

Draft 2020 Scientific Committee (SC68B) Plenary Annotated Agenda

SUB-GROUP AGENDAS WILL BE DEVELOPED BY THE RELEVANT CONVENORS. BECAUSE OF THE RAPIDLY CHANGING SITUATION WITH COVID-19, SOME AGENDA ITEMS MAY NEED TO BE DELAYED UNTIL THE 2021 MEETING, OR POSSIBLY FOR INTERSESSIONAL WORK.

* 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 time 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

- 4.1 Summary of Secretariat co-operation with other organisations**
- 4.2 African States Bordering the Atlantic Ocean (ATLAFCO) [no official observer but any report welcome]**
- 4.3 Arctic Council [no official observer but any 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]**
 - 4.5.1 Scientific Council*
 - 4.5.2 Conference of Parties*
 - 4.5.3 Agreement on Small Cetaceans of the Baltic and North Seas (ASCOBANS)*
 - 4.5.4 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 any report welcome]**
- 4.8 Food and Agriculture Organisation of the United Nations (FAO) [Secretariat]**
- 4.9 Inter-American Tropical Tuna Commission (IATTC) [no official observer but any report welcome]**
- 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 Other**

5. GENERAL ASSESSMENT AND MODELLING ISSUES (IST)*

- 5.1 Evaluate the energetics-based model and the relationship between $MSYR_{1+}$ and $MSYR_{mat}$**
- 5.2 Implications of ISTs for consideration of species' and populations' status**
- 5.3 Progress on previous recommendations and on the workplan**

6. AWMP IMPLEMENTATION-RELATED MATTERS (IST)*

6.1 Common minke whales off Greenland

- 6.1.1 Synthesis paper on testing framework and results for the 'G-common minke SLA' for common minke whales off West and East Greenland*
- 6.1.2 Conclusions on carryover and interim allowance for the 'G-common minke SLA'*

6.2 Implementation Review for North Pacific gray whales (Chukotka and Makah hunts)

- 6.2.1 Review of new information*
- 6.2.2 Undertake new modelling if deemed necessary*
- 6.2.3 Conclusions and workplan if required to complete the Implementation Review*
- 6.2.3 Conclusions on carryover and interim allowance for Eastern North Pacific gray 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 North Pacific gray whales (see Item 6.2)*
- 7.1.3 Bering-Chukchi-Beaufort Seas bowhead whale*
- 7.1.4 Common minke whale stocks off East Greenland (see Item 6.1)*
- 7.1.5 Common minke whale stocks off West Greenland (see Item 6.1)*
- 7.1.6 Fin whales off West Greenland*
- 7.1.7 Humpback whales off West Greenland (see Item 8.1.4)*
- 7.1.8 Humpback whales off St. Vincent and The Grenadines (see Item 8.1.4)*

7.2 Biennial workplan

8. WHALE STOCKS NOT SUBJECT TO DIRECTED TAKES *

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 *Preparation for in-depth assessment of North Atlantic humpback whales (and see Items 7.1.7 and 7.1.8)*

8.1.5 *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 *Gulf of Mexico Bryde's whales*

8.2.8 *Omura's whale*

8.2.8 *Biennial workplan*

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)*

8.3.2 *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 BSD)*

8.4.2 *Southern Hemisphere fin whales (SH)*

8.4.3 *Biennial workplan*

8.5 Progress on previous recommendations

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)*

9.2 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*

9.2.5 *South American river dolphins*

9.2.6 *South Asia river dolphins (with SM)*

9.3 Progress on previous recommendations

9.4 Biennial workplan

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

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

10.1.1 New techniques for species, stock, and individual identification

10.1.2 Reference databases and standards for DNA registries

10.2 DNA data quality and genetic analyses guidelines

10.2.1 Review and finalise updated DNA quality guidelines (including Next Generation Sequencing data and precautions when using GenBank)

10.3 Recommendations on the avoidance of sample depletion

10.4 Review terminology used for stock structure related terms used within the IWC

10.5 New genetic approaches of use to the Scientific Committee in addition to stock structure issues

10.6 Progress on previous recommendations

10.7 Biennial workplan

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

11.1 Review of abundance estimates

11.2 Review and provide advice on surveys (past and future)

11.3 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

11.3.4 Review new survey techniques/equipment

11.4 Provide advice to the Commission on the status of stocks

11.5 Progress on previous recommendations

11.6 Biennial workplan

12. BYCATCH AND ENTANGLEMENTS (HIM)*

12.1 IWC's Bycatch Mitigation Initiative

12.1.1 Update on progress of Expert Panel

12.1.2 Identification of pilot projects

12.1.3 Review of other activities and provision of advice, if requested

12.2 Review new methods and estimates of entanglement rates, risks and mortality

12.3 Review mitigation measures for preventing bycatch and entanglement

12.4 Reporting of bycatch (including small cetaceans) and large whale entanglements

12.4.1 Review progress on the global entanglement database

12.4.2 National progress reports

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

12.6 Provide advice on observer schemes in South Africa

12.7 Progress on previous recommendations

12.8 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 Approach for requesting/providing marine traffic data

