Report of the Forty-fourth
Meeting of the Scientific Committee
(Hobart, Australia, 20 to 24 October 2025)

This is a preliminary[1] version of the SC-CAMLR-44 Report
as adopted on Friday 24 October 2025.

[1] Preliminary in this case means that further proofreading and verification may still be required by the Secretariat.

Contents

* Annexes 4 to 7 are available on the CCAMLR website

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Opening of the meeting

1.1 The Forty-fourth meeting of the Scientific Committee was held from 20 to 24 October 2025 at the CCAMLR Headquarters in Hobart, Tasmania, Australia. The meeting was chaired by Dr C. Cárdenas (Chile). The plenary sessions of the meeting were streamed to an online audience.

1.2 Dr Cárdenas welcomed all participants, whether in-person or as an online audience (Annex 1). He anticipated his second meeting as Chair of the Scientific Committee to be a collaborative and productive meeting.

1.3 Dr Cárdenas noted the retirement of Drs G. Watters and C. Reiss (United States of America (USA)) and highlighted their invaluable contributions to the work of the Scientific Committee and the Commission over many years.

1.4 Dr Cárdenas welcomed the addition of two new Wombats (individuals who have participated in at least one official CCAMLR meeting in thirty different years), namely Dr V. Siegel (Germany) and the current Executive Secretary, Dr D. Agnew (paragraphs 2.4,15.7).

1.5 Chile drew the Scientific Committee's attention to the passing of Dr Rodrigo Wiff, a distinguished CCAMLR scientist who dedicated his life to fisheries sustainability, biodynamic modelling and Antarctic science. His generosity, compassion and friendliness will be missed.

1.6 The Scientific Committee recalled that Dr Wiff was the very first recipient of a CCAMLR Scientific Scholarship (2012) and expressed its sincere condolences to his family, friends and colleagues.

1.7 Dr Cárdenas encouraged the delegates to work together efficiently and to use the best available science to provide consensus advice to the Commission. He noted that in cases where consensus could not be reached, all views will be presented.

1.8 The List of Documents considered during the meeting is given in Annex 2. A glossary of acronyms and abbreviations used in CCAMLR reports is available online at https://www.ccamlr.org/node/78120.

1.9 While all parts of this report provide important information for the Commission, paragraphs of the report summarising the Scientific Committee's advice to the Commission have been highlighted in grey. Contributed statements are indicated in italics.

1.10 The report of the Scientific Committee was prepared in accordance with Rule 3 of the Rules of Procedure of the Scientific Committee by D. Bahlburg (Germany), M. Belchier (United Kingdom (UK)), P. Brtnik (Germany), R. Cavanagh and M. Collins (UK), A. Dunn (New Zealand), T. Earl (UK), M. Eléaume (France), Z. Filander (South Africa), S. Hill (UK),

K. Hoszek-Mandera (Poland), E. Johannessen (Norway), N. Kelly (Australia), L. Krüger (Chile), D. Maschette (Australia), E. Pardo (New Zealand), S. Parker (Secretariat), C. Péron (France), S. Rodríguez Alfaro (European Union), M. Santos (Argentina), F. Schaafsma (Kingdom of the Netherlands (Netherlands)), K. Teschke (Germany), S. Thanassekos (Secretariat), X. Wang and G. Zhu (People's Republic of China (China)).

Adoption of the agenda

1.11 The Scientific Committee considered the Provisional Agenda which had been circulated as SC CIRC 25/49 prior to the meeting consistent with Rule 7 of the Rules of Procedure of the Scientific Committee. The Agenda was adopted without change (Annex 3).

