

2022 Scientific Committee (SC68D) DRAFT Plenary Agenda with Annotations as at 25 March 2022

SUB-GROUP AGENDAS WILL BE DEVELOPED BY THE RELEVANT CONVENORS

* Indicates a note in the annotated agenda

1. INTRODUCTORY ITEMS*

- 1.1 Chair's welcome and opening remarks**
- 1.2 Remembrances**
- 1.3 Appointment of rapporteurs**
- 1.4 Meeting procedures and schedule**
- 1.5 Establishment of sub-committees and Working Groups**

2. ADOPTION OF AGENDA*

3. REVIEW OF AVAILABLE DATA, DOCUMENTS AND REPORTS*

- 3.1 Documents submitted**
- 3.2 National Progress Reports on research**
- 3.3 Data collection, storage and manipulation**
- 3.4 Guidance for the format of recommendations and discussion of Recommendations Database**
- 3.5 Review of Commission resolutions from 2018**

4. COOPERATION WITH OTHER ORGANISATIONS [OBSERVER]*

- 4.1 Summary of Secretariat co-operation with other organisations**
- 4.2 African States Bordering the Atlantic Ocean (ATLAFCO) [no official SC observer but report welcome]**
- 4.3 Arctic Council [no official observer but report welcome]**
- 4.4 Convention on Biological Diversity (CBD) [Secretariat]**
- 4.5 Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) [Secretariat]**
- 4.6 Convention on the Conservation of Migratory Species (CMS) [Secretariat]**
 - 4.6.1 Scientific Council*
 - 4.6.2 Conference of Parties*
 - 4.6.3 Agreement on Small Cetaceans of the Baltic and North Seas (ASCOBANS)*
 - 4.6.4 Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)*
- 4.7 Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) [no official observer but report welcome]**
- 4.8 Food and Agriculture Organisation of the United Nations (FAO) [Secretariat]**
- 4.9 Regional Fisheries Management Organizations (RFMOs)**

4.9.1 *Inter-American Tropical Tuna Commission (IATTC) [no official observer but report welcome]*

4.9.1 Indian Ocean Tuna Commission (IOTC)

4.10 IUCN Task Force on Marine Mammal Protected Areas (formerly ICMMPA) [Panigada and Mattila]

4.11 International Council for the Exploration of the Sea (ICES) [Haug]

4.12 International Maritime Organisation (IMO) [Leaper and Secretariat]

4.13 International Union for the Conservation of Nature (IUCN) [Cooke, Reeves]

4.14 North Atlantic Marine Mammal Commission (NAMMCO) [Secretariat, Moronuki]

4.15 North Pacific Marine Science Organisation (PICES) [Tamara]

4.16 Protocol on Specially Protected Areas and Wildlife (SPAW) of the Cartagena Convention for the Wider Caribbean [Nelson]

4.17 Secretariat of the Pacific Regional Environmental Programme (SPREP) [Secretariat]

4.18 Marine Traffic [Secretariat and Leaper]

4.19 Other

5. GENERAL ASSESSMENT AND MODELLING ISSUES (IST)*

5.1 Use of ISTs for consideration of species' and populations' status

5.2 Progress on previous recommendations

5.3 Biennial workplan

6. AWMP AND RMP IMPLEMENTATION-RELATED MATTERS (IST)*

6.1 Implementation Review of West Greenland bowhead whales

6.2 Plan for Implementation Review of West Greenland common minke whales

6.3 Implementation Review of North Atlantic common minke whales

6.4 Plan for Implementation Review of North Atlantic fin whales

6.5 Progress on previous recommendations

6.6 Biennial workplan

7. STOCKS SUBJECT TO ABORIGINAL SUBSISTENCE WHALING (ASW)*

7.1 New information and progress on recommendations

7.1.1 Eastern Canada/West Greenland bowhead whales

7.1.2 Bering-Chukchi-Beaufort Seas bowhead whales

7.1.3 North Pacific gray whales

7.1.4 Common minke whale stocks off East Greenland

7.1.5 Common minke whale stocks off West Greenland

7.1.6 Fin whales off West Greenland

7.1.7 Humpback whales off West Greenland (see Item 8.2.7)

7.1.8 Humpback whales off St. Vincent and the Grenadines (see Item 8.2.7)

7.2 Biennial workplan

8. WHALE STOCKS NOT SUBJECT TO DIRECTED TAKES BY CONTRACTING GOVERNMENTS *

8.1 Comprehensive or In-depth Assessments (IA)*

- 8.1.1 Comprehensive Assessment of North Pacific humpback whales*
- 8.1.2 Comprehensive Assessment of North Pacific sei whales*
- 8.1.3 Progress on in-depth assessment of western North Pacific common minke whales*
- 8.1.4 Biennial workplan*

8.2 Potential new assessments: progress on previous recommendations and prioritised workplan (SH and NH)*

- 8.2.1 Non-Antarctic blue whales in the Southern Hemisphere (SH)*
- 8.2.2 Antarctic blue whales (SH)*
- 8.2.3 Southern Hemisphere right whales not the subject of CMPs (SH)*
- 8.2.4 North Pacific blue whales (NH)*
- 8.2.5 North Atlantic sei whales (NH)*
- 8.2.6 North Atlantic right whales (NH)*
- 8.2.7 North Atlantic humpback whales (and see Items 6.1, 7.1.7 and 7.1.8) (NH)*
- 8.2.8 Rice's whales (NH)*
- 8.2.9 Biennial workplans*

8.3 New information (if provided) for other northern stocks (NH)*

- 8.3.1 North Atlantic blue whales (NH)*
- 8.3.2 North Atlantic common minke whales (NH)*
- 8.3.3 East Greenland-Svalbard-Barents Sea (Spitsbergen) bowhead whales (NH)*
- 8.3.4 Unusual mortality events affecting northern stocks (NH; also see Item 14.3.2)*
- 8.3.5 Biennial workplan*

8.4 New information (if provided) for other Southern stocks (SH)*

- 8.4.1 Southern Hemisphere humpback whales (If new information from Australia provided for estimating abundance of breeding stock D)*
- 8.4.2 Southern Hemisphere fin whales (SH)*
- 8.4.3 Biennial workplan*

8.5 Progress on previous recommendations

8.6 Biennial Workplan

9. STOCKS THAT ARE OR HAVE BEEN SUGGESTED TO BE THE SUBJECT OF CONSERVATION MANAGEMENT PLANS (CMP)*

9.1 Stocks with existing CMPs: new information and progress with previous recommendations*

- 9.1.1 SE Pacific southern right whales (CMP, SH)*
- 9.1.2 SW Atlantic southern right whales (CMP, SH)*
- 9.1.3 North Pacific gray whales (CMP, IST, ASW)*
- 9.1.4 Franciscana (CMP, SM)*
- 9.1.5 South American river dolphins (CMP, SM)*

9.2 Progress with identified priorities*

9.2.1 Humpback whales in the northern Indian Ocean including the Arabian Sea

9.2.2 Central American humpback whales

9.2.3 Mediterranean sperm whales

9.2.4 Mediterranean fin whales

9.3 Progress on previous recommendations

9.4 Biennial workplan

10. STOCK DEFINITION AND DNA TESTING (SD-DNA)*

10.1 Provide advice to other sub-groups on population structure for requested stocks*

10.1.1 North Pacific gray whales

10.1.2 Franciscana

10.1.3 Sotalia guianensis

10.2 DNA data quality*

10.3 DNA guidelines checklist*

10.4 Recommendations on the avoidance of sample depletion*

10.5 Review terminology used for stock structure related terms used within the IWC*

10.6 New genetic approaches (if submitted) for use by the Scientific Committee in addition to stock structure issues*

10.7 Progress on previous recommendations

10.8 Biennial workplan

11. CETACEAN ABUNDANCE ESTIMATES AND STOCK STATUS (ASI)*

11.1 Review of abundance estimates*

11.1.1 Bering-Chukchi-Beaufort bowhead whales

11.1.2 North Atlantic common minke whales

11.1.3 North Atlantic humpback whales

11.1.4 North Atlantic right whales

11.1.5 Eastern North Pacific gray whales

11.1.6 North Pacific sei whales

11.1.7 North Pacific blue whales

11.1.8 North Pacific humpback whales

11.1.9 Southern Hemisphere non-Antarctic blue whales

11.1.10 Antarctic blue whales

11.1.11 Southern Hemisphere right whales

11.1.12 Southern Hemisphere humpback whales

11.1.13 Franciscana

11.1.14 Finless porpoise

11.1.15 Other species/stocks identified intersessionally by SC convenors

11.2 Update and review abundance table maintained by the IWC*

11.3 Review and refine the abundance review process*

11.4 Methodological issues*

11.3.1 Amendments to RMP guidelines to consider model-based abundance estimates

11.3.2 Progress on simulation software to evaluate methods for abundance estimates

11.3.3 Consider diagnostic methods for mark-recapture models

11.5 Provide advice to the Commission on the status of stocks*

11.6 Review and provide advice on surveys (past and future) *

11.7 Progress on previous recommendations

11.8 Biennial workplan

12. BYCATCH AND ENTANGLEMENTS (HIM)*

12.1 IWC's Bycatch Mitigation Initiative*

12.2 Collaboration on bycatch mitigation with IGOs (including FAO, Regional Fisheries Management Organisations and others) *

