e.g. left side); date; lat lon or location; sex (if known); mother or calf designation (if applicable); biopsy sample no. (if applicable); satellite tag no. (if applicable); and comments. Protocols for inputting and extracting metadata from images into flat files – if a desired step by the catalogue holder – can be handled in an appendix.

The number of identification photographs to submit per individual will also vary on a case-by-case basis. For large, collaborative catalogues, only one best identification photo(s) is needed per individual. For other studies one best photo(s) per season may be requested, or an identification photo for every sighting may be requested for submission.

5.1.7 Reporting

A report is required from both assessment and repository catalogues from each funding year. A report should include the geographic areas, years/seasons, and number of individuals compared to the existent catalogue, along with results of the comparisons yielding the number of matches, the number of newly identified individuals, and the subsequent total number of identified individuals in the catalogue. The data should be presented in summary form. The report should also contain a detailed Methods section that describes how inter-matching and quality coding were conducted. Recent publications generated from catalogue data should be listed.

6. CONCLUSIONS AND RECOMMENDATIONS

The Working Group completed its review of the draft guidelines. It was suggested that appendices focusing on specific technical aspects of photo-ID such as gps-logging, photo quality coding, etc. be developed and added to the guidelines.

6.1 Work Plan

The photo-identification guidelines (excepting possible appendices) are anticipated to be completed intersessionally and should be ready to circulate within the Scientific Committee at SC/67a (Table 1).

Table 1

Summary of the work plan for the *ad hoc* Working Group on Guidelines for Photo-identification Databases

Item	Intersessional 2016/17	2017 Annual Meeting (SC/67a)
Photo-identification guidelines	Email group will develop final draft of guidelines	Final draft ready to circulate

An intersessional email group was convened under Olson (Table 2).

7. ADOPTION OF REPORT

This report was adopted at 2:03 pm on 15 June 2016.

REFERENCES

Bell, E.M. 2015. Annual report of the Southern Ocean Research Partnership (IWC-SORP) 2014/2015. Paper IWC SC/66a/SH8 submitted to the IWC Scientific Committee.

Branch, T.A. 2007. Abundance of Antarctic blue whales south of 60°S from three complete circumpolar sets of surveys. *Journal of Cetacean Research and Management* 9: 253-262.

Friday, N., Smith, T.D., Stevick, P.T. and Allen, J. 2000. Measurement of photographic quality and individual distinctiveness for the photographic identification of humpback whales, *Megaptera novaeangliae*. *Marine Mammal Science* 16: 355-374.

Hammond, P.S., Mizroch, S.A., and Donovan, G.P. (eds.) 1990. Individual recognition of cetaceans: use of photo-identification and other techniques to estimate population parameters. Rep. Int. Whal. Commn., Special Issue 12.

Kelly, N., Miller, B., Peel, D., Double, M.C., de la Mare, W. and Gales, N. 2012. Strategies to obtain a new circumpolar abundance estimate for Antarctic Blue Whales: survey design and sampling protocols. Paper IWC SC/64/SH10 submitted to the IWC Scientific Committee.

Olson, P.A. 2012. Antarctic blue whale photo-identification catalogue summary. Paper IWC SC/64/SH8 submitted to the IWC Scientific Committee.

Olson, P.A., Ensor, P., Andrews-Goff, V. and Double, M.C. 2013. Inter-annual and within season movements of photo-identified Antarctic blue whales. Abstracts. 20th Biennial Conference on the Biology of Marine Mammals, Dunedin, New Zealand, December 9-13, 2013.

Olson, P.A. and Kinzey, D. *In press*. Using Antarctic blue whale photo-ID data from IDCR/SOWER: capture-recapture estimates of abundance. *Journal of Cetacean Research and Management* Special Issue. (Available from the author.)

Olson, P.A., Schmitt, N., Ensor, P., Collins, K., Donnelly, D., Leaper, R., Calderan, S., Miller, B.S., Goetz, K. and Double, M.C. 2015. Photo-identification of Antarctic blue whales during the New Zealand-Australia Antarctic Ecosystems Voyage 2015. Paper IWC SC/66a/SH26 submitted to the IWC Scientific Committee.

Peel, D., Bravington, M.V., Kelly, N. and Double, M.C. 2015. Designing an effective mark-recapture study of Antarctic blue whales. *Ecological Applications* 25: 1003-1015.

Table 2

E-mail Intersessional Correspondence Groups and Terms of Reference.

Group	Sub-committee	Terms of Reference	Membership
(1) Development of IWC photo-ID guidelines	DB	Develop a set of IWC guidelines for photo-ID catalogues supported by the IWC and developed for the purposes of stock assessment.	Olson (convenor), Allen, Baker, Bell, Carlson, Cheeseman, Collins, Donovan, Double, Findlay, Galletti, Garrigue, George, Jackson, Kaufman, Mallette, Matsuoka, Minton, Mizroch, Stevick, Weinrich, Zerbini

Appendix 1

TERMS OF REFERENCE FOR THE *AD HOC* WORKING GROUP ON GUIDELINES FOR PHOTO-IDENTIFICATION DATABASES

Supports IWC work conducting cetacean population assessments through photo ID databases (catalogues of cetacean photo-identifications and associated geographical and biological data, including genetic data when applicable and appropriate).