13.5 Progress on previous recommendations

13.6 Biennial workplan

14. ENVIRONMENTAL CONCERNS (E)*

14.1 Chemical pollution

14.1.1 Final report of the Pollution 2020 project

14.1.2 Review Terms of Reference and recommend a Biennial workplan for Pollution 2025

14.2 Diseases of concern

14.3 Strandings and mortality events

14.3.1 Update on the IWC Strandings Initiative and Workplan 2020-2022

14.3.2 New information on unusual mortality events

14.4 Progress from pre-meeting on noise

14.5 Review report of workshop on marine debris

14.6 SOCER report (Atlantic Ocean)

14.7 Progress on previous recommendations

14.8 Biennial workplan

15 ECOSYSTEM MODELLING*

15.1 Cooperation with CCAMLR and CMS on ecosystem modelling including progress from workshop(s)

15.1.1 Plan for postponed Workshop on the Role of Cetaceans in Ecosystem Functioning: Gap Analysis

15.1.2 Finalise response to Commission's request on review of contributions of cetaceans to ecosystem functioning (Resolution 2016-3)

15.1.3 Planning of the future joint IWC-CCAMLR workshop(s) and possible MoU

15.2 Progress on species distribution models (SDMs)

15.3 Modelling of competition among whales including progress with IBEMs

15.4 Standing topics

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

15.4.2 Review progress on evaluation of krill distribution and abundance

15.5 Progress on previous recommendations

15.6 Biennial workplan

16. SMALL CETACEANS*

16.1 Review and consolidation of previous recommendations

16.2 Poorly documented hunts of small cetaceans for food, bait or cash and changing patterns of use including summary of workshops and databases

16.3 Small cetacean task team

16.4 Review of intersessional workshops on *Sotalia guianensis*

16.5 Review direct takes and live captures of small cetaceans

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 areas of concern.

17.1.2 Progress on plans for 3rd workshop on Modelling and Assessment of Whale Watching Impacts (MAWI)

17.2 Finalise IWC's General Principles for Whale Watching

17.3 Progress with regional reviews of whale watching

17.3.1 Sri Lanka

17.3.2 Latin America

17.4 Collaborative work within the IWC

17.4.1 IWC's Whale Watching Handbook

17.4.2 Work of Conservation Committee Standing Working Group on Whale Watching

17.4.3 Collaboration with other SC sub-committees 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 SOS management plan

18.2 New information for other sanctuaries

18.3 Biennial workplan

19. IWC LIST OF RECOGNISED SPECIES*

20. IWC DATABASES AND CATALOGUES*

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

20.2 Progress with existing or proposed new catalogues (PH)

20.2.1 Southern Hemisphere right whale photo catalogues

20.2.2 Happywhale database

20.2.3 Arabian Sea Whale Network's Flukebook

20.2.4 Southern Hemisphere Blue Whale Catalogue (SHBWC)

20.2.5 Antarctic Blue Whale Catalogue (ABWC)

20.2.6 Fin whale photo catalogues

20.2.7 Western gray whale catalogue

20.3 Progress with existing IWC databases (GDR, Secretariat)

20.4 Potential future IWC databases (GDR)

20.4.1 Global database for disentanglement activities

20.4.2 Global bycatch database

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

21.1 IWC-POWER and co-operation with Japan

21.2 Southern Ocean Research Partnership (IWC-SORP)

21.3 National cruises that require IWC oversight

21.4 Workplan

22. SCIENTIFIC COMMITTEE BUDGET FOR THE CURRENT BIENNIUM*

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

22.1.1 Funded proposals for the current biennium 2019-20

22.1.2 Funded proposals in previous years still ongoing

22.1.3 Report on funds reallocations and contingencies for the Research Fund, Voluntary Fund for Small Cetaceans and SORP Voluntary Fund

22.2 Proposed budget for 2021-2022 developed under Committee's guidelines

23. COMMITTEE PRIORITIES FOR THE BIENNIUM 2021-22 AND INITIAL AGENDA FOR 2021

24. WORKING METHODS OF THE COMMITTEE*

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

24.2 Biennial reporting to the Commission and related matters

24.3 Capacity building and succession plan for Scientific Committee

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

24.5 Committee involvement in the IWC recommendations database

24.6 Governance Review: Review of papers from the Working Group on Operational Effectiveness

24.7 Any other matters

24.8 Biennial workplan

25. PUBLICATIONS

26. ADOPTION OF REPORT

NOTES TO THE AGENDA

ITEM 1: INTRODUCTORY ITEMS

As much of the Scientific Committee agenda as feasible will be covered by email or virtual meetings during the period 12 to 24 May 2020. A similar process will be followed, again as feasible, for the (a) Ecosystem Functioning Workshop; (b) noise pre-meeting; and (c) abundance estimates, stock status and international cruises (ASI) pre-meeting.

Details of these arrangements will be inserted here once they have been agreed.....

The list of intersessional correspondence groups and their terms of reference can be found at <https://iwc.int/correspondence-groups>. Convenors will be provided with a list of recent recommendations relevant to their sub-groups by the Secretariat (taken from the new Database of Recommendations).

Item 1.2: Remembrances

In the previous year, several members of the SC have passed away, including Sidney Holt, Edward Mitchell and Seiji Ohsumi. Short written tributes will be presented in recognition of their contributions to the IWC and cetacean science.

Item 1.4: Meeting procedures and time schedule

The tentative time schedule will be provided as a separate document. Given the great time differences, I expect that there will be room for one time slot per day from 1430-1630 UK time (this will be 0530-0730 in Alaska and 2230-0130 in Hobart). I am working with the Convenors on this and we will provide the information as far in advance as possible.

Item 1.5: Establishment of sub-committees and working groups

The following 16 sub-groups (Table 1) were identified by the Chair, vice Chair and Head of Science after SC68A. It is important that you consult the registration and document submission details that can be found on the website to register for sub-groups: (<https://iwc.int/sc68b>); this will allow the convenors to contact the sub-groups directly with draft agendas, requests for information/text, and draft report text.

