

# Annex I

## Report of the *Ad hoc* Working Group on IWC Global Databases and related issues

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### 1. INTRODUCTORY ITEMS

The *Ad hoc* Working Group on IWC Global Databases and Related Issues met during SC69A 24 April to 6 May 2023, in Bled, Slovenia. Double thanked members for attending the meeting and reminded the Working Group of the Terms of Reference as stated in Item 2. The *ad hoc* Working Group on IWC Global Databases and Related Issues (GDR) aims to assess the utility and support requirements of all IWC databases that are relevant to the Scientific Committee's work. It collects information on these databases, summarises data use, and provides recommendations to improve integration, content, and workflows. The Committee has acknowledged that the development, maintenance and financial support of SC databases requires a robust, long-term approach, and encouraged GDR to work with the Secretariat and SC Chair to propose an appropriate funding model and review existing or planned databases to ensure they are properly resourced and prioritised.

#### 1.1 Appointment of Rapporteur

Charlton was appointed as Rapporteur.

#### 1.2 Adoption of agenda

The adopted agenda can be found in Appendix 1.

#### 1.3 Documents available

The following documents were available to the working group: SC/69A/GDR/01, SC/69A/GDR/02, SC/69A/GDR/03, SC/69A/GDR/04.

### 2. TERMS OF REFERENCE

This *ad hoc* intersessional Working Group will assess the utility and support requirements of all IWC databases relevant to the work of the Scientific Committee. Specifically, it will:

- (1) collate summary information on all IWC databases relevant to the SC;
- (2) summarise data use by the SC for each database;
- (3) provide recommendations to improve integration, content and workflows;
- (4) review technical progress on existing databases or databases under development;
- (5) consider needs and specifications for potential new databases, including developing simple technical guidelines on new proposals; and
- (6) produce a budget and workplan for the implementation and development of existing and new databases.

### 3. PROGRESS WITH EXISTING IWC DATABASES

#### 3.1 Data management strategy

SC/69A/GDR/01 described the Secretariat’s draft data management strategy that is based on the principles of Open Science. The strategy aims to streamline data management, optimise data dissemination and advance communication of valuable data. The data infrastructure will include metadata providing data descriptions, with policies for data sharing and access in place. The data will include various types of information such as sightings, catch, animal welfare and genetics data.

SC/69A/GDR/02 presented the progress to date on the implementation of the data management strategy. Relational databases are being developed using PostgreSQL and related interactive dashboards will present basic outputs from each database on the IWC website. Some database development is supported through collaboration with the University of Manchester.

The Working Group **welcomed** the development of a data management strategy within the Secretariat and the progress to date. The group acknowledged the need to address resourcing needs and prioritisation of databases so important data are available to inform the Scientific Committee and Commission.

In discussion, the Working Group highlighted why some databases and data flows were not yet included in the strategy and emphasised the need for a holistic approach to data management. The Working Group also identified the National Progress Reports as an efficient way to approach nations, agencies and institutions to report data. The authors acknowledged the strategy remains in development and welcomed further discussions on all IWC-related databases and data flows.

The Working Group **agreed** to establish an Intersessional Correspondence Group (ICG) to progress the data management strategy and noted the ICG should include members from many countries so the strategy accommodates different circumstances in regards to data collection, collation and reporting (see Annex V).

### 3.2 Review of existing IWC databases

The Working Group reviewed and updated the current list of databases developed to support the work of the SC (see Tables 1-3).

### 3.3 IWC Databases: priorities

Previously the Secretariat invested in physical servers paid for by project funds to host databases and associated web apps. However, these servers have now reached the end of their life and with less funding to support their replacements. It is now recognised that cloud hosting is more cost effective and reliable than physical hosting on-premise for several reasons including scalability (only pay for what is used), flexibility (accessible from anywhere) and round-the-clock support. Consequently, all future databases and web apps will be hosted on fully-managed cloud hosting platforms and thus any existing or proposed databases must be budgeted for going forward using zero-based budgeting to be presented to the Commission for approval. Therefore, it is important to review and prioritise new, existing and proposed databases to minimise costs.