Chair's report

1.12 The Chair of the Scientific Committee noted the work undertaken this past year, which generated advice for the Scientific Committee to consider. The following meetings were held or attended by representatives of the Scientific Committee:

(i) Third Age Determination Workshop (WS-ADM3) in Cambridge, UK, 19–23 May 2025

(ii) Working Group on Acoustic Survey and Analysis Methods (WG-ASAM-2025) in Geilo, Norway, 30 June–4 July 2025

(iii) Working Group on Statistics, Assessments and Modelling (WG-SAM-2025) in Tenerife, Spain, 16–20 June 2025

(iv) Working Group on Ecosystem Monitoring and Management (WG-EMM-2025) in Geilo, Norway, 7–18 July 2025

(v) Working Group on Fish Stock Assessment (WG-FSA-2025) in Hobart, Australia, 6–16 October 2025

(vi) Workshop on developing Capacity for Data-Limited Integrated Stock Assessments in toothfish fisheries (Cap-DLISA) in Tenerife, Spain, 23–27 June 2025

(vii) FAO symposium on applying the Ecosystem Approach to Fisheries Management in ABNJ, Rome, Italy, 11–13 March 2025

(viii) Antarctic Treaty Consultative Meeting / Committee for Environmental Protection (ATCM 47 – CEP 27) meeting, Milan, Italy, 23–27 June 2025

(ix) 36th Meeting of Managers of Latin American Antarctic Programs (RAPAL), Punta Arenas, Chile, 22–25 September

(x) Scientific Committee Bureau meetings for organisation and planning.

Harvested species: general issues

2.1 The WG-ASAM co-convener, Dr X. Wang (China), introduced the report of the WG-ASAM-2025 meeting held at Geilo (Norway) from 30 June to 4 July (SC-CAMLR-44/09). The meeting was attended by 16 participants from nine Members with one invited expert (ARK). The meeting discussed standardised approaches for acoustic surveys and associated biological sampling to inform the development of the krill fishery management approach (KFMA).

2.2 The WG-SAM co-convener, Dr T. Okuda (Japan), introduced the report of the WG-SAM-2025 meeting held in Tenerife (Spain) from 16 to 20 June (SC-CAMLR-44/08). The meeting was attended by 25 participants from 12 Members, and 29 papers were submitted. The meeting included discussions on data collection and models for evaluating stock status, fishing operations and on harvest control rules for toothfish and krill.

2.3 The WG-EMM convener, Dr J. Hinke (USA) introduced the report of the WG-EMM-2025 meeting held at Geilo (Norway) from 7 to 18 July (SC-CAMLR-44/10). The meeting was attended by 54 participants from 21 Members. The meeting included discussions on krill biology and ecology, krill fishery management, ecosystem monitoring and spatial management, with focus topics on the CCAMLR Ecosystem Monitoring Program (CEMP) and the progression of the revised Krill Fishery Management Approach (KFMA) and the harmonisation between KFMA and the Domain 1 Marine Protected Area (D1MPA) proposal.

2.4 The WG-FSA convener, Mr S. Somhlaba (South Africa) introduced the report of the WG-FSA-2025 meeting held in Hobart (Australia) from 6 to 16 October (SC-CAMLR-44/11). The meeting was attended by 45 participants from 14 Members and was the last Working Group meeting attended by Dr Agnew in his role as Executive Secretary of CCAMLR. WG-FSA thanked Dr Agnew for his work and contributions (paragraph 15.7).

2.5 The Scientific Committee endorsed the recommendation by WG-EMM-2025 (paragraph 2.35) requesting Members to provide information about the locations and components of scientific moorings to the Secretariat for communication to Members for both safety and enhanced collaboration on the scientific data generated by the moorings. In this context, the Scientific Committee tasked the Secretariat to identify a method for collecting information about currently deployed moorings and making it available to the fishing industry and report it to WG-FSA-2026.

2.6 The Scientific Committee endorsed the recommendation by WG-EMM-2025 (paragraph 2.210) and WG-SAM-2025 (paragraph 2.12) to revise the haul-by-haul and Catch and Effort (CE) forms to remove the ‘type of fishing’ classification field to avoid mismatches between what is reported in CE and haul-by-haul data in the different fisheries and to prevent inconsistent reporting of fishing type between both vessels and seasons in haul-by-haul data (WG-EMM-2025, paragraph 2.208).