12.3 Review new methods and estimates of bycatch and entanglement rates, risks and mortality*

12.4 Reporting of bycatch and entanglements (both small and large cetaceans) including National Progress Reports*

12.5 Review mitigation measures for preventing bycatch and entanglement *

12.6 Review studies examining the implications of effort reductions on cetacean bycatch, fisheries economics and yields*

12.7 Review of topics related to Hector's and Māui dolphins in New Zealand (with SM)*

12.8 Consider definition of r_{max} for small cetaceans for use by the Scientific Committee*

12.9 Progress on previous recommendations

12.10 Biennial workplan

13. SHIP STRIKES (HIM)*

13.1 Review new methods and estimates of rates of ship strikes, risk of ship strikes and mortality (including review progress on ship strike database) *

13.2 Mitigation of ship strikes in high risk areas*

13.2.1 Review progress towards assessing and mitigating ship strikes in previously identified high risk areas

13.2.2 Provide advice on routing measures

13.2.3 Review new research relevant to mitigation

13.3 Co-operation with IMO Secretariat and relevant IMO committees*

13.4 Review progress for obtaining Automated Information System (AIS) data*

13.5 Progress on previous recommendations

13.6 Biennial workplan

14. ENVIRONMENTAL CONCERNS (E)*

14.1 Chemical pollution*

14.1.1 Review intersessional work on Pollution 2025 (Report on workshop on cumulative effects)

14.1.2 New information on pollution

14.2 Diseases of concern*

14.2.1 Review progress in intersessional work on emerging diseases

14.2.2 Special primer on coronavirus surveillance in aquatic wildlife

14.2.3. Review new information on Diseases of Concern

14.3 Strandings and mortality events*

14.3.1 Review progress of steering committee for IWC Strandings Initiative

14.3.2 New information on unusual mortality events

14.3.3 Other information

14.4 Climate change*

14.4.1 Review report from intersessional workshop on climate change

14.2.2. review new information

14.5 Underwater noise*

14.5.1 Review progress from intersessional work on impacts to cetaceans from underwater noise

14.5.2 Review new information

14.6 Marine debris*

14.6.1 Review progress on recommendations on marine debris

14.6.2. review new information

14.7 Habitat alteration as anthropogenic impact on cetaceans*

14.8 SOCER report (Polar regions) *

14.9 Review strategy to better integrate E workplan with other Committee sub-groups*

14.10 Review strategy on developing and using a “One Health” approach*

14.11 Progress on previous recommendations

14.12 Biennial workplan

15 ECOSYSTEM MODELLING*

15.1 Workshop on the Role of Cetaceans in Ecosystem Functioning: Gap Analysis*

15.1.1 Review outcomes and recommendations

15.2 Review results of ecosystem modelling in the Antarctic Ocean and northeast Atlantic Ocean*

15.3 Review progress on estimating pre-exploitation and current abundance of large whale populations*

15.4 Progress on multi-species distribution models (MSDMs)*

15.5 Progress with development of individual-based energetic models (IBEMs)*

15.6 Modelling of competition among whales and relationships between whales and prey*

15.7 Standing topics*

15.6.1 Progress on considering effects of long-term environmental variability on whale populations

15.6.2 Review progress on evaluation of krill distribution and abundance

15.8 Progress on previous recommendations

15.9 Biennial workplan

16. SMALL CETACEANS*

16.1 Small Cetacean Use as Aquatic Wildmeat*

16.1.1 Discuss framework for progressing on identified issues/areas

16.1.2 Review of other information

16.2 Ongoing and Potential CMP for Small Cetaceans*

16.2.1. Franciscana

16.2.2. South American river dolphins

16.2.3. Asian river dolphins

16.2.4. Conservation planning and communication with IUCN ICPC

16.3 Progress Intersessional Correspondence Groups and Previous Recommendations*

16.3.1 Guiana dolphin

16.3.2. Finless porpoise

16.3.3 Beaked whales

16.3.4 Strait of Gibraltar killer whales

16.3.5 Tursiops taxonomy

16.3.6 Review progress on developing a framework for review of recommendations

16.3.7 Other

16.4 Small Cetacean Task Team Progress*

16.4.1. Review of task team procedures

16.4.2 Lahille's dolphin task team

16.5 Review direct takes and live captures of small cetaceans*

16.5.1 Evaluation of previous recommendations related to direct takes

16.5.2 Live captures

16.6 Status of the voluntary fund for small cetacean conservation research*

16.7 Biennial workplan

17. WHALE WATCHING*

17.1 Assess the impacts of whale watching and swim-with-whale operations on cetaceans*

17.1.1 Studies on assessing impacts, (i) short-term; (ii) mid- to long-term; (iii) swim-with operations; (iv) emerging issues of concern; and (v) emerging technologies

17.1.2 Review responses to MAWI questionnaire

17.2 Finalise IWC's General Principles for Whale Watching after intersessional discussion with the Conservation Committee and Secretariat *

17.3 Progress with regional reviews of whale watching*

17.3.1 Sri Lanka

17.3.2 Latin America

17.3.3 Timor-Leste

17.3.4 Indian Ocean Sanctuary

17.4 Collaborative work within the IWC*

17.4.1 Update on IWC's Whale Watching Handbook

17.4.2 Communication with Conservation Committee's Standing Working Group on Whale Watching

17.4.3 Collaboration with other SC sub-groups on platforms of opportunity and citizen science

17.5 Progress on previous recommendations

17.6 Biennial workplan

18. WHALE SANCTUARIES (SAN)*

18.1 Updates from relevant sub-committees on new information relevant to the Southern Ocean Sanctuary management plan

18.2 New information for Indian Ocean Sanctuary

18.3 Progress on previous recommendations

18.4 Biennial workplan

19. EXTINCTION INITIATIVE*

20. IWC LIST OF RECOGNISED SPECIES*

21. IWC DATABASES AND CATALOGUES (PH AND GDR)*

21.1 Guidelines for IWC catalogues and photo-ID databases (PH)

21.2 Progress with existing or proposed new catalogues (PH)

21.2.1 Right whale photo catalogues

21.2.2 Happywhale database

21.2.3 Flukebook

21.2.4 Southern Hemisphere Blue Whale Catalogue (SHBWC)

21.2.5 Antarctic Blue Whale Catalogue (ABWC)

21.2.6 Fin whale photo catalogues

21.2.7 Humpback whale photo catalogues

21.2.8 Other photo-identification catalogues

21.3 Progress with existing IWC databases (GDR, Secretariat)

21.3.1 Summary of IWC databases and current priorities

21.3.2 IWC National Progress Reports

21.3.3 Review database procedures, evaluate possible integration and consolidation of existing databases, and define rules for accessing data

21.4 Potential future IWC databases (GDR)

21.4.1 IWC database proposal pro forma

21.4.2 New proposals for IWC databases

21.5 Biennial workplan

22. MULTINATIONAL RESEARCH PROGRAMMES AND NATIONAL RESEARCH CRUISES THAT REQUIRE IWC ENDORSEMENT (ASI)*

22.1 IWC-POWER and co-operation with Japan

22.2 Southern Ocean Research Partnership (IWC-SORP)

22.3 IWC-ATLAFCO collaboration for capacity building and cetacean surveys

22.4 National cruises that require IWC oversight

22.5 Review and provide advice on plans for future surveys

22.6 Biennial workplan

23. SCIENTIFIC COMMITTEE BUDGET FOR THE CURRENT AND NEXT BIENNIUM*

23.1 Status of funded research, workshop proposals, data processing and computing needs

23.1.1 Funded proposals for 2022

23.1.2 Funded proposals in previous years still ongoing

23.1.3 Report on fund reallocations and contingencies for the Research Fund, Voluntary Fund for Small Cetaceans and SORP Voluntary Fund

23.2 Proposed budget for 2023-2024 developed under the Committee's guidelines

24. COMMITTEE PRIORITIES FOR THE BIENNIUM 2023-24 AND INITIAL AGENDA FOR 2023*

25. WORKING METHODS OF THE COMMITTEE*

25.1 Updates on Rules of Procedure and Handbook of the Scientific Committee

25.2 Reporting to the Commission and related matters

25.3 Capacity building and succession plan for Scientific Committee

25.4 Update on Data Availability requests and consideration of potential updates/clarifications

25.5 Committee involvement in the IWC recommendations database

25.6 Governance Review

25.7 Joint Conservation Committee-Scientific Committee Working Group

25.8 Any other matters

25.9 Biennial workplan

26. PUBLICATIONS

27. ADOPTION OF REPORT

DRAFT NOTES TO THE 2021 SC (SC/68C) AGENDA

ITEM 1: INTRODUCTORY ITEMS

The global pandemic due to COVID-19 has challenged us all in many ways during the past ~24 months. One impact to the IWC was that in 2020 and 2021, we replaced the in-person Scientific Committee (Committee or SC) meeting with a virtual one. Because those meetings were unprecedented, we postponed discussing many agenda items and dealt with many others solely by email. Our desire was to hold an in-person meeting in 2022 that was more typical of SC meetings including addressing all agenda items. Unfortunately, we are still in grip of the pandemic and will need to hold another virtual meeting in 2022 to reduce the risk from COVID-19 to our members. Lessons learned from the 2020 and 2021 virtual meetings are being applied this year, as much as possible. Another impact of the global pandemic was the postponement of the Commission meeting from 2020 to 2021. A special virtual meeting of the Commission took place in September 2021 with a very limited agenda. The decision has not yet been made whether the 2022 Commission will be held in-person, virtually, or postponed.