The Working Group provided guidance to the Secretariat on the databases considered to be a priority for development or maintenance in the intersessional period up to SC69B (see Tables 1-3).

### 3.4 IWC Databases: data presentation

SC/69A/GDR/04 described WhaleVis, an interactive visualisation and analysis dashboard for the IWC catch database. The tool is designed to facilitate understanding of whaling events and resulting changes in whale population distribution, and to prioritise management and conservation efforts for populations under threat of extinction. The dashboard provides a set of visualisations of the catch data, as well as the ability to extract selected portions of the database in comma-delimited format. It also introduces users to new perspectives of the data, such as a network graph representation of whaling expedition routes and population maps normalised by search effort. The tool is implemented using the Observable notebook environment, which ensures data and code transparency and facilitates collaborative analysis. The authors demonstrated the use of WhaleVis through three example-use cases.

The Working Group discussed the importance of catch data for other sub-committees and **welcomed** the advancement of the tool which is sophisticated and useful for supporting the work of the Committee. It is acknowledged that the coding framework could also have utility for improving the accessibility and visualisation of other IWC databases. The Working Group also discussed the value of its online availability, the work in progress, some limits on its current functionality and the need for guidance on feature selection. The Working Group **invites** an update on WhaleVis at SC69B.

Further discussions focused on the exposure of data associated with the catches and how the IWC can be confident that any online data visualisation and data accessibility tools are compliant with national and EU data protection and privacy laws. It also discussed under what circumstances and how parties can waive protections if they wish to do so.

*Attention: S*

*The Committee **recommended** the Secretariat investigate relevant national and EU data protection and privacy laws and, in accordance with these laws, develop licencing and data use policies for SC-related datasets containing personal and/or vessel-specific data.*

The Working Group requested the authors to truncate the data within the WhaleVis tool to those collected before the 1986 moratorium on commercial whaling and ensure the online application does not allow the visualisation or accessibility of vessel-specific records.

Table 1  
Scientific Committee Databases.

Database/Application	Status	Secretariate work required	SC use	Priority for development or maintenance	Progress since SC68D	SC Sub Committee /Group
Blue Whale Song Library	Stalled since 2018	Develop database (£4,000 available) - no further instructions received	None	Ask SH convenors	None	SH
Catch Summary Database	Live	See SC/69A/GDR/02	High	High	See SC/69A/GDR/02	IST/IA/ASI
Individual Catch Database	Live	See SC/69A/GDR/02	High	High	See SC/69A/GDR/02	IST/IA/ASI
Cetacean Diseases of Concern Intranet	Stalled since 2017	Develop database/intranet - no further instructions received	None	None	None	E
Discovery Marking Data	Stalled	Develop database	Medium	Low/Check	None	ASI
Entanglement Response	Postponed	Develop database	None	None	None	E/HIM
IWC biopsy sampling database	Under Development	Updates only (in progress). Incorporate into NPR?	None	Consider under DMS	Ongoing	SD-DNA
IWC photographic cruise database and archive	Live	Updates only (in progress)	Low	Low	Ongoing	PH
Journal <a href="https://journal.iwc.int/">https://journal.iwc.int/</a>	Live	We are in the process of improving access to the JCRM archive. Vol. 5-24 and all Special Issues are now available on OJS platform. JCRM Supplements to follow in the short term	High	Low	Done	JCRM Editorial Board
National Progress Reports <a href="https://portal.iwc.int/">https://portal.iwc.int/</a>	Live	Integration of standard FAO areas. Consider future rebuild under DMS	High	Medium	Ongoing	ALL
New integrated sightings, photo-ID, database	Stalled	Updates only (funding available)	None	None/Check		PH/NH/SH
Research Requests <a href="https://forms.office.com/r/wEmk6Py8U5">https://forms.office.com/r/wEmk6Py8U5</a>	Live	None required. Changed to a form, Retired database	Retired	None	Done	ALL
SH Blue Whale Catalogue <a href="https://www.bluewhalecatalogue.org/">https://www.bluewhalecatalogue.org/</a>	Live	Migrated to IWC server - development ongoing. IWC hosts	High	None	Ongoing	SH/CMP/PH
Ship Strikes <a href="https://portal.iwc.int/">https://portal.iwc.int/</a>	Live	Consider future rebuild under DMS. Bulk import tool (CSV) - Not done. Allow data to be submitted via API directly from country databases - Not done, low priority. Update records found to have errors - Partially done, vessel and species will require more work	High	High	Ongoing	HIM/IA/IST
Small Cetaceans Catches (Bycatch and Direct)	Under Development	Consider under DMS. Initial design and implementation. Incorporate into NPR?	None	Consider under DMS		SM
Survey Database (SOWER and POWER)	Under Development	See SC/69A/GDR/02	None	Medium	See SC/69A/GDR/02	ASI
South Georgia southern right whale photo-ID catalogue	Available on request	None required	None	None	Done	PH/SH
WNP gray whale catalogue	Stalled	Migration to new system	None	None/Check		CMP