Table 1 - Committee sub-groups and convenors for 2020

Sub-committees/working group name	Convenor	Co-convenor
Scientific Committee Plenary	Suydam (robert.suydam@north-slope.org)	Zerbini (alex.zerbini@noaa.gov)
<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	Zerbini (alex.zerbini@noaa.gov)	Givens (geofgivens@gmail.com)
<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	Walloe (lars.walloe@medisin.uio.no)	
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 (rlbetacea@aol.com)	Urban-Ramirez (jurban@uabcs.mx)
Sub-Committee on Non-deliberate Human-Induced Mortality of cetaceans, HIM	Leaper (russell@ivytdemon.co.uk)	Currey (rohan.currey@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)	
Sub-Committee on Small Cetaceans, SM	Porter (lindsay.jp@gmail.com)	Trujillo (Fernando@omacha.org)
Sub-Committee on Whale watching, WW	New (lfn36@hotmail.com)	

Note that as in 2019, Revised Management Procedure (RMP) and Aboriginal Whaling Management Procedure (AWMP) will not meet in 2020. Instead the topics focused on Implementation Reviews and the Aboriginal Whaling Scheme will be handled by IST. Reporting on new information, including harvest data, related to stocks subject to aboriginal hunts will be reviewed by ASW or ASI and/or SD as appropriate.

ITEM 2: ADOPTION OF AGENDA

The Agenda is based upon the priority items identified by the Commission and the Committee.

I 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 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** and for **submission of documents**. This is done through the IWC Meeting Portal (see link at <https://iwc.int/sc68b>).

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 of 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. 21 April 2020) the relevance and importance of presenting the information in 2020 will be evaluated by the Chair, Vice-Chair, and Head of Science.

The deadline for **primary papers** is 7 days before the start of the meeting (i.e. **5 May 2020**). As previously informed, the deadline for papers containing **abundance estimates** for potential endorsement at this meeting was 1 month before (i.e. **12 April 2020**) and notification sent to Alex.Zerbini@noaa.gov and abundance@iwc.int. *Exceptional* cases will be evaluated by the Chair, Vice-Chair and Head of Science 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 for the past several years 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. 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, Allison (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 2020** (secretariat@jwc.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: 5-20

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 Commission meeting - the relevant part of Item 5.2 will be incorporated into discussions of Item 11.4. There is a need for the Commission to approve a Committee initial draft agenda (see Item 23)

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

There is no immediate formal urgency for items to be completed in time for the 2020 Commission meeting in that the management advice for the block including carryover provisions has already been agreed until 2026. However....

Under Item 6.1, it should be possible to review the results of the work on North Atlantic common minke whales for the Greenland hunts via correspondence or a short zoom meeting.

Under Item 6.2, completing the gray whale Implementation Review would be desirable if possible. Documents are already available for this and met the deadline for papers using standard analyses. Key aspects (e.g. abundance and stock structure) could be dealt with by ASI and SD Zoom expert meetings. The results of those will allow a decision to be made if we can complete the IR with a final Zoom Expert Meeting or if it will need to be continued next year.

The Workplan will also have a document available (intended ultimately for the ASW sub-committee of the Commission) that will consider aspects of the new ASW scheme relevant to the SC.

The list of reviews developed at the 2018 meeting is given below.

Timetable for AWMP Implementation and Implementations Reviews

Hunts	Year SLA developed (IRs completed)	Next Implementation Review
Chukotka and Makah gray	2004 (2010)/2013	Start 2019
West Greenland humpback	2014	Start 2020
West Greenland bowhead	2015	Start 2021
West Greenland fin	2017/18 est.	2023 estimated
West Greenland/East Greenland common minke	2018	2024 estimated

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

There is no immediate urgency for these to be completed in time for the 2020 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 which might suggest a need for an emergency Implementation Review. Simple information on the hunts (e.g. catches and biological data) can be recorded here and dealt with by correspondence.

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

There is no immediate formal urgency for this work to be completed in time for the 2020 Commission meeting. However, progress on at least some items can potentially be made via email or Zoom Expert meetings e.g.: North Pacific Humpback whales; North Pacific sei whales. Details on which matters will be dealt with and how will be provided after discussions within the Convenors' group as to what is feasible. Given the endangered status of North Atlantic right whales and the likely new information, if documentation is available an Expert Zoom meeting may be warranted. For the other species/populations, the reports of intersessional groups can form the basis of the report.

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/SD/ASI/NH)

Item 8.1.1 Comprehensive Assessment of North Pacific humpback whales

An intersessional correspondence group under Clapham (IWC 2019, Annex T) will be provided on progress made in further preparation for the North Pacific humpback whale comprehensive assessment. The need for an intersessional workshop remains (already in the existing budget but not possible to hold before SC68B) and if documentation is available then it may be possible to make progress via a Zoom expert meeting.

Item 8.1.2 Comprehensive Assessment of North Pacific sei whales

The Committee agreed in 2019 to proceed with two stock structure hypotheses and to attempt to incorporate additional optional features (see IWC 2019, Annex 07). An intersessional correspondence group under Cooke (IWC 2019, Annex T) was re-established to further progress the agreed workplan and its report, along with the results of some simulation analyses. For progress to be made an Expert Zoom meeting would be required.

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 within IA as an in-depth assessment (the original Comprehensive Assessment occurred in 1991) within IA. A steering group was established under Allison (IWC 2019 Annex T) to guide the work on trial specifications and review any additional changes. The need for an intersessional workshop remains (already in the existing budget but not possible to hold before SC68B).