Specifically the group will:

(1) review ongoing catalogue developments;

(2) develop guidelines for catalogues contributing photo-ID data to IWC assessments and/or that are IWC funding recipients; and

(3) support the collaboration of photo-ID catalogues in order to integrate databases as an underpinning of cetacean population assessments.

Appendix 2

AGENDA

1. Introductory items
    - 1.1 Opening remarks
    - 1.2 Terms of Reference
    - 1.3 Election of Chair
    - 1.4 Appointment of rapporteurs
    - 1.5 Adoption of agenda
2. Humpback whale catalogues
3. Blue whale catalogues
    - 3.1 Antarctic blue whales
    - 3.2 Southern Hemisphere Blue Whale Catalogue
        - 3.2.1 Updates on items related to the SHBWC from 2015
4. Other whale photo-ID catalogues
5. Guidelines for IWC databases and catalogues
    - 5.1 Photo-identification guidelines document
        - 5.1.1 Guidelines background
        - 5.1.2 Data access for shared catalogues
        - 5.1.3 Photo subjects for large whales
        - 5.1.4 Catalogue organisation and internal reconciliation
        - 5.1.5 Image quality coding
        - 5.1.6 Submissions to the IWC – Images and associated data
        - 5.1.7 Reporting
6. Conclusions and recommendations
    - 6.1 Work Plan
7. Adoption of the Report

Appendix 3

SOUTHERN HEMISPHERE BLUE WHALE CATALOGUE TERMS OF REFERENCE AND SHARING AGREEMENT

The Southern Hemisphere Blue Whale Catalogue (SHBWC) is an international collaborative effort to improve knowledge on Southern Hemisphere blue whales by comparing photo-identification catalogues among different researchers and institutions.

Any researcher or institution working on photo-identification of blue whales in the Southern Hemisphere is welcome to contribute to the SHBWC.

Once the user agrees to contribute photographs with the SHBWC, basic information regarding contact details and research area will be requested by the catalogue curator (Centro de Conservacion Cetacea). In addition, two agreements will need to be signed and dated:

- SHBWC sharing agreement and;
- International Whaling Commission data availability agreement under Procedure B (the process for obtaining access to data for analyses the Committee believes would be valuable in providing other advice to the Commission).

After procedures are accepted, researchers will receive a user ID and password. Before photo-ID submission, researchers belong to a restricted access user category and cannot see other contributed photo-IDs.

- Each photo-ID should be uploaded with associated location (e.g. latitude/longitude) and date information, with optional categories to associate additional information (e.g. genetic data). The location/date and other associated photo-ID information is only visible to regional catalogue managers.
- Photographs from each region (see 'Protocols and Procedures') should be uploaded into the geographic area corresponding to the source of the photo.
- Once photo-IDs have been uploaded, user access is upgraded so that it is possible to see photo-IDs contributed by other groups and suggest possible matches. No location or date information is disclosed on the photo-ID database.
- Your name and contact information will be released to those requesting further information.

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).

By accepting to contribute and use the SHBWC, the user agrees to the following SHBWC sharing agreement:

1. Photographs will only be used for the purposes of comparing blue whale identification

   (a) catalogues.

2. All photographs and data are copyrighted to the contributing organisations and individuals, and may not be used or reproduced without permission.

3. Any individual matches found as a result of comparing catalogues will be reported immediately to the contributor.

4. Any announcements of a match or matches between catalogues, including publications of any sort, should include names representing both/all catalogues as authors of the match.

5. Data providers will communicate beforehand with each other and come to agreement to determine co-authorship of announcements or publications. After approval of use if obtained, any use of the photographs and matches should include acknowledgement of both the data provider and the SHBWC as appropriate.

6. Prior written consent of the original data providers is required to use data contained in SHBWC in any publication, product, or commercial application (press releases, scientific or popular publications, web sites, funding or reporting documents, advertisements, etc.).

7. Users will not hold the SHBWC liable for errors in the data. While we have made every effort to ensure the quality of the database, we cannot guarantee the accuracy of the data.

In addition, the IWC Data Availability Conditions for use of Data is considered a fundamental part of this sharing agreement and includes the following rules and conditions:

(1) Data shall not be transmitted to third parties.

(2) Papers may only be submitted to a Committee meeting in accordance with the following time restrictions:

- Novel methods – 3 months before the Scientific Committee
- Standard methods - 2 months before
- Alternative analyses submitted in response to earlier papers - 1 month before

Such papers must not include the raw data or the data in a form in more detail than is necessary to understand the analysis.

(3) Papers must carry a restriction on citation except in the context of IWC meetings.

(4) Data owners are offered co-authorship.

(5) Publication rights remain strictly with the data owner.

(6) Data shall be returned, to the data owner immediately after the meeting at which the paper is submitted and any copies destroyed, unless an extension is granted.