The 2022 SC meeting (SC68D) will occur from 25 April to 13 May 2021. We have extended the duration by about a week in part because we will not meet on weekends. Not meeting on weekends will allow time for our members to deal with their normal jobs, household and family responsibilities, and other tasks. We will also try to address all or most of our agenda items. To accomplish this goal, we are planning to use two tactics: (1) We plan on holding numerous pre-meetings and workshops from late March until the 10th April (no pre meetings or workshops to be held two weeks prior to the beginning of the SC meeting, except for a meeting of the Abundance Steering Group). The pre-meetings will be handled in the normal fashion using zoom as the virtual interface and Sharepoint as the document repository. The pre-meeting sessions will focus on specific agenda items or topics specific to intersessional correspondence groups (<https://iwc.int/correspondence-groups>.) and a draft report will be developed with corresponding recommendations. The relevant subcommittee will review, modify if needed, and endorse the report from the pre-meeting and include it in the full SC report. (2) During the normal SC meeting, we plan to hold two meetings each day with three concurrent sessions in each of those time slots (details in Item 1.4 below).

The pre-meeting and workshop schedule and relevant zoom links will be posted on the SC Sharepoint (iwcoffice.sharepoint.com/teams/sc68dplenary) by the relevant subcommittee. The SC Chair, Vice-chair, and convenors will endeavour to keep all SC members informed about planned sessions and their topics. Please reach out to the relevant convenor (see Item 1.5, below) if you have any questions about subcommittee topics or schedule.

We also plan to hold several plenary sessions in 2022. These sessions will focus on items that require full SC discussion. The sessions will include issues associated with the Working Group on Operational Effectiveness, the IWC budget, the SC Communication Plan, and other topics.

Even though we have all had a great deal of experience with virtual meetings in the past two years, there may be some challenges as we hold another virtual meeting of the SC. Please be patient if we experience difficulties with technology, bandwidth or other issues. Please feel free to contact the SC Chair (Alex Zerbini: alex.zerbini@noaa.gov), Vice-chair (Lindsay Porter: sc.vice.chair.porter@iwc.int), and/or the Head of Science, Conservation, and Management (Iain Staniland: iain.staniland@iwc.int) if you have any questions or concerns.

Item 1.2: Remembrances

Please let the Chair or Vice-Chair know if any SC members have passed away since the 2020 meeting.

Item 1.4: Meeting procedures and time schedule

All meeting papers, tentative time schedules, and other information will be available on the SC68D Sharepoint (iwcoffice.sharepoint.com/teams/sc68dplenary). In 2020, the SC sessions were held at the same time each day, thus placing an unfair burden of meeting late at night or early in the morning for those members residing in the far west or the far east. The time slots were adjusted in 2021 and varied from day to day depending on agenda items. We intend to repeat the strategy adopted in 2021 for the upcoming meeting (e.g., sessions that relate primarily to a specific location will be scheduled so that SC participants from that location are meeting at a reasonable time). The SC leadership will work with the convenors on developing an appropriate schedule. We will provide information to everyone as far in advance as possible, including any schedule or agenda changes. Please check the Sharepoint frequently for up-to-date information.

The meeting will begin on 25 April 2022 and end on 13 May. There will likely be two meeting time slots per day with three concurrent sessions in each. It is anticipated that the first day will include a plenary session that will address topics of general interest to the Committee, including a proposed plan to host meetings for agenda items that require an in-person setting. There may also be sub-committee sessions on that day too. From 26 April until 11 May there will be up to three sub-committee meetings in each of the two time slots per day. We will not be meeting on Saturday or Sunday in most cases. Convenors meetings may also occur periodically as needed throughout the SC meeting. Finally, we will pause the meeting with primarily plenary sessions on 12 and 13 May although Heads of Delegation will likely meet at least once during those days. The SC meeting will not formally close until the timetable for any in person meetings is known. In person meetings will be conducted between 13 May and 1 July 2022 and a final plenary session will close SC once the text from any in person meeting has been circulated and inserted into the final SC report. However, some agenda items may be postponed until 2023 or “discussed” via email or a comment sheet on the Sharepoint site.

The Secretariat’s IT Team will organise and provide training sessions for zoom and the use of Sharepoint prior to the beginning of the SC meeting.

Item 1.5: Establishment of sub-committees and working groups

The following 16 sub-groups (Table 1) met in 2021 and were identified by the Chair, Vice-Chair and Head of Science, Management and Conservation to also meet in 2022 (SC68D). It is important that you consult the registration and document submission details that can be found on the IWC website to register for sub-groups: (<https://iwc.int/sc68d>).

Table 1 - Committee sub-groups and convenors for 2022

Sub-committees/working group name	Convenor	Co-convenor
Scientific Committee Plenary	Zerbini (alex.zerbini@noaa.gov)	Porter (lindsay.jp@gmail.com)
<i>Ad hoc</i> Working group on Photo-id, PH	Olson (paula.olson@noaa.gov)	
Standing Working Group on Abundance estimates, stock status and international cruises, ASI	Givens (geof@geofgivens.com)	New (lnew@ursinus.edu)
<i>Ad hoc</i> Working Group on Sanctuaries, SAN	Parsons (ecm-parsons@earthlink.net)	
<i>Ad hoc</i> Working Group on Databases and related issues, GDR	Mike Double (Mike.Double@awe.gov.au)	
Sub-committee on Implementation Simulation Trials, IST	Donovan (greg.donovan@iwc.int)	Brandon (jbrandon@gmail.com)
Sub-committee on Aboriginal Subsistence Whaling, ASW	Walløe (lars.walloe@medisin.uio.no)	Nelson (thomas.nelson@govt.lc)
Working Group on Stock Definition and DNA testing, SD&DNA	Lang (aimee.lang@noaa.gov)	Tiedemann (tiedeman@uni-potsdam.de)
Sub-Committee on In-depth Assessments, IA	Palka (Debra.Palka@noaa.gov)	Herr (helena.herr@uni_hamburg.de)
Sub-Committee on the other Northern Hemisphere whale stocks, NH	Robbins (jrobbins@coastalstudies.org)	
Sub-Committee on the other Southern Hemisphere whale stocks, SH	Jackson (Jennifer.Jackson@bas.ac.uk)	Bell (elanor.bell@awe.gov.au)
Sub-Committee on Conservation Management Plans, CMP	Brownell (rlbcetacea@aol.com)	Weller (dave.weller@noaa.gov)
Sub-Committee on Non-deliberate Human-Induced Mortality of cetaceans, HIM	Leaper (russell@rcleaper.com)	Minton (gianna.minton@gmail.com)
Sub-Committee on Environmental Concerns, E	Holm (patricia.holm@unibas.ch)	Cholewiak (Danielle.cholewiak@noaa.gov)
Standing Working Group on Ecosystem Modelling, EM	Kitakado (kitakado@kaiyodai.ac.jp)	Ferguson (megan.ferguson@noaa.gov)
Sub-Committee on Small Cetaceans, SM	Porter (lindsay.jp@gmail.com)	Trujillo (Fernando@omacha.org)
Sub-Committee on Whale watching, WW	Suydam (Robert.Suydam@north-slope.org)	Urban-Rámirez (jurban@uabcs.mx)

ITEM 2: ADOPTION OF AGENDA

The Agenda is based upon the priority items identified by the Commission and the Committee. One result of meeting virtually means we have fewer sessions for plenary and subcommittee meetings. However, because the Commission is planning to meet in September 2022, we will strive to address as many agenda items as we can but some may need to be postponed until 2023 or discussed separately during in-person meetings held after SC68D.

We recognise that some Contracting Governments do not believe that certain topics should be on the Commission and/or Scientific Committee Agendas. Statements to this effect will again be incorporated as an Annex to the report with no discussion this year.

ITEM 3: REVIEW OF AVAILABLE DATA, DOCUMENTS AND REPORTS

Item 3.1: Documents submitted

As in previous years, you **must** use the online system for **registration, submission of documents, and downloading of documents**. This is done through the IWC SC68D Sharepoint (<https://iwcoffice.sharepoint.com/teams/sc68dplenary>).

Following on from our discussions of improvements in working methods in recent years, please note that:

- (1) only primary documents and For Information papers that are directly relevant to the Committee's/sub-groups agendas will be accepted – acceptance will be determined by the convenors of the relevant sub-groups who will take advice when appropriate from convenors of intersessional groups – if in any doubt at all please submit your proposed document title and a short summary of what it will contain to the relevant convenor (see above) before you write the paper;
- (2) the 'classic' agenda item 'other' will not appear on sub-group's agendas – should important and urgent new findings become available after the initial deadline for comments on the full agenda (21 days before the meeting i.e. 6 April 2021) the relevance and importance of presenting the information in 2021 will be evaluated by the Chair, Vice-chair, and Head of Science.