Item 8.1.4 Preparation for in-depth assessment of North Atlantic humpback whales (and see Items 7.1.7 and 7.1.8, NH)

The Committee agreed in 2019 that a considerable amount of new information has accumulated since the last assessment and that those data should be reviewed in anticipation of an in-depth assessment. Particular attention was needed on stock structure. There was also a concern about multi-year mortality event off the east coast of the USA. An intersessional correspondence group was formed under Mattila (IWC 2019, Annex T) to identify and evaluate data that are available for a future assessment of North Atlantic humpback whales.

Item 8.2: Evaluation for potential new In-Depth assessments

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

We can receive written updates if available and include them in the report. Originally expected were updates on the Southern Hemisphere blue whale photo catalogue, regional catch scenarios and population assessment models for pygmy and Chilean blue whales, and division of catches in the northern Indian Ocean using data on acoustic distribution of the two putative stocks to assess the stocks separately.

Item 8.2.2 Antarctic blue whales (SH)

An intersessional Steering Group under Lang (IWC 2019, Annex T) was established to conduct a synoptic review of Antarctic population structure, including genetics, Discovery marks, satellite tags, photo-ID, acoustics, sightings and catch patterns. We can receive written updates if available and include them in the report. This is part of preparation for an in-depth assessment within the next few years.

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

An intersessional correspondence group, under Charlton (IWC 2019, Annex T), was established to progress the development of a common life history modelling framework to estimate regional demographic parameters and investigate commonalities in their population dynamics. We can receive written updates if available (including the report of an intersessional group) and include them in the report.

Item 8.2.4 North Pacific blue whales (NH)

In anticipation of an assessment, the Committee recommended in 2019 that data from IWC-POWER, JARPN I, and JARPN II be analysed for abundance estimates, available genetic samples be analysed, older (<1920) catch data from Japanese waters be mapped, and analysis of additional life history data and acoustics be conducted. An intersessional correspondence group under Branch (IWC 2019, Annex T) was continued to review available data needed for a future assessment of North Pacific blue whales. We can receive written updates if available (including the report of the intersessional group) and include them in the report.

Item 8.2.5 North Atlantic sei whales (NH)

An intersessional correspondence group under Cholewiak and Mallette (IWC 2019, Annex T) was continued to review available data for a future assessment. We can receive written updates if available (including the report of the intersessional group) and include them in the report.

Item 8.2.6 North Atlantic right whales (NH)

At SC/68a, 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 again expressed serious concern over the status of this species. The Committee welcomed and prioritised the discussion of new information on this species. Depending on documentation this may warrant consideration of an Expert Zoom meeting if scheduling allows.

Item 8.2.7 Gulf of Mexico Bryde's whales (NH)

The Committee particularly welcomed and prioritised the discussion of new information during SC/68b, in light of serious concerns about population status. Depending on documentation this may warrant consideration of an Expert Zoom meeting if scheduling allows.

Item 8.2.8 Omura's whale (NH)

The Committee will welcome new information this year

Item 8.3: New information for other northern stocks (NH)

The Committee had stated that it would welcome new information at SC/68b about North Atlantic blue whales; North Atlantic minke whales in the western North Atlantic in light of new information about elevated mortalities along the East Coast of the US since 2017; and other information about other Northern Hemisphere stocks not subject to directed takes. This will only be considered this year if documentation is provided that requires urgent attention.

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

Item 8.4.1 Southern Hemisphere humpback whales

Another intersessional correspondence group, under Jackson (IWC 2019, Annex T), was established to assess if there are any unpublished regional catch data held in South Africa (Best archives) and Australia (Bannister and Dawbin archives).

The reports of the ISGs will form the basis of the report. Further discussion will only be considered this year if documentation is provided that requires urgent attention.

Item 8.4.2 Southern Hemisphere fin whales

An intersessional correspondence group, under Herr (IWC, 2019, Annex T), was established to develop standard survey protocols to assist future collation of fin whale sightings from the Southern Ocean. The Committee had also stated that it would welcome new information on population structure, distribution, and abundance.

The reports of the ISG will form the basis of the report. 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 are important for the 2020 Commission meeting if action is required in the context of e.g. the CMP fund or approving additional work on new CMPs e.g. Arabian Sea humpbacks and Mediterranean fin whales. Reports on existing CMPs could be developed by the co-ordinators and reviewed by email. Consideration should be given (depending on documentation available) to Expert Zoom meetings on e.g. Franciscana, Arabian Sea humpbacks, Central American humpbacks, Mediterranean fin whales and Asian River dolphins.

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) 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 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* is planned for North Pacific gray whales in 2020 by IST (see Item 6.2). CMP will coordinate with IST and ASW for discussion about gray whales. The Committee will receive an update about the on-going scientific studies across the range of the North Pacific gray whales.

Item 9.1.4 Franciscana (CMP, SM)

The Committee will review new information in preparation for a future Comprehensive Assessment that is expected to occur in the near future.

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

In 2019, the Committee received new information indicating that this population is small and agreed that it would benefit from a CMP. The Committee welcomes new information 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 a document provided by the ACCOBAMS SC on a CMP for Mediterranean fin whales and efforts on outreach to relevant range states and stakeholders.

Item 9.2.5 South American river dolphins (with SM)

The Committee will receive a report from an intersessional workshop to begin the process of developing a CMP for boto (*Inia sp.*) and tucuxi (*Sotalia fluviatilis*) and new information on Amazon river dolphins.

Item 9.2.6 South Asia river dolphins (with SM)

This is included here as it is expected that there will be documentation proposing that the SC consider this a priority for a future CMP. The primary discussion will take place under Item 16.3 but any recommendation that this should be a priority for a future CMP will be noted here. Note that CMS COP 13 discussed action on freshwater dolphins.