Table 2  
Other IWC Committee Databases.

Database/Application	Status	Work Required	Progress
Conservation Reporting Database <a href="https://crm.iwc.int/data/conservation-database">https://crm.iwc.int/data/conservation-database</a>	Live	Finalise specifications - Done Develop database and Review at CC 2022 - Done Recommendation: Add to IWC CRM <a href="https://crm.iwc.int/data/conservation-database">https://crm.iwc.int/data/conservation-database</a> Small trial group to test data entry and access - Ongoing Continue adding country data - Ongoing	Ongoing
Database of Recommendations <a href="https://recommendations.iwc.int">https://recommendations.iwc.int</a>	Live	Minor bug fixes, but stable	Done
InforMEA project database <a href="https://crm.iwc.int/">https://crm.iwc.int/</a> <a href="https://elearning.informea.org/">https://elearning.informea.org/</a>	Live	Deployed. Data population and back-dating underway As member of InforMEA, IWC can add web-based training courses for free	Ongoing
IWC on InforMEA <a href="https://www.informea.org/en/treaties/international-whaling-comission">https://www.informea.org/en/treaties/international-whaling-comission</a>	Live	Meetings, National focal points, Country Members, Resolutions (ongoing)	Ongoing
WW Handbook <a href="https://wwhandbook.iwc.int/en/">https://wwhandbook.iwc.int/en/</a>	Live	Update to CraftCMS v4	None
National Legislation Database	Under development	Built on Confluence, population underway (in partnership with Monash University)	Ongoing

Table 3  
Core IWC Secretariat productivity databases.

Database/Application	Status	Work Required	Progress
Bibliographic reference database (EndNote)	Live	Import Commission papers and communication circulars	None
Meeting Registration and document upload	Live	For SC69A Microsoft tools were used for registration and automatic addition of users to our office 365 SC groups and document submission, approval and production	Done
Document Web Archive <a href="https://archive.iwc.int">https://archive.iwc.int</a>	Live	General maintenance and updates. Back-dating of paper archives	Done

## 4. POTENTIAL FUTURE IWC DATABASES

### 4.1 Proposal proforma

The Working Group was reminded of the IWC database proposal proforma developed by GDR previously (IWC, 2022, Annex N). There were no requests to update this document.

### 4.2 New proposals and IWC database discussions in SC sub-committees and working groups

The Working Group did not receive any formal proposals for the development and support of new IWC databases during SC69A but is aware of discussions regarding the development of a stranding database.