Authors should make every attempt to submit primary papers 14 days before the start of the meeting (**11 April 2022**). As previously informed, papers containing **abundance estimates** for potential endorsement at SC68D should be sent to geof@geofgivens.com and abundance@iwc.int, as soon as possible, but no later than 26 March 2022. Papers expected to be discussed during pre-meetings should be sent to the relevant convenor as soon as possible. *Exceptional* cases will be evaluated by the Chair, Vice-Chair and Head of Science, Management and Conservation in light of their importance to the agenda. Documents will be distributed wholly electronically (website) by the Secretariat.

Item 3.2: National Progress Reports on research

Despite considerable effort and costs to develop an online system to encourage and facilitate reporting (for details of how to submit Progress Report data see circular IWC.All.346), many countries still fail to submit the required reports. As such, the Committee recommended that all Contracting Governments electronically submit National Progress Reports. Heads of Delegations are strongly encouraged to ensure that national progress reports are compiled and uploaded. The online reporting system has been updated and improved to facilitate data entry. Secretariat staff are available to provide assistance with submitting data and can provide a bulk upload service if required. Please contact it.support@iwc.int in the first instance if assistance is required. Suggestions for improvements should be submitted in writing to Mike Double (Mike.Double@awe.gov.au) the convenor of the Intersessional Correspondence Group.

Item 3.3: Data collection, storage and manipulation

Under this agenda item, the Secretariat will report on catch data and other statistical material, progress of data coding projects and verification projects.

Item 3.4: Guidance for the format of recommendations and discussion of Recommendation Database

The Secretariat will provide guidance to the sub-groups about the style and format of recommendations as in previous years. They will also provide an update on the status and usability of the IWC's database of recommendations. Each sub-group will be provided with a document with past recommendations specific to that group.

Item 3.5: Review of Commission resolutions from 2018

The SC's workplan is based on direction from the Commission. We will review the resolutions passed by the Commission during its 2018 meeting to help facilitate and guide our agendas and discussions in each sub-group.

ITEM 4: COOPERATION WITH OTHER ORGANISATIONS

Cooperation with other organisations is increasingly important. Many of the organisations on this list are ones that have met since our last meeting and with whom we exchange observers. They are included in alphabetical order after Item 4.1 which will be a summary of Secretariat engagement with international organisations. Observers, please, send your reports to the Secretariat no later than **27 April 2021** (secretariat@iwc.int) – if meetings did not take place and you have relevant information to provide, please do so. This year, this will be an information item with no discussion - directly relevant scientific matters will be dealt with under appropriate Agenda Items.

ITEMS: 5-23

These items have been prepared in consultation with the Convenors to specifically take into account relevant Commission Resolutions and Agenda Items, along with the feasibility of discussion. We hope that this will help the communication process and guide your expectations. Note also that some of the Agenda Items here will incorporate discussions from more than one sub-group – this is indicated on the Agenda itself.

ITEM 5: GENERAL ASSESSMENT AND MODELLING ISSUES (IST)

There is no immediate urgency for this work to be completed in advance of the 2022 Commission meeting - the relevant part of Item 5.1 will be incorporated into discussions of Item 11.5.

ITEM 6: AWMP AND RMP IMPLEMENTATION-RELATED MATTERS (IST WITH ASW/SD/ASI, AS NECESSARY)

There is no immediate formal urgency for all items to be completed in time for the 2022 Commission meeting in that the management advice for each aboriginal quota block, including carryover provisions, has already been agreed until 2026.

Under Item 6.1, it should be possible to continue the *Implementation Review* of West Greenland bowhead whales.

Under Item 6.2, plans will be made for initiating an *Implementation Review* for West Greenland common minke whales estimated to begin in 2024.

Implementation Reviews of North Atlantic common minke whales and fin whales are expected to occur in 2022 and 2023, respectively. These topics will be considered under Items 6.3 and 6.4.

The list of planned reviews developed at the 2021 meeting is given below.

Timetable for AWMP and RMP *Implementation* and *Implementations Reviews*

Species/area	Year <i>Implementation (IRs)</i> completed	Next <i>Implementation Review</i>
West Greenland humpback whales (AWMP)	2014	After completion of North Atlantic humpback whale in-depth assessment – estimated start of IR 2024 or 2025
West Greenland bowhead whales (AWMP)	2015	Estimated completion 2022
North Atlantic common minke whales (RMP)	1993 (2003, 2008, 2017)	Estimated start 2022
North Atlantic fin whales (RMP)	2009 (2016)	Estimated start 2023
West Greenland fin whales (AWMP)	2018	Estimated start 2023
Alaskan and Chukotka bowhead whale hunts (AWMP)	2000 (2007, 2012, 2018)	Estimated start 2025
Common minke whales off Greenland (AWMP)	2018, 2019	Estimated start 2026
Chukotka and Makah gray whales hunt (AWMP)	2004 (2010) (2020)	Estimated start 2027

ITEM 7: STOCKS SUBJECT TO ABORIGINAL SUBSISTENCE WHALING (ASW)

Harvest data from 2021 and new information will be discussed under this agenda item for stocks that are subject to aboriginal hunts. There is no immediate urgency for these topics to be completed in time for the 2022 Commission meeting in that the management advice for the block, including carryover provisions, has already been agreed until

2026 and there is no requirement for annual review. To date, no information has been submitted for any species that might suggest a need for an emergency Implementation Review.

ITEM 8: WHALE STOCKS NOT SUBJECT TO DIRECTED TAKES BY CONTRACTING GOVERNMENTS (IA, SH, NH WITH SD&DNA/ASI, AS NECESSARY)

Under this agenda item the Committee normally considers: (1) those stocks in the process of (or final preparations for) an in-depth assessment (i.e. North Pacific sei whales and North Pacific humpback whales); (2) Southern Hemisphere (SH) stocks for which a recent in-depth assessment has occurred or for which data are being assembled to see if an in-depth assessment is feasible (humpback, fin and blue whales); and (3) Northern Hemisphere (NH) stocks for which a recent in-depth assessment has occurred or for which data are being assembled to see if an in-depth assessment is feasible (North Pacific blue whales, North Atlantic right whales, North Pacific right whales, North Atlantic bowhead whales, Sea of Okhotsk bowhead whales, Sperm whales). Items related to the stock structure and abundance of these stocks will be dealt with early in the meeting by the sub-groups on SD&DNA and ASI.

Item 8.1: In-depth Assessments (IA)

Item 8.1.1 Comprehensive Assessment of North Pacific humpback whales

Considerable progress was made on this agenda item in 2021, including on stock structure base on new photo-IDs and genetic data, abundance estimates, and removals. An intersessional correspondence group under Clapham was re-established in 2021 and additional progress will be provided to the Committee in 2022.

Item 8.1.2 Comprehensive Assessment of North Pacific sei whales

In 2021, the Committee reviewed preliminary results from the assessment model and agreed that work continue intersessionally. An intersessional correspondence group under Cooke was re-established to further progress the agreed workplan and its report, along with the results of some simulation analyses. The Committee looks forward to hearing about progress from the ICG.

Item 8.1.3 Progress on in-depth assessment of western North Pacific common minke whales

In 2019, an *Implementation Review* (IR) of western North Pacific common minke whales was undertaken within IST (IWC 2019, Annex 06). Because Japan withdrew from the IWC and no other member countries are hunting those whales, the SC agreed that the IR should continue as an in-depth assessment (the original Comprehensive Assessment occurred in 1991) within IA. The need for an intersessional workshop remains (already in the existing budget but not possible to be held before SC68D) because of COVID-19. The Committee welcomes information on progress about the assessment for common minke whales in the North Pacific.

Item 8.2: Evaluation for potential new In-Depth Assessments

Item 8.2.1 Non-Antarctic blue whales in the Southern Hemisphere (SH)

The Committee is preparing for a Comprehensive Assessment (i.e., the first in-depth assessment for a stock) of these populations. We anticipate updates on the Southern Hemisphere blue whale photo catalogue, new information on distribution and seasonal movements in the northwest and southwest Indian Ocean and new estimates of abundance for the (i) Southeast Pacific, (ii) Southeast Indian Ocean and (iii) Southwest Pacific. We also encourage any new information on the evidence for population connectivity between southeast Pacific and northeast Pacific blue whales.

Item 8.2.2 Antarctic blue whales (SH)

The Committee is preparing for an in-depth assessment of Antarctic blue whales. If available, we will review new abundance and trend estimates for Antarctic blue whales available from mark-recapture analyses and acoustic data. Any new evidence for population structuring within Antarctic blue whales, and between Antarctic blue whales and non-Antarctic Southern Hemisphere blue whales will also be reviewed, including evidence for acoustic differences between low-latitude Southern Hemisphere wintering grounds.