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

There is no immediate formal urgency for most of this work to occur before the Commission meeting. However, advice on stock structure is relevant to several of the proposed potential workshops (e.g. NP gray whales, NP humpbacks, Franciscana) and Expert Zoom meetings should be considered for the review of key relevant papers on specified identified species/areas provided papers are available. Items 10.2 and 10.3 could also be dealt with in that way provided draft text is available.

This agenda item merges two previously separate sub-groups, the Working Group on Stock Definition and the Working Group on DNA. The DNA item has been considered since 2000 in response to a Commission Resolution (IWC, 2000). Under this single item, the Committee would normally: (1) review new papers on stock structure on behalf of other sub-groups; (2) review and update of guidelines for ensuring DNA data quality and for analyses of genetic data; (3) consider

general statistical and other issues related to stock structure matters using a suite of data and techniques; (4) develop terminology appropriate to stock definition, unit-to- conserve and ‘viable’ population for use across sub-groups and the Committee; (5) use of population models to test spatial stock structure models; (6) genetic methods for species, stock and individual identification; (6) results of the ‘amendments’ of sequences deposited in GenBank; (8) collection and archiving of tissue samples from catches and bycatches; and (9) reference databases and standards for diagnostic DNA registries. Information on specific stocks will be considered by an Expert Zoom meeting and incorporated under those Agenda Items. Other Items will be simply reporting 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. Therefore, if documentation is available and requests made by convenors, an Expert Zoom meeting may be scheduled early in the meeting period.

Item 10.2: DNA data quality and genetic analyses guidelines

An intersessional correspondence group continued under Tiedemann (IWC 2019, Annex T) 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 finalize the updated guidelines, ideally via correspondence.

Item 10.3: Recommendations on the avoidance of sample depletion

The Committee will review work of an intersessional correspondence group, under Lang (IWC 2019 Annex T) about sample depletion. The Committee will provide advice about genomic approaches to maximize 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 ISG.

Item 10.4: Review terminology used for stock structure related terms used within the IWC

An intersessional correspondence group continued under Tiedemann (IWC 2019, Annex T) 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 but no detailed discussion is expected

Item 10.5: New genetic approaches of use to the Scientific Committee in addition to stock structure

This item usually considers papers related to new genetic approaches of use to the SC, such as epigenetic ageing, close kin mark-recapture, etc. It will be low priority this year.

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

There is no immediate formal urgency for much of this work to occur before the Commission meeting. However, review of some abundance estimates is important for meeting the provisions of the Aboriginal Whaling Scheme or for other high priority SC projects (e.g. the review of NP gray whales). Also, advice on abundance is relevant to several of the proposed potential workshops suggested elsewhere (e.g. NP gray whales, NP humpbacks, Franciscana) and a Zoom Expert meeting should be considered for key identified species/areas where documents meet the deadline. While review of past surveys (in Item 11.2) might be postponed, the SC should endeavour to review and offer advice on future surveys for which this is the last such opportunity. Parts of Item 11.3 might be possible to also be dealt with in that way provided draft text is available. It would be valuable for the Commission to have at least a draft of 11.4 for those stocks for which it is possible – that draft could be developed by a small expert group including convenors of IST, IA, SH, NH, SD/DNA and 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 by a dedicated 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, if it was needed urgently. ASI is also tasked with the development of 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 by specific areas if appropriate. ASI will provide a biennial overview of 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); (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 last year's 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 pre-meeting and continue through the SC annual meeting. Under the present circumstances, priority for review will be given to estimates required by sub-committees to complete or significantly progress their work during SC/68B (examples are given under relevant agenda items) and for which papers providing estimates are available at least one month ahead of the meeting (i.e. 12 April 2020) and for which convenors have identified the need. This will be finalised by an Expert Zoom meeting after focussed written review by identified experts.

Item 11.2: 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 the AWMP, RMP or IA.

Item 11.3: 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. This may require discussion by an Expert Zoom meeting.

Item 11.4: 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 following the approach agreed last year 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 Convenors group will determine in advance a mechanism to develop a draft that will form the basis of an Expert Zoom meeting.

ITEM 12: BYCATCH AND ENTANGLEMENTS (HIM)

It will be extremely valuable to at least present any SC advice on Item 12.1 if available in time for the Commission meeting. The Committee needs to review the draft 2020-2024 BMI workplan as it relates to its activities (Item 12.8) as well as provide information on relevant bycatch research and experts in relation to priority countries for pilot project development. This could be achieved with a smaller group of people providing written comments in advance to discuss any activities further and proposing how the work could be integrated into the SC workplan, followed by a brief discussion via a Zoom Expert meeting.

Other items (including 12.2, 12.3, 12.4 and 12.5) could be also considered by such a mechanism. Item 12.6 is directly intended for a single country (South Africa) so does not formally need to go through the Commission but through the BMI expert panel.

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 from the Secretariat, including a draft workplan for the period 2020-2024 with implications for the work of the Scientific 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 and will be discussed by an Expert Zoom meeting.

Item 12.2: Review new methods and estimates of entanglement rates, risks and mortality

The Committee will review new estimates of entanglement rates, risks and mortality. The Committee will give further consideration 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; and (e) approaches to risk assessment. This will depend on the documentation available and will be discussed by an Expert Zoom meeting. The planned intersessional review of the Māui dolphin modelling work and its implications did not occur as funding was not made available by the Government of New Zealand. An update is expected from New Zealand.

Item 12.3: Review mitigation measures for presenting bycatch and entanglement

Matilla will trial a data form for disentanglement activities conducted by members of the IWC network at the GWERN meeting and present the results at SC/68B. Other information on mitigation measures (e.g. from Peru and Pakistan) will be considered provided documentation is available, probably via Expert Zoom meeting

Item 12.4: Reporting of bycatch (including small cetaceans) and large whale entanglements

A particular focus on bycatch in the Indian Ocean is expected, including discussion of the recommendations put forward in the 2019 IWC workshop on Indian Ocean cetacean bycatch in Nairobi. The discussion will be dependent on documentation received.