2.7 The Scientific Committee endorsed the recommendations by WG-SAM-2025 (paragraph 3.27), WG-EMM-2025 (paragraph 3.6) and WG-FSA-2025 (WG-FSA-2025, paragraphs 2.12 and 2.15) to implement the proposed separation of C1 haul-by-haul forms into finfish and krill trawl-fishery specific forms (WG-FSA-2025/07), along with accompanying instructions as requested by WG-FSA-IMAF-2024 (paragraph 1.20), and including fields recommended by WG-IMAF to clarify the reporting of incidental mortalities on vessels. The

Scientific Committee also recommended that the form nomenclature be revised to avoid confusion in form names, and that any references to these forms in Conservation Measures (CMs) be identified and revised as necessary.

2.8 The Scientific Committee endorsed the recommendation by WG-FSA-2025 (paragraph 2.15) that the new separate C6 (finfish) and C1 (krill) haul-by-haul forms could be voluntarily tested in the coming season, in parallel with the current forms, as required by existing CMs and if necessary revised versions of the new C1 (krill) form and the new C6 (finfish) haul-by-haul form could be presented by the Secretariat at WG-EMM-2026 and WG-FSA-2026 respectively.

2.9 The Scientific Committee endorsed the recommendation by WG-FSA-2025 (paragraph 6.8) to adopt changes to the Warp Strike Observation worksheet and accompanying information presented by the Secretariat, considering the current CCAMLR data collection form assumes that the warp and net monitoring cables can be observed simultaneously, which is not the case for all vessels.

2.10 Dr Kasatkina (Russian Federation (Russia)) expressed the opinion that a coverage rate of 5% of fishing time for seabird strike observations lacked scientific justification and could result in seabird strikes being underestimated.

2.11 The Scientific Committee noted that analysis of warp strike observation requirements had taken place at WG-IMAF-2023 (paragraphs 4.12 to 4.17) and SC-CAMLR-42 (paragraph 3.35) and welcomed future research investigating the effect of different coverage rates to be brought to WG-IMAF for consideration.

2.12 SC-CAMLR-44/BG/01 presented a summary of catches of target species from directed fishing on toothfish, icefish and krill in the Convention Area in the 2023/24 and 2024/25 seasons and from research fishing under CM 24-01. The authors noted that the total catch for *Euphausia superba* has been updated to 624 918 tonnes as detailed in SC-CAMLR-44-BG/36 Rev. 2.

Krill in Statistical Area 48

2.13 The Scientific Committee noted record krill catches in Statistical Area 48 during the 2024/25 season, which exceeded the trigger level of 620 000 tonnes specified in CM 51-01 by 4 917 tonnes. More than 50 % of this catch was taken from Subarea 48.1, corresponding to a doubling of the CM 51-07 (2023) limit for that Subarea (WG-FSA-2025, paragraph 2.5).

2.14 The Scientific Committee noted the number of vessels notified for this fishery in the 2025/26 season (14 vessels) (CCAMLR-44/BG/08 Rev. 1) exceeds the number that fished in the area during 2024/2025 (12 vessels, including 6 with continuous trawling capability) (SC-CAMLR-44/BG/36 Rev.2).

2.15 The Scientific Committee recommended that the Commission note the number of vessels notified to fish for krill in Area 48, in the context that the trigger level was reached in the 2025 season (CCAMLR-44/BG/08 Rev. 1, Table 6).

2.16 SC-CAMLR-44/BG/38, authored by the Antarctic and Southern Ocean Coalition (ASOC) presented an analysis of automatic identification system (AIS) data, which revealed a strong increase in apparent fishing effort in Subarea 48.1 in the 2024/25 season following the lapse of CM 51-07, raising concerns about concentrated fishing. This increase was particularly apparent in predator-rich areas such as the Gerlache and Bransfield straits. ASOC recommended that CCAMLR consider these changes in the intensity of apparent fishing effort, reflected also by a broader spatial footprint, as it continues to assess the impacts of the krill fishery on the ecosystem and consider management implications.