Item 8.2.3 Southern Hemisphere right whales not the subject of CMPs (SH)

The Committee is reviewing assessment related parameters for southern right whales in order to conduct regional population assessments in future. The Committee is expecting to receive updates on stock structure, population dynamics modelling, abundance estimates and catches from various intersessional groups established in 2021. The Committee is also developing a global standardised body condition and visual assessment protocol for this species. We

encourage written updates on these topics if available (including the reports of the intersessional groups) for inclusion in the report.

Item 8.2.4 North Pacific blue whales (NH)

The Committee is at the pre-assessment stage for blue whales in this large region (the full process is described in IWC, 2019b, pp. 18-19). There are at least two populations of blue whales in the North Pacific, and possibly three, based mainly on song type. The status of the eastern North Pacific population was assessed by the Committee in 2016 as 'almost recovered' (IWC, 2017d). In recent years, the Committee has been evaluating the data available to assess blue whales in the less studied central and western North Pacific. Given the time constraints due to the need to host virtual meetings during the COVID pandemic and the existence of an intersessional group to advance the work, detailed discussion of this topic has been postponed.

Item 8.2.5 North Atlantic sei whales (NH)

The Committee is at the pre-assessment stage for sei whales in this area (the full process is described in IWC, 2019b, pp.18-19). Given the time constraints in 2020 and 2021, discussion of this topic was postponed until 2023. Information gathering for a future Comprehensive Assessment will continue through the intersessional correspondence group convened by Cholewiak and reported to the SC in the future.

Item 8.2.6 North Atlantic right whales (NH)

At SC/68C, the Committee recognised the substantial efforts of the USA and Canada to better understand the status of this species and to mitigate human impacts but nonetheless the SC again expressed serious concern over the status of this species. The Committee welcomes updates on the status of North Atlantic right whales and any new information.

Item 8.2.7 North Atlantic humpback whales (also see Items 6.1 and 8.1.1) (NH)

In 2021, the Committee reviewed new information in preparation for an *In-Depth Assessment* of North Atlantic humpback whales and agreed to host a virtual intersessional workshop to receive and evaluate new information. The intersessional correspondence group under Robbins was reconvened to continuing compiling information on stock structure, abundance, biological parameters and human impacts in preparation for the assessment. That information will be reviewed and discussed in detail in the virtual intersessional workshop, which is expected to occur at some time after the meeting in 2022. Further consideration of this agenda item may also require an in-person meeting of a small group.

Other discussions on North Atlantic humpbacks include new information on humpbacks off West Greenland and St. Vincent and the Grenadines (Items 7.17 and 7.1.8, respectively).

Item 8.2.8 Rice's whales (NH)

Gulf of Mexico Bryde's whales have recently been recognised as a new species, Rice's whales. In 2021, the Committee reviewed information on research and management activities and received a new population estimate for this critically endangered species. We encourage presentation of new research outcomes for Rice's whales in 2022.

Item 8.3 New information (if provided) for other northern stocks (NH)

The Committee will review new information about other Northern Hemisphere stocks not subject to directed takes as meeting time allows. It particularly welcomes new information about North Atlantic blue whales, North Atlantic common minke whales, East Greenland-Svalbard-Barents seas bowhead whales. The Committee also welcomes new information about unusual mortality events affecting northern stocks.

Item 8.4: New information for other southern stocks (SH)

Item 8.4.1 Southern Hemisphere humpback whales

New information is anticipated on an evaluation of the feasibility of future surveys of breeding stock D. Further discussion will only be considered this year if documentation is provided that requires urgent attention.

Item 8.4.2 Southern Hemisphere fin whales

The Committee is reviewing assessment related parameters for fin whales with a view to possible future assessment. The Committee welcomes updates relevant to population structuring and abundance of Southern Hemisphere fin whales. Further discussion will only be considered this year if documentation is provided that requires urgent attention.

ITEM 9: STOCKS THAT ARE OR HAVE BEEN SUGGESTED TO BE THE SUBJECT OF CONSERVATION MANAGEMENT PLANS (CMP)

Aspects of this agenda item are important for the 2022 Commission meeting if action is required in the context of the CMP fund or approving additional work on new CMPs e.g., Arabian Sea humpbacks, South American river dolphins, and Mediterranean fin whales.

This agenda item considers stocks, with a specific focus on progress with scientific aspects, that are: (1) the subject of existing CMPs (e.g., southeast Pacific and South Atlantic right whales, North Pacific gray whales, franciscana, South American river dolphins) or (2) are likely candidates for a CMP (e.g. Arabian Sea humpback whales) or have been suggested to be candidates. Items related to the stock structure and abundance of these stocks will be dealt with intersessionally or early in the meeting by the sub-groups on SD&DNA and ASI.

Item 9.1: Stocks with existing CMPs: new information and progress with previous recommendations

Item 9.1.1 SE Pacific southern right whales (CMP, SH)

The Committee welcomes an update on the coordination between Peru and Chile and on the scientific work and international cooperation on passive acoustic monitoring that should assist in designing future sighting surveys and identification of breeding areas of SE Pacific southern right whales.

Item 9.1.2 SW Atlantic southern right whales (CMP, SH)

The Committee welcomes an update about the on-going work that is occurring under the CMP for SW Atlantic southern right whales.

Item 9.1.3 Western North Pacific gray whales (CMP, IST, ASW)

An *Implementation Review* was completed for North Pacific gray whales in 2021 by IST. The Committee will receive an update about the on-going scientific studies across the range of the North Pacific gray whales, including the review of estimates of abundance by ASI.

Item 9.1.4 Franciscana (CMP, SM)

The Committee will review new information, including intersessional work and a status review workshop, in preparation for a future Comprehensive Assessment of the franciscana dolphin.

Item 9.1.5 South American river dolphins (CMP, SM)

The Committee welcomes new information, including intersessional work, on the boto (*Inia* sp.) and tucuxi (*Sotalia fluviatilis*) and progress on activities related to the recently-established CMP for South American river dolphins.

Item 9.2: Progress with identified priorities

Item 9.2.1 Humpback whales in the northern Indian Ocean including the Arabian Sea

The Committee welcomes an update on the efforts to initiate collaboration among range states and efforts to enhance our scientific understanding of northern Indian Ocean humpback whales, including crew-based observer programmes, collection of sightings and entanglement data, passive acoustic monitoring and collection of genetic samples.

Item 9.2.2 Central American humpback whales

The Committee previously received new information indicating that this population is small and agreed that it would benefit from a CMP. The Committee welcomes new information, including from intersessional work, about this population and efforts to increase collaborative efforts among range state for research and conservation.

Item 9.2.3 Mediterranean sperm whales

The Committee will welcome an update about the status of a possible CMP for Mediterranean sperm whales.

Item 9.2.4 Mediterranean fin whales

The Committee will welcome an update about the status of a possible CMP for Mediterranean fin whales and efforts on outreach to relevant range states and stakeholders.

ITEM 10: STOCK DEFINITION AND DNA TESTING (SD&DNA)

This agenda item merges two previously separate sub-groups, the Working Group on Stock Definition and the Working Group on DNA. Topics related to DNA have been considered since 2000 in response to a Commission Resolution (IWC, 2000). Under SD&DNA, the Committee: (1) reviews new papers on stock structure on behalf of other sub-groups; (2) reviews and updates of guidelines for ensuring DNA data quality and for analyses of genetic data; (3) considers general statistical and other issues related to stock structure matters using a suite of data and techniques; (4) develops

terminology appropriate to stock definition, unit-to-serve and 'viable' population for use across sub-groups and the Committee; (5) considers use of population models to test spatial stock structure models; (6) evaluates genetic methods used for species, stock and individual identification; (7) provides advice on the collection, archiving, and preservation of tissue and DNA samples from catches, bycatches, and biopsies of free-ranging cetaceans; and (8) reviews reports of reference databases and standards for diagnostic DNA registries. Information on specific stocks will be considered and incorporated under those Agenda Items.

Item 10.1: DNA testing and advice on stock structure to other sub-groups as required

SD&DNA provides advice to other sub-committees about issues related to stock structure. This year the Committee expects to review reports from three ICG groups that focused on (1) reviewing available evidence pertaining to population structure of franciscana, (2) reviewing available evidence pertaining to population structure in *Sotalia guinensis*, and (3) clarifying terminology and re-evaluating plausibility of gray whale stock structure hypotheses. Additional topics may be discussed at the request of other sub-committees.

Item 10.2: DNA data quality

An intersessional correspondence group (ICG) continued under Tiedemann (IWC 2020, Annex K) to review recent revisions of the DNA quality guidelines that pertain to data pertaining to using next generation sequencing approaches. The Committee will review and finalise the updated guidelines, ideally via correspondence.

Item 10.3: DNA Guidelines Checklist

An intersessional correspondence group (ICG) was established under Tiedemann (IWC, 2021) to generate checklist of key aspects of the genetic data analysis guidelines and to identify aspects of the guidelines that may need updating, particularly in the context of genomic methodologies and analysis. The Committee will review and update from the ICG.