Item 12.5: Collaboration on bycatch mitigation with IGOs (including FAO, RFMO, and others)

The Committee will receive an update on continued collaborations with other organisations including the Kobe bycatch working group, and collaboration with RFMOs including IOTC and ICCAT. In addition, the FAO Secretariat will provide the Committee with an update on the draft FAO Technical guidelines on marine mammal bycatch mitigation. The Committee will consider a report commissioned by the IWC Secretariat reviewing RFMOs for their management of cetacean bycatch and recommendations for prioritised IWC engagement with RFMOs.

An Expert Zoom meeting is likely to be needed, with participation expected from the relevant IGOs.

ITEM 13: SHIP STRIKES (HIM)

It will be extremely valuable at least to have SC advice on Item 13.2 if available in time for the Commission meeting via the Conservation Committee. In addition, the Chair of the Ship Strikes SWG will be seeking advice on a ship strikes costed workplan (2020-2022) and how this might be delivered (implications for Item 13.6). This will depend on documents being available on those items. They could be presented and discussed by a small expert group. Other items (especially straightforward review items e.g. under Item 13.1, 13.3 and 13.4 and perhaps Item 13.2) could be also considered by such a mechanism depending on the documentation available.

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)

An intersessional correspondence group under Leaper (IWC 2019, Annex T) was continued to assist the ship strike coordinators in reviewing cases submitted to the IWC global database and to provide advice on how to reduce the backlog of cases. Related to this, the Committee will hear from the Secretariat about the status of the development of bulk upload tools for ship strike data and connecting with known holders of large data sets requesting that data be shared with the IWC. The focus will be on progress with the ship strikes database and the report of the ISG. If documents are available on methods/estimates they will be looked at that may require a Zoom Expert meeting

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 the Antarctic. Additionally, the Committee noted serious concern in 2019 about ship strikes near the Canary Islands. The Secretariat will brief the Committee about discussions with Spain and the Canary Islands government about this issue.

An intersessional correspondence group under Leaper (IWC 2019, Annex T) was continued to consider how best to respond to requests for advice on routing measures. This will form the basis of the SC report.

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. More specifically, the Secretariat will provide an update on the situation with Northern Indian Ocean blue whales and ship strikes off Sri Lanka. This will largely be a reporting item.

Item 13.4: Best methods for requesting/providing marine traffic data

The Committee will receive an update from the Secretariat about an MOU with Marine Traffic for the provision of data on ship tracks from the Automated Information System (AIS). This will largely be a reporting item.

ITEM 14: ENVIRONMENTAL CONCERNS (E)

Whilst nothing is formally essential to be completed by the 2020 Commission meeting, SC advice is provided to the CC and other Commission subgroups on many of these topics and it would be helpful if that could be available, especially where there are recommendations for action in workshop reports (if available) that need review for possible SC endorsement. Most of these Agenda Items appear relatively straightforward and could be dealt with via either simply noting documents (e.g. 14.1, 14.6) or by one or more Expert Zoom meetings depending on expertise needed (e.g. 14.2 - 5) provided it could be accepted that the number experts are limited and that suitable documentation is available. Some of this will depend on the level of the progress made at the virtual 'noise' workshop.

One item that might require more discussion is strandings, for which a new work programme 2020-2024 is being developed, and on which it will be important to get SC advice. Consideration should be given to an Expert Zoom meeting

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

This agenda item will be postponed until 2021 but progress will be made intersessionally.

Thus, in 2021, the Committee will receive a summary of the POLLUTION 2020 project that includes data integration and mapping of persistent organic pollutants (POPs) and mercury and their trends. The Committee will provide advice to the Commission in light of Resolution 2016-4.

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 will continue intersessional discussions during 2020 to 2021.

Item 14.2: Diseases of concern

A focus session had been planned for SC/68b to address diseases of concern, including *Toxoplasmosis*, and *Herpesvirus*. The Committee also expected to receive information about knowledge gaps on cetacean host-pathogen interactions. An intersessional correspondence group under Stimmelmayer (IWC 2019, Annex T) was established to plan for the focus session. If documentation and experts are available this might be considered via an Expert Zoom meeting. If not it could be postponed to the next biennium.

Item 14.3: Strandings and mortality events

The Committee will receive updates regarding the implementation of the IWC Strandings Initiative, development of its new four year work programme and new information about stranding events.

Item 14.4: Progress from pre-meeting on noise

A Steering Group, under Cholewiak and Leaper (IWC 2019, Annex T), was established to plan for a pre-meeting addressing noise at SC/68b. The report from the pre-meeting will be the only topic discussed, possibly only via email, under this agenda item in 2020.

The Committee may also receive updates on national and international ocean noise strategies, including the intersessional co-operation with the IUCN Western grey whale advisory panel (WGWAP) Noise Task Force and the new international and national guidelines and advice (e.g. IUCN, NOAA).

Item 14.5: Review report of workshop on marine debris

The Committee will receive a report from the workshop on marine debris held in La Garriga, Spain, December 2019 prior to the World Marine Mammal Science Conference (WMMSC). A mechanism will be developed (initially by email but perhaps also via Zoom Expert meeting) to enable the SC to review/endorse recommendations and conclusions.