2.17 The Scientific Committee thanked ASOC for this useful analysis, which will help inform further discussions of this important issue throughout the meeting.

2.18 SC-CAMLR-44/BG/36 Rev. 2 provided a summary of krill fishery operations in the 2024/25 season. Catches were taken faster than in any previous season with the result that the trigger level was reached and the fishery was closed on 1 August 2025. The total catch was 624 917 tonnes based on C1 (haul-by-haul) data. 57% of this was caught in Subarea 48.1, where the catch increased by 118 % compared to the previous season. The catch in Subarea 48.2 increased by 47%, while that in Subarea 48.3 decreased by 97%. The paper presented metrics of catch concentration including catch per square kilometre within each Subarea and polygon contours representing the area in which 50% of the catch was taken.

2.19 The Scientific Committee thanked the Secretariat for the analyses presented in SC-CAMLR-44/BG/36 Rev. 2 and recommended updating the document for submission to the Scientific Committee in future years, and that the Secretariat work with WG-EMM to refine the contents for inclusion in future Fishery Reports.

2.20 The Scientific Committee noted the value of catch concentration metrics such as those presented in SC-CAMLR-44/BG/36 Rev. 2 and encouraged further refinement of these metrics at WG-EMM. It also noted that such metrics do not provide a direct measure of ecosystem impact of fishing. It further noted that these metrics might be biased by the inclusion of research surveys which are spatially extensive and have low catch rates compared to commercial hauls. It encouraged Members that have conducted krill surveys to contact the Secretariat to help identify the corresponding C1 (haul-by-haul) records (SC-CAMLR-44/BG/36 Rev. 2, Table A1).

2.21 The Scientific Committee noted that the krill catch (359 226 tonnes) in the Subarea 48.1 in the 2024/25 fishing season is about 50% of the potential catch limit for Subarea 48.1 (SC-CAMLR-41, paragraph 3.46 and Table 2).

2.22 The Scientific Committee noted there was a substantial increase in catches in Subarea 48.1 that could not have occurred if CM 51-07 remained in place. The Scientific Committee further noted that the changes in fishing distribution during the 2024/25 fishing season may have been affected by the sea ice coverage in Subareas 48.1 and 48.2 (WG-FSA-2025, paragraph 4.13), as well as the interannual dynamics of krill stocks and patchy nature of krill distribution (SC-CAMLR-43/BG/22; WG-FSA-2021/56).

2.23 The Scientific Committee noted ongoing changes in fleet composition (continuous versus traditional trawl vessels) and recommended that WG-EMM investigate the effect of fishing method on fishery distribution.

2.24 The Scientific Committee highlighted the urgent need for spatial distribution of the krill catch. It also noted that estimates of total catch are an uncertain representation of total removals due to potential errors in estimation procedures and the exclusion of escape mortality (Krafft et. al., 2016; Krag et al., 2021).

2.25 The Scientific Committee noted that the current situation with a trigger level of 620 000 tonnes in CM 51-01 alone is not precautionary due to local concentration of the catch (WG-EMM-2025, paragraph 4.47). It further noted the effectiveness of the now lapsed CM 51-07 in spreading the trigger level across the Subareas (WG-EMM-2025, paragraph 4.13) and the urgent need to implement an interim conservation measure to distribute catches across Subareas 48.1 to 48.4 (WG-EMM-2025, paragraph 4.14).

2.26 The Scientific Committee recalled that three components of the KFMA were endorsed by the Commission (CCAMLR-38, paragraph 5.7) and noted the significant scientific progress on the revised KFMA (WG-EMM-2025/05) which distributes catch limits in time and space in Subarea 48.1.

2.27 The Scientific Committee recalled that the original distribution of catch limits in the framework of the trigger level allocation under the now-lapsed CM 51-07 was largely based on the sum of maximum historical catches (the trigger level) and the proportions of biomass in each Subarea during the first synoptic krill survey in 2000 (the allocations) (WG-EMM-2025/05).