## 5. IWC NATIONAL PROGRESS REPORTS

### 5.1 National Progress Reports submitted in 2023

The Working Group again acknowledged the low number of National Progress Reports submitted to SC69A, and the low return rate on the questionnaire put to Heads of Delegations and Commissioners via Circular. The submission and content of National Progress Reports and the information from the questionnaire will be discussed further intersessionally (see GDR workplan).

### 5.2 NPR data presentation

SC/69A/GDR/03 implements an R script (R Core Team 2022) to generate reports which summarise the data submitted to the IWC in National Progress Reports (NPRs). Two examples are provided: Australia and the U.S. Such reports facilitate greater accessibility and interpretation of the data submitted in NPRs as well as an authored output which can potentially act as an incentive for data holders to provide and submit their data to the IWC. Additionally, this paper provided recommendations regarding the online submission system to facilitate data accessibility, transparency and analysis.

The Working Group thanked the authors for their work on this tool and congratulated them on its success. It discussed how it can easily generate pdf versions of NPRs that can then be submitted as meeting papers. Such papers will have value to the SC and also to the reporting countries. Also, with modifications to the script it could generate issue (e.g. entanglements) as well as than country-focused reports. It noted that the paper also highlighted potential reporting errors and ways to improve data quality in NPR submissions.

### 5.3 NPR discussion

Follow further discussion on National Progress Reports the working developed the following recommendation.

*Attention: S*

*The Committee **recommended** the Secretariat issue the circular requesting the submission of National Progress Reports in February to allow time for further reminders and the application of the R script to generate pdf reports if requested. Furthermore, it **requested** the Secretariat address the National Progress Report data submission and data quality issues identified in SC/69/GDR/03.*

## 6. OTHER BUSINESS

### 6.1 Marine Plastics Resolution

The Working Group considered it could not contribute to the development of a plan to address Commission Resolution 2022-1.

### 6.2 Communications Initiative

The Working Group acknowledged the importance of communicating the value of IWC-maintained databases to the Commission and the need for long-term financial support. The Working Group encouraged the Communications Initiative to highlight that long-term resourcing, support, capacity is required for management IWC data.

## 7. INTERSESSIONAL WORKPLAN

To progress the work of the GDR Working Group an intersessional correspondence group (ICG) convened by Staniland will operate in the intersessional period up to SC69B with the following Terms of Reference:

- (1) Further develop the data management strategy, including consideration of all data submission processes and related IWC databases (see Table 1).
- (2) Consider ongoing maintenance, resourcing, capacity needs for SC-related IWC databases in preparation for the budgeting process at SC69B.
- (3) Review the information received from the National Progress Report questionnaire and continue to assess ways to improve the submission rates, data quality and value of these reports.

Members of this ICG are: Allison, E. Bell, Branch, Barreto, Charlton, Double, Fortuna, Katara, Ki Sow, S. Reeves, Sigurðsson, Staniland (convenor), O'Loughlin, Tandy, Zerbini.

## REFERENCE

International Whaling Commission. 2022. Report of the Scientific Committee. Annex N. Data proforma. *J. Cetacean Res. Manage. (Suppl.)* 24.

## **Appendix 1**

### **AGENDA**

1. Introductory items
  - 1.1 Appointment of Rapporteurs
  - 1.2 Adoption of Agenda
  - 1.3 Documents available
2. Terms of Reference
3. Progress with existing IWC databases
  - 3.1 Data management strategy
  - 3.2 Review of existing IWC databases
  - 3.3 IWC Databases: priorities
  - 3.4 IWC Databases: data presentation
4. Potential future IWC databases
  - 4.1 Proposal proforma
  - 4.2 New proposals and IWC database discussions in SC sub-committees and working groups
5. IWC National Progress Reports
  - 5.1 National Progress Reports submitted in 2023
  - 5.2 NPR data presentation
  - 5.3 NPR discussion – questionnaire, reporting rate, challenges of reporting, data reported through other means
6. Other business
  - 6.1 Plastics resolution
  - 6.2 Communications Initiative
7. Intersessional workplan