Item 14.6: SOCER report (North Atlantic)

This year the SOCER report will focus on Atlantic Ocean. 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 14.7: Progress on previous recommendations

The Committee will review progress on previous recommendations including on climate change. An intersessional correspondence group under Simmonds (IWC 2019, Annex T) was established to discuss future work related to climate change, potentially as a pre-meeting or workshop.

ITEM 15: ECOSYSTEM MODELLING

Under Item 15.1, the Commission will be expecting advice regarding the SC relevant components of Resolution 2016-3 which will depend on the progress that can be made at the Ecosystem Functioning Workshop, whether virtual or in-person - the dates, speakers, moderators and rapporteurs are all lined up so work can at least be started in line with the Commission's Resolution. This will be the first step in this long-term effort. The results can be addressed by an Expert Zoom meeting of the SC, as can the general issue of CCAMLR-IWC co-operation, including the Ecosystem Modelling workshops.

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: Cooperation with CCAMLR and CMS on ecosystem modelling including progress from workshop(s)

A steering group was formed under Ritter (IWC 2019 Annex T) to prepare for an intersessional workshop on Cetacean and ecosystem functioning: a gap analysis (jointly with CMS). The Committee agreed that the workshop should explore conducting analyses for regions outside of the Antarctic to compare the function of whale in different ecosystems. Discussions are underway on the extent that this workshop can achieve its agenda virtually.

The Committee will finalise its response to the Commission about the progress it has made thus far relevant to Resolution 2016-3.

The Secretariat and others will provide a discussion document on improving IWC-CCAMLR co-operation and will also refer to the proposed joint ecosystem modelling workshop with CCAMLR.

Item 15.2: Progress on species distribution models (SDMs)

An intersessional correspondence group under Murase (IWC 2019, Annex T) was retained to continue development of guidelines and recommendations for best practices in species distribution modelling. The report of that ICG will form the basis of the report.

Item 15.3: Modelling of competition among whales including progress with IBEMs

This item will only be considered if documentation is available.

Item 15.4: 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

Whilst nothing is formally essential to be completed by the 2020 Commission meeting, SC advice is provided on many of these topics (often via the CC) and it would be helpful if that could be available, especially where there are recommendations for action in workshop reports (if available) 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 2019 remain without the need for them to be reiterated. Review of recommendations from workshop reports could be achieved by one or more small expert virtual meetings. Other items (e.g. 16.6 and possibly 16.5 could be achieved by noting documents that summarise the available information. Expert Zoom meetings could be considered if sufficient documentation is available (e.g. 16.4)

Item 16.1: Review and consolidation of previous recommendations

The Small Cetaceans sub-committee will review previous recommendations, if updates are available, identifying what recommendations have been addressed and may need to be amended, others consolidated, etc.

Item 16.2: Poorly documented hunts of small cetaceans for food, bait or cash and changing patterns of use including summary of workshops and databases

The Committee expected to receive: (a) the final report of the workshop on Poorly documented takes of small cetaceans; West Africa held in Nairobi in May 2019; and (b) a synthesis of the results from the three workshops help to date on poorly document takes of small cetaceans for food, bait or cash. The Convenors will discuss the most appropriate mechanism to review/endorse the recommendations from the 2019 workshop.

A correspondence group was formed to develop a draft 'toolbox' of investigative techniques to assist in documenting more clearly the takes of small cetaceans and consider organising a workshop comprising a multi-disciplinary group of biologists, social scientists, managers and NGOS with a global scope. The report of the ICG will form the basis of the report.

Item 16.3: Small cetacean task team

An advisory group under Simmonds (IWC 2019, Annex T) will continue to assist the Committee in providing timely and effective advice on situations where a population of cetaceans is or suspected to be in danger of a significant decline that may eventually lead to its extinction; the ultimate aim being to ensure that extinction does not occur. The Committee will receive an update on the status of recommendations from the Workshop on South Asian river dolphins (this may involve consideration of the development of a CMP (see Item 9.2.6).

Item 16.4: Review of intersessional workshops on *Sotalia guianensis*

Domit chaired an intersessional Steering Group to organize two workshops focusing on *Sotalia*. The Committee will receive information from those two workshops and explore the possibility of developing a *Sotalia* Task Team.

Item 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 12.4.

Item 16.6: Status of the voluntary fund for small cetacean conservation research

The Committee will receive a report on projects awarded in 2019 under the Voluntary Fund for Small Cetacean Conservation Research.

ITEM 17: WHALE WATCHING (WW)

Whilst nothing is formally essential to be completed by the 2020 Commission meeting, SC advice is provided on many of these topics (often via the CC) and it would be helpful if that could be available, especially where there are recommendations for action in a workshop report (17.1.2 if available) that need review for possible SC endorsement before Commission action or finalisation of General Principles for Whale Watching (Item 17.2). Review of recommendations from the workshop report and finalisation of guidelines (the draft is already available as Annex N Appendix 2 in last year's report) could be achieved by an Expert Zoom meeting if they appear to need more discussion after email comments. Other items (e.g. 17.3 and 17.4) could be achieved by e mail or noting documents that summarise the available information.

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. The first report from the Sub-Committee on Whale watching was in 1998. At that meeting, 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-term and mid- to long-term impacts of whaling 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 because of the coronavirus. 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 an update on this workshop after it has been held.

The Committee will also receive an update from two Intersessional Correspondence Groups: (1) on human-induced behavioural changes of concern that was established to monitor relevant information across the range of interactions between whale watching operations and cetaceans, terminology, and consideration of the relevance of this topic of this topic on the work of the Committee; and (2) river dolphin interactions with whale watching activities, including monitoring, assessing and reporting on commercial operations with river dolphins in the Amazon and elsewhere.