Item 10.4: Recommendations on the avoidance of sample depletion

The Committee will review work of an ICG, under Lang (IWC 2020, Annex K) about sample depletion. The Committee will provide advice about genomic approaches to maximise the utility of tissue samples that are in danger of becoming depleted. If possible, this will be a reporting item with endorsement of the work of the ICG.

Item 10.5: Review terminology used for stock structure related terms used within the IWC

An ICG continued under Tiedemann (IWC 2020, Annex K) to revisit definitions that were previously put forward for stock-related terms at the IWC, particularly those related to large whale assessments, and revise them as necessary. The report of the ICG will form the basis of reporting under this item.

Item 10.6: New genetic approaches of use to the Scientific Committee in addition to stock structure

This item considers papers related to new genetic approaches of use to the SC, such as epigenetic ageing, close kin mark-recapture, etc.

ITEM 11: CETACEAN ABUNDANCE ESTIMATES AND STOCK STATUS (ASI)

The Committee has recognised the need for consistency in the way it reviews and categorises abundance estimates, which in the past were reviewed only within the sub-group to which they were submitted. Since 2017, all abundance estimates have been reviewed the Standing Working Group on Abundance Estimates, Stock Status and International Cruises (ASI) and the advice passed on to the relevant sub-group early in the meeting. ASI has also been updating a table of an agreed set of abundance estimates for use by the Committee and a biennial document compiling abundance estimates for the Commission and the public that provides a broad overview by species and ocean basin, and, if appropriate, by specific areas. ASI is also working to provide information on the status of whale stocks, largely based upon completed assessments and or RMP/AWMP *Implementations* or *Implementation Reviews*. Therefore, under this agenda item the Committee will report on: (1) the development of a biennial document that compiles agreed abundance estimates including a basin wide summary (Item 11.1); (2) consider methodological issues, including amending the Guidelines to conduct surveys and analyse survey data for use in the RMP to consider spatial modelling approaches (Item 11.3); and (3) development of a summary of information on the status of stocks (based on completed assessments or Implementations; Item 11.4). The summary of abundance estimates and the status of stocks is intended to be made available on the IWC website immediately after the Scientific Committee report is published.

Item 11.1: Review of abundance estimates

At 2019 meeting, ASI developed a new process for the submission of abundance estimates to the Committee. It was intended that an initial review of estimates would occur during an ASI virtual pre-meeting and continue through the SC

annual meeting. Priority for review will be given to estimates required by sub-committees to complete or significantly progress their work during SC/68D (examples are given under relevant agenda items) for which papers providing estimates are available at least one month ahead of the meeting (i.e. 28 March 2021) and for which convenors have identified the need. Priority will also be given to evaluate intersessional work conducted by the Abundance Steering Group (ASG). The review of some abundance estimates may be postponed due to limited time available during the virtual meetings.

Item 11.2: Update and review the table of abundance estimates maintained by the IWC

The Committee will review and update the table of abundance estimates maintained by the IWC.

Item 11.3: Review and refine the abundance review process

The Committee will continue to refine definition of abundance categories and re-categorise estimates of abundance previously accepted by the Committee to adhere to new category definitions.

Item 11.4: Methodological issues

The Committee will develop a set of specific instructions for the amendment of the RMP guidelines (recognising that these are generally applicable to all circumstances including AWMP and IA) to consider model-based abundance estimates based upon a draft supplied by an intersessional group under Staniland. Given the technical nature of this topic, the Committee may postpone this agenda item until an in-person meeting can be held.

If applicable, the Committee will review new information on the development of simulation software to evaluate methods for abundance estimates and will consider diagnostic methods for mark-recapture methods used in the estimation of abundance and trends in abundance.

Item 11.5: Provide advice to the Commission on the status of stocks

The Scientific Committee is expected to provide advice on 'status'. This Item will consider (a) the discussions on the agreed approach for expressing status for stocks considered under ISTs, (b) how to summarise the results of stocks considered under in-depth assessments and (c) whether it is possible to provide some indication of status for stocks not considered under (a) and (b). The Scientific Committee will work toward designing a website summarizing status of stocks for the Commission and general public.

Item 11.6: Review and provide advice on surveys (past and future)

If applicable (e.g., documents are available), the Committee will review and provide advice on future surveys designed to estimate abundance. Priority will be given to surveys producing abundance estimates to be used in the context of an IST (i.e., AWMP, RMP) or IA. Due to limited time at SC68D, consideration of this agenda item may be severely limited.

ITEM 12: BYCATCH AND ENTANGLEMENTS (HIM)

This Item consolidates the discussions of bycatch for large whales and small cetaceans with respect to both estimation and scientific aspects of mitigation.

Item 12.1: IWC's Bycatch Mitigation Initiative

The Committee will receive an update on the IWC's Bycatch Mitigation Initiative (BMI) from the Secretariat, including the recruitment of a new BMI coordinator, and the agreed workplan for the period 2020-2024 with implications for the work of the Committee. The update will include progress of the Expert Panel, which first met immediately prior to the 2019 SC meeting in Nairobi, and the identification of possible pilot projects and next steps. This will be a high priority item with a focus for implications for the work of the Scientific Committee.

Item 12.2: Collaboration on bycatch mitigation with IGOs (including FAO, Regional Fisheries Management Organisations and others)

Important aspects of the work of the IWC on bycatch mitigation involve collaborations with other IGOs. The Committee will discuss the scientific aspects of these collaborations.

Item 12.3: Review new methods and estimates of bycatch and entanglement rates, risks and mortality

The Committee will review new estimates of bycatch and entanglement rates, risks and mortality. The Committee will also review papers, if submitted, related to: (a) observer programmes, including technology use and required levels of coverage; (b) role of fisheries data collection schemes; (c) use of strandings data for quantitative estimation of bycatch; (d) mortality estimates.

Item 12.4: Reporting of bycatch and entanglements (both small and large cetaceans) including National progress reports

The Committee will continue to review data provided and National Progress reports and to discuss how reporting mechanisms may be improved.

Item 12.5: Review mitigation measures for preventing bycatch and entanglement, including pingers.

The Committee will continue to discuss and review studies related to mitigation measures for preventing bycatch and entanglement and provide advice where appropriate. The Committee will also review the assessment by an intersessional group in collaboration with the intersessional group on noise (reporting to E) and the Bycatch Expert Panel on the potential for acoustic interferences by pingers.

Item 12.6: Review studies examining the implications of effort reductions on cetacean bycatch, fisheries economics and yields

The associations between fishing effort, bycatch risk and fisheries economics were highlighted in a For Info paper to SC/68B. There was insufficient time to discuss this in 2020 and 2021 and the Committee agreed that this agenda item would be addressed by the HIM sub-committee in 2022.

Item 12.7: Review of topics related to Hector's and Māui dolphins in New Zealand (HIM, SM)*

In 2019, the Committee recommended a detailed independent review (see IWC 2019) of a 'Spatial risk assessment of threats to Hector's and Māui dolphins' (Roberts et al., 2019) with respect to this document's use for informing management measures to address anthropogenic threats to Hector's and Māui dolphins off New Zealand. This review was recommended to be conducted intersessionally or as a pre-meeting to SC68B. In 2020, New Zealand informed the Committee that it was currently in the process of revising its management measures to protect Hector's and Māui dolphins, and therefore elected to defer the proposed intersessional review of the Hector's and Māui dolphin modelling work until after that revision was completed. The Committee recommended to schedule a pre-meeting prior to the 2022 SC annual meeting to continue addressing this agenda item. Given the scope, technical complexity, and funding required for this review, it has not been possible to undertake this work since SC68C. Therefore, the substantive part of this agenda item will be postponed for discussion at the 2023 meeting."

12.8: Consider definition of r_{max} for small cetaceans for use by the Scientific Committee*

One of the topics identified for review in 2019 included life history parameters and the need to consider estimates of r_{max} for Hector's and Māui dolphins. It became apparent during discussions in 2020 that a definition of r_{max} for use by the Committee is needed, including how and when it should be used. The Committee will review a report from an intersessional correspondence group established under Wilberg to consider this topic but may defer further discussions to an in-person meeting.

ITEM 13: SHIP STRIKES (HIM)

This Item consolidates the discussions of ship strikes with respect to both estimation and scientific aspects of mitigation.

Item 13.1: Review new methods and estimates of rates of ship strikes, risk of ship strikes and mortality (including review progress on ship strike database)

The Committee will review progress on the IWC global ship strike database as well as any new information on risk analyses and estimates of mortality associated with ship strikes.

Item 13.2: Mitigation of ship strikes in high risk areas

The Committee will review any new information presented on mitigation and specifically expressed interest in receiving more information about the efficacy of implementing new mitigation measures in high risk areas identified in the IWC Strategic Plan to Mitigate the Effects of Ship Strikes on Cetaceans.

Item 13.3: Co-operation with IMO Secretariat and relevant IMO committees

The Secretariat will provide the Committee a review of actions taken to cooperate with the IMO Secretariat on the development of now routeing measures and ship strike issues.

Item 13.4: Review progress for obtaining Automated Information System (AIS) data

The Secretariat has been working with Marine Traffic to discuss ways of AIS data. The Committee will review progress on this topic.