2.28 The Scientific Committee noted the discussion in WG-EMM-2025 about using the proportions of biomass from the two broad-scale surveys (2000 and 2019) (Krafft et al., 2021) to provide an interim measure (WG-EMM-2025, paragraph 4.16), and potential catch limits in the frame of the trigger level under CM 51-01 for each Subarea (WG-EMM-2025, paragraph 4.19).

2.29 The Scientific Committee further noted that the resulting potential catch limits in the frame of the trigger level under CM 51-01 for each Subarea are as follows (WG-EMM-2025, paragraph 4.19):

(i) 48.1 248 000 tonnes

(ii) 48.2 263 500 tonnes

(iii) 48.3 201 500 tonnes

(iv) 48.4 93 000 tonnes

2.30 The Scientific Committee did not reach consensus on these catch limits

2.31 CCAMLR-44/BG/29, presented by ASOC, emphasised the need to engage in constructive discussions on the KFMA and the D1MPA proposal and find a way forward at CCAMLR-44. ASOC encouraged the Scientific Committee and Commission to consider proposals in light of previous advice and recommendations, including those from SC-CAMLR. These included: using a staged approach to increase catch limits; ensuring that any increases in the catch limit are accompanied by increased monitoring of krill and krill predators; and harmonising the KFMA and the D1MPA proposal.

2.32 The Scientific Committee discussed three papers (SC-CAMLR-44/02; SC-CAMLR-44/BG/23; SC-CAMLR-44/BG/25) commenting on and proposing ways forward for the development of interim and long-term solutions in the krill fisheries management.

2.33 SC-CAMLR-44/BG/25 commented on the current and future krill fishery management in Area 48. It argued that the options for an interim measure for spatial distribution of catches in Area 48, intended to replace the expired CM 51-07, required scientific and legal justification. The authors noted the fundamental differences in the methodology of the 2019 and 2000 surveys (CCAMLR-37/16), and the 2019 survey data were not included in the model ensembles for the values used to estimate krill in Subarea 48.1 (WG-FSA-2021/39; WG-EMM-2021, paragraphs 2.32–2.33). It was noted that the use of general protection zones and seasonal protection zones (GPZ and SPZ) for the KFMA in a framework of harmonisation of the KFMA and the D1MPA proposal has no legal justification under current conservation measures. The authors noted that the revision of krill fisheries management in Subarea 48.1, as well as in other Subareas 48.2–48.4, should be implemented within the framework of coordinated fisheries management in Area 48, based on patterns of krill spatial distribution and the relationships between Subareas. This coordinated krill fishery management is implemented within the framework of CM 51-01. The authors proposed that the revision of krill fisheries management in Subareas 48.1- 48.4 should be carried out in a unified framework based on ecosystem-based and precautionary approaches, which include regular, standardised synoptic and regional krill surveys in summer and winter, accompanied by environmental data collection and regular observations of mammals and seabirds. The development of science-based metrics and indicators for assessing the potential ecosystem impacts of the krill fishery as a basis for a risk assessment, and a revision of the Scientific Observer Guidelines – Krill Fisheries were identified as integral parts of the krill fishery management review.

2.34 The Scientific Committee agreed that regular acoustic monitoring is essential to inform krill fisheries management. Conducting synoptic summer and winter surveys annually, however, may exceed the existing logistical and financial capacity. However, the Scientific Committee noted that this lack of capacity should not hold up progress on finding short- and long-term solutions for krill fisheries management. The Scientific Committee further noted that some of the issues raised, including the revision of the SISO guidelines, are being addressed.

2.35 SC-CAMLR-44/02 provided two options for interim conservation measures to replace the lapsed CM 51-07 and prevent excessive concentration of catches until a full implementation of a krill fisheries management approach (KFMA) harmonised with a marine protected area in the Antarctic Peninsula region, is feasible. The first option is a simple update to the Subarea catch limits, which was discussed by WG-EMM-2025 (paragraph 