Item 17.2: Finalise IWC's General Principles for Whale Watching

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). The Committee encouraged the Commission to adopt the revised principles in September 2020. The principles will be revisited if additional information is received at SC/68B.

Item 17.3: Progress with regional review of whale watching

The Committee will receive an update from the Secretariat for an Advisory Group to enhance communication and provide advice to the Indian Ocean Rim Association (IORA), as appropriate, and to consider ways to promote training workshops.

The Committee will also discuss new information presented about the development of whale watching in Sri Lanka and Latin America. It is anticipated that a group of researchers from Latin America, from Mexico to Argentina/Chile will produce documents on whale watching for consideration at SC/68B.

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. An Intersessional Correspondence Group continued under the direction of Minton. 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/68B, the Committee will discuss various methods for improving communication and coordinate between the Scientific Committee and Conservation Committee on whale watching, including the potential for a joint meeting between the Committee's Whale Watching sub-committee and the utility of using the recommendation database for facilitating communication.

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. Leslie New (convenor) will provide an update on those engagements.

ITEM 18: WHALE SANCTUARIES (SAN)

Only if new information is submitted.

ITEM 19: IWC LIST OF RECOGNISED SPECIES

This is an ongoing matter and need only be discussed if there is a proposal submitted. Our guidance is to follow the Society for Marine Mammalogy so if there are changes submitted the approach is routine and does not need formal discussion.

Brownell and Mallette will update the Committee on the list of recognised species.

ITEM 20: IWC DATABASES AND CATALOGUES (PH, GDR)

Nothing is formally essential to be completed by the 2020 Commission meeting. Many of the items are reports on progress (e.g. Item 20.2 and 20.3) which do not require much if any discussion. Any updates to Guidelines (Item 20.1) could be dealt with by a 'virtual' small expert group meeting provided a document with proposals was available. Proposals for new databases (Item 20.4) need to be considered in the light of the Guidelines for such proposals and may need to be discussed by a 'virtual' Expert Zoom meeting.

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 humpback 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 21: MULTINATIONAL RESEARCH PROGRAMMES AND NATIONAL CRUISES THAT REQUIRE ENDORSEMENT (ASI)

Aspects of these items are essential to be completed by the 2020 Commission meeting.

For example, Commission approval to continue the IWC-POWER programme in conjunction with Japan is extremely important. Discussion of the scientific aspects need not be too complicated as we will have reports from the Technical Advisory Group and Planning meeting to go on – the key is to get 'political' agreement (or a decision on a recommendation) by the SC perhaps via the Heads of Delegation.

Similarly, it is important to get SC approval of the proposals to be funded by IWC-SORP in accordance with our procedures. A report and recommendations for funding will be provided in a document developed by Eleanor Bell summarising the results of the intersessional review group.

Finally, it is important to review any research cruise plans and at least those that require formal endorsement in an RMP/AWS context, should documents be available.

Each of these could initially be done by an Expert Zoom meeting.

The Committee will review the report of the IWC-POWER Technical Advisory Group and the Planning Committee that met in Tokyo in January 2019 (SC/68B/REP/01 and 02) and review recommendations for the 2021 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.

ITEM 22: SCIENTIFIC COMMITTEE BUDGET FOR THE CURRENT BIENNIUM

A review of what has been achieved in the past years (Item 22.1) is in effect a summary document of what happened (usually undertaken by the Secretariat) and can be provided either in person or remotely as needed.

However, under Item 22.2 it is essential to submit a recommendation for the biennial budget to the 2020 Commission meeting - although there may be options for the level of detail that might be required depending on advice from the Bureau. The difficulty is that normally the budget is developed based upon the initial discussions and full proposals developed in the sub-groups, then a draft proposal incorporating all of the proposals that fits in with the expected budget is presented for discussion and agreement/modification by the SC.

A separate Budget Process document has been developed by the Secretariat that provides a process to follow given the absence of a face-to-face meeting

The Committee will provide a brief update on all activities carried out during the current biennium including the status of the current funding.

The Committee will review requested budget items from sub-groups and propose a two-year (2021-2022) budget to the Commission for their consideration at the September 2020 Commission meeting.

ITEM 23: COMMITTEE PRIORITIES FOR THE BIENNIUM 2021-22 AND INITIAL AGENDA FOR 2021

This needs to be presented to the 2020 Commission meeting and can best be achieved by a Zoom Convenors meeting to integrate the individual workplans.

The Committee will develop a targeted 2-year workplan for the consideration of the Commission with the objective of providing the Commission (and its sub-groups) with consolidated advice for its 2022 biennial meeting. This will be based upon the workplans developed by sub-groups but will also allow discussion of relative priorities in Plenary, taking into account the Committee's workload.

ITEM 24: 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 to the Conservation Committee and Commission.

A revised web-friendly version of the Scientific Committee Handbook will be available on the website by mid-April: <http://iwc.int/scientific-committee-handbook>.

Under this item the Committee will also receive an update from the ICG on the succession plan for SC expertise to identify a way or 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 provide comments on the papers related to IWC governance developed by the Working Group on Operational Effectiveness. The Chair will appoint an *ad hoc* group to develop an initial draft response for the Committee to consider.

ITEM 25: PUBLICATIONS

There will be a document summarising the status of publications, improvements undertaken and potential improvements. This is essentially a reporting item but draft recommendations could be considered by the convenors and Heads of Delegation.

The Committee will review progress with publications including: the IDCR/SOWER Commemorative Volume; the Indo-Pacific Antarctic minke whale assessment paper; and consider a discussion document provided by the Secretariat showing some of the recent changes to increase the SC's role in JCRM.

ITEM 26: ADOPTION OF REPORT

The process for agreeing the final report is tbd.