ITEM 14: ENVIRONMENTAL CONCERNS (E)

The Commission and the Scientific Committee have increasingly taken an interest in the environmental threats to cetaceans. In 1993, the Commission adopted resolutions on research on the environment and whale stocks and on the preservation of the marine environment. As a result, the Committee formalised its work by establishing a Standing Working Group that has met every year subsequently. The E sub-committee has three standing agenda items: pollution, diseases of concern and strandings; and two items that are dealt with on a cyclic basis.

Item 14.1: Chemical pollution

The Committee welcomes new information about a contaminant mapping tool that will provide information about contaminants worldwide and updates about Pollution 2025, including assessing multiple stressors within the framework of Pollution 2025. An intersessional correspondence group under Holm (IWC 2019, Annex T) was established in 2019 to progress the IWC's Pollution 2025 programme including establishing planning activities and work priorities. This ICG continued intersessional discussions during 2020 to 2021. The Committee will review a report from an intersessional workshop on this topic. The Committee will also review new information received on the effects of chemical pollution on cetaceans.

Item 14.2: Diseases of concern

The Committee will review new information and the work from an intersessional correspondence group established to advance discussions on emerging diseases on cetaceans. The Committee also expects to host a two hour session on a special primer on coronavirus surveillance in aquatic wildlife.

Item 14.3: Strandings and mortality events

The Committee will receive updates regarding the reform of the IWC Strandings Initiative Steering Committee, the scoping of strandings data managements, the Stranding Coordinator position, and new information about stranding events.

Item 14.4: Climate change

A Steering Group, under Simmonds was established to plan for a intersessional workshop on climate change, which was held in a virtual format in early 2022. The Committee will review a report of the workshop. The Committee will also review new information received on this topic.

Item 14.5: Underwater noise

The Committee will review updates from an ICG established to advance underwater noise topics of interest, including collaboration with the Conservation Committee and consideration of outcomes on noise related to the Marine Environment Protection Committee of the International Maritime Organization.

Item 14.6: Marine debris

The Committee will receive updates on progress on recommendations related to marine debris.

Item 14.7: Habitat alteration as anthropogenic impact on cetaceans

The Committee will review information on habitat alteration as a form of anthropogenic impact to cetaceans.

Item 14.8: SOCER report (Polar Regions)

This year the SOCER report will focus on Polar Regions. Committee members are encouraged to make submissions using the standardised form for data entry, which can be downloaded from: <http://iwc.int/socer>. The Committee will continue discussions about the future of SOCER given the current financial challenges. This will largely be a reporting item this year handled by email.

Item 14.9: Review strategy to better integrate E workplan with other Committee sub-groups

The Committee will review efforts in developing a strategy to better integrate the workplan of the sub-committee on Environmental Concerns across other groups within the Committee.

Item 14.10: Review strategy on developing and using a “One Health” approach

At last year's meeting, the Committee welcomed the One Health Approach, which recognises the intricate relationships between humans, animals and the (IWC, 2022). The Committee recommended developing specific recommendations on how the One Health approach can be operationalised within its sub-groups to facilitate the protection and health of cetaceans and marine ecosystems. The Committee will review progress of an ICG established to developing these recommendations.

ITEM 15: ECOSYSTEM MODELLING

Each year, under this Item the Committee reviews new work on a variety of issues related to ecosystem modelling, falling under three areas: (1) reviewing ecosystem modelling efforts undertaken outside the IWC; (2) exploring how ecosystem models can contribute to developing scenarios for simulation testing of the RMP; and (3) reviewing other issues relevant to ecosystem modelling within the Committee. Given Resolution 2016-3 (Resolution on Cetaceans and Their Contributions to Ecosystem Functioning), Ecosystem services was added in 2017 as new standing topic.

Item 15.1: Workshop on the role of cetaceans in ecosystem functioning: Gap Analysis

The Committee recognised that investigating the contributions of cetaceans to ecosystem functioning was a complex long-term task and agreed to start the process by holding a gap analysis workshop. Due to the COVID-19 pandemic, the in-person meeting scheduled for 2021 was postponed until 2022, but a pre-meeting was held prior to SC68C to plan a process by which the Committee would respond to Resolution 2016-3. During the pre-meeting, the Committee agreed continue analyses relevant to this topic intersessionally and re-establish a steering committee to plan for an in-person workshop in 2022. The pandemic has precluded this workshop to occur to date and because of the technical nature of the discussions related to the role of whales in the ecosystem, this agenda item will likely be dealt as an in-person meeting after SC68D.

Item 15.2: Review results of ecosystem modelling in the Antarctic Ocean and northeast Atlantic Ocean

The Committee agreed that assessing the role of cetaceans in the ecosystem would benefit from focusing analyses in the Southern Oceans and in the northeast Atlantic Ocean. The Committee will review results from these analyses if they are made available, but may defer further consideration of this topic until an in-person discussion can occur.

Item 15.3 Review progress on estimating pre-exploitation and current abundance of large whale populations

The Committee agreed that analyses of the role of cetaceans in the ecosystem required information on pre-exploitation and current abundance. The Committee established an ICG to provide plausible sets of abundance estimates (historical and current) for relevant whale species in the Antarctic and the North Atlantic Oceans. The Committee may review the work of the ICG if new information is provided.

Item 15.4: Progress on multi-species distribution models (MSDMs)

An intersessional correspondence group under Kitakado (IWC 2022) was re-established to finalise guidelines and recommendations for best practices in species distribution modelling and extend its work to multi-species distribution models (MSDMs) by continuing a literature review and developing possible simulation platform for evaluation of models. The report of that ICG will form the basis of the report.

Item 15.5 Review progress with development of individual-based energetic models (IBEMs)

An intersessional correspondence group under Friedlaender (IWC 2020, Annex T) was re-established to further develop IBEMs and infer functional responses using them. The report of that ICG will form the basis of the report.

Item 15.6 Modelling of competition among whales and relationships between whales and prey.

Under this agenda item, the Committee will address new information relevant to further understanding of the relationship between whales and prey, of ecosystems and analytical methods for ecological modelling will be addressed.

Item 15.7 Standing topics

Under this standing agenda item, the Committee will receive updates on standing agenda items that are planned for future biennia or for which not sufficient progress was made to change previous recommendations. No substantial discussion is expected and this will largely be a reporting item.

ITEM 16: SMALL CETACEANS (SM)

Whilst nothing is formally essential to be completed by the 2022 Commission meeting, SC advice is provided on many of these topics (often via the CC) and it would be helpful if advice could be available, especially where there are recommendations for action in workshop reports that need review for possible SC endorsement before Commission action. It should be noted that serious expressions of concern over status or for action by the Cetacean Task Team from previous years remain without the need for them to be reiterated.

16.1 Small Cetacean Use as Aquatic Wildmeat

Workshop reports will be reviewed and endorsed where appropriate. There will also be discussions related to the collaboration with CMS's Aquatic Wildmeat Group and development of a framework for progressing issues or areas needing attention. A correspondence group was formed to synthesise the work of SM, including the regional workshop,

which is planned as a pre meeting. The output from the pre-meeting, including the plan for this issue moving forward, will be provided as text for insertion on the SC report.

16.2 Ongoing and Potential CMP for Small Cetaceans

SM will work with CMP regarding the on-going and potential CMPs for franciscana, South American river dolphins, and Asian river dolphins. It will also receive updates on a possible collaboration between the IWC SC and the IUCN's Integrated Conservation Planning for Cetaceans (ICPC).

16.3 Progress Intersessional Correspondence Groups and Previous Recommendations

The Small Cetaceans sub-committee will review previous recommendations intersessionally. Progress from the ICGs will be reviewed and discussed, identifying what recommendations have been addressed, which may need to be amended, others consolidated, etc. Finless porpoise (marine species) will be reviewed in depth, through both a pre meeting and SC discussion, as per recommendations from SC68C

16.4 Small Cetacean Task Team Progress

The Committee will receive updates from the Small Cetacean Task team including procedures, and Lahille's dolphin.

16.5 Review direct takes and live captures of small cetaceans

The Committee will consider new information on directed takes and live captures contained in National Reports and from other sources. Incidental takes will be considered by HIM under Item 12.5.

16.6 Status of the voluntary fund for small cetacean conservation research

The Committee will provide a short update on projects awarded in 2021. This will be via email ITEM 17: WHALE WATCHING (WW)

The IWC Resolutions 1993-9 and 1994-14 directed Member States to submit information on whale watching. With Resolution 1996-2, the Commission directed the Scientific Committee to begin examining whale watching and its impacts on cetaceans. Whilst nothing is formally essential to be completed by the 2022 Commission meeting, SC advice is provided on many of relevant topics (often via the CC) and it would be helpful if new information and recommendations could be available.

Terms of Reference for the Sub-Committee on Whale watching were: (1) scientific protocols for research on the effects of whale watching; (2) the scientific basis for management; (3) research on the efficacy of mitigation; (4) criteria for selection of suitable areas for long-term studies on the effects of whale watching on cetaceans.

The Committee will receive updates from relevant intersessional groups under relevant Agenda sub-items.

Item 17.1: Assess the impacts of whale watching and swim-with-whale operations on cetaceans

The Committee will receive information from studies that assess the impacts on the short, mid-, and long-term impacts of whale watching on cetaceans, impacts from swim-with operations on cetaceans and emerging areas of concern.

A planned 3rd workshop on Modelling and Assessment of Whale Watching Impacts (MAWI) was postponed in 2020 and 2021 because of COVID-19. This workshop was tasked with: (1) defining specific research questions and hypotheses that will benefit understanding of the impact of whale watching, (2) identify those whale watching locations that would be most suitable and amenable for targeted studies addressing these questions, and (3) summarise the current modelling tools available to analyse the data that will be collected. The Committee will receive updates related to the planning of this workshop.

Item 17.2: Finalise IWC's General Principles for Whale Watching after intersessional discussion with the Conservation Committee and the Secretariat

The IWC's general principles for whale watching were last updated in 1996. The Committee revised the principles at SC/68A (IWC 2019, Annex N) and in 2020 (SC/68B) reiterated its recommendation of endorsement by the Commission of the revised principles. The principles will be revisited if additional information is received at SC/68D.

Item 17.3: Progress with regional review of whale watching

The Committee welcomes updates and new information about the development of whale watching in Sri Lanka, Reunion and Zanzibar, and Timor-Leste. Information presented under this agenda item will also inform a possible review of the Indian Ocean Sanctuary.

Item 17.4: Collaborative work within the IWC

Item 17.4.1 IWC's Whale Watching Handbook

The IWC's Whale Watching handbook was finalised and added to the IWC's website in 2018. Minton or the Secretariat will provide an update on development of new content for the handbook and promotion of the handbook.

Item 17.4.2 Work of Conservation Committee Standing Working Group on Whale Watching

This item was added to the agenda as a standing item in 2019. At SC/68D, the Committee will receive and update on progress toward improving communication and coordination between the Scientific Committee and Conservation Committee on whale watching.

Item 17.4.3 Collaboration with other SC sub-committees on platforms of opportunity

The Committee agreed that it would be useful for the Whale Watching subcommittee to engage with other relevant sub-committees, such as EM, IA and ASI, to identify types of analyses that would be acceptable when using data from platforms of opportunity and citizen science. The Committee will receive an update on those engagements.

ITEM 18: WHALE SANCTUARIES (SAN)

The *Ad hoc* Working Group on Sanctuaries (SAN) was established in 2001 to conduct the reviews of the Indian Ocean Sanctuary (IOS) in 2002 and the Southern Ocean Sanctuary in 2004. The group was re-established in 2013 to review the SOS again in 2014.

Item 18.1: Updates from relevant sub-committees on new information relevant to the Southern Ocean Sanctuary (SOS) management plan

The Southern Ocean Sanctuary (SOS) was established by the Commission in 1994. Paragraph 7(b) of the Schedule specified that the SOS shall be reviewed ten years after its initial adoption and at succeeding ten year intervals. The year 2024 marks the third decade of this Sanctuary and preparations will be initiated by the Committee for a new SOS decadal review.

Item 18.2 New information for Indian Ocean Sanctuary

The Commission adopted the Indian Ocean Sanctuary (IOS) in 1979. The IOS was reviewed and renewed in 2002. Unlike the SOS, regular reviews of the IOS have not been specified by the Commission. The Committee will request guidance from the Commission on whether a new review of the IOS should be conducted.

ITEM 19: EXTINCTION INITIATIVE

This initiative was proposed in 2020 by Stachowitsch. The objective of the initiative is to focus on populations that are critically endangered and on the verge of extinction and provide relevant recommendations to the Commission on those populations in peril. Intersessional work has occurred and the Committee will review that work and recommendations.

ITEM 20: IWC LIST OF RECOGNISED SPECIES

Our practice is to follow the Society for Marine Mammalogy (SMM) list of species. If changes have occurred in the SMM list, the approach for modifying the IWC list is routine and does not need formal discussion. Brownell and Mallette are expected to update the Committee on the list of recognised species.

ITEM 21: IWC DATABASES AND CATALOGUES (PH, GDR)

Nothing is formally essential to be completed on this agenda item by the 2022 Commission meeting. Many of the items are reports on progress (e.g., Item 21.2 and 21.3) which do not require much if any discussion. Any updates to the Photo-ID Guidelines (Item 21.1) could be dealt with by a 'virtual' small expert group meeting provided a document with proposals was available. Proposals for new databases (Item 21.4) need to be considered in the light of the Guidelines for such proposals.

The IWC is increasingly acting as a repository of data (including genetic samples, currently archived at the Southwest Fisheries Science Center, NOAA, US). These include: the IWC catch database; the National Progress Report database; the IWC sightings database (IWC-DESS), which holds sightings and effort data from the IWC IDCR, SOWER and POWER cruises as well as data submitted under the RMP; the IWC photographic archive for the IWC IDCR, SOWER and POWER cruises; a number of photo-identification catalogues (e.g. Southern Hemisphere blue whales, Antarctic blue whales, various species from IWC-POWER etc.); the global ship strikes database and possibly a future global entanglement database. This item will address: (1) common guidelines and principles for IWC databases including data availability; (2) design issues and (3) provide a summary of holdings. Information and analyses using data will continue to be discussed

under the relevant items. These discussions are dealt with by the *Ad hoc* Working Group on Photo-identification (PH) and the *Ad hoc* Working Group on Databases (GDR).

ITEM 22: MULTINATIONAL RESEARCH PROGRAMMES AND NATIONAL CRUISES THAT REQUIRE ENDORSEMENT (ASI)

The Committee will review the report of the IWC-POWER Technical Advisory Group and the Planning Committee that met virtually in 2021 and review recommendations for the 2022 cruise. The item will integrate advice from the NH, IA and ASI sub-groups. The Committee will also review progress under the Southern Ocean Research Partnership (SORP) programme, including updates on previously funded projects and a review of new projects proposed for funding. This item will integrate advice from several sub-groups. The Committee will also discuss a collaboration between the IWC and ATLAFCO, a West African multinational organization, for capacity building and cetacean surveys in western Africa.

ITEM 23: SCIENTIFIC COMMITTEE BUDGET FOR THE CURRENT BIENNIUM

The IWC is running a budget deficit and will become financially insolvent if action is not taken. The Commission has directed the Budgetary Sub-committee (BSC) to develop recommendations for achieving a balanced budget. Two small groups were formed in 2020, one addressing the entire IWC budget and a second focusing on the research and meeting budgets of the SC. The former SC Chair (Suydam) and current SC Chair (Zerbini) participated in both of those small groups. The Budgetary Sub-Committee is developing options to balance the IWC budget. These options include (1) reduce expenditure (e.g., cuts in the IWC budget, including the SC research and meeting budgets), (2) increase income (e.g., increase in dues by Contracting Governments), or (3) a combination of options (1) and (2). Information on the budget proposal by the BSC and further actions by the SC will be provided and discussed during SC68D.

Because the Commission was not able to meet in 2021, the SC developed a one year budget and workplan for 2022. We anticipate the develop another one year budget for 2023 during SC68D, which we expect will be approved by the Commission at their meeting in October.

The Committee will also provide a brief update on all activities carried out during 2020, 2021, and 2022, including the status of the current funding.

ITEM 24: COMMITTEE PRIORITIES FOR THE BIENNIUM 2022-23 AND INITIAL AGENDA FOR 2023

The Committee will develop a 2023 workplan, taking into consideration the current workload, for the consideration by the Commission. This Committee workplan will be based upon the workplans developed by sub-groups but will also allow discussion of relative priorities of the Commission.

ITEM 25: WORKING METHODS OF THE COMMITTEE

The Committee has agreed to keep this Item on the Agenda to allow for discussion of possible proposals to improve the working methods of the Committee, including discussion on the balance between cost savings and the efficiency of the Committee. The Committee also agreed to place this Item on the agenda to stimulate discussion within the Committee as to how best to improve communications on conservation matters with the Conservation Committee and Commission.

The Scientific Committee Handbook can be found at <http://iwc.int/scientific-committee-handbook>. The handbook will be revised and updated, including making it more user friendly.

Under this item the Committee will also discuss succession plans for the SC expertise to identify ways to address the issue of succession of key members of the Committee, particularly related to the *Implementation Review* and assessment processes (including modelling expertise).

The Committee will receive updates related to IWC governance developed by the Working Group on Operational Effectiveness. The Committee will also receive a proposed SC Communication Initiative, which is being developed by a steering group under Double. The SC will review and possibly revise this document. The objective of this initiative is to develop new communication tools and material tailored to IWC Commissioners as the principal audience. This material is also likely to have value for other policy makers, other organizations, the general public, and scientists new to the IWC.

ITEM 26: PUBLICATIONS

The Committee will review progress with publications including: the IDCR/SOWER Commemorative Volume; the Indo-Pacific Antarctic minke whale assessment paper; and will received updates from JRCM.

ITEM 27: ADOPTION OF REPORT

The draft report will be available to the full SC for review and providing suggested edits. The final draft of the report will be reviewed and agreed by the Heads of Delegation using the process the Committee adopted in 2020 and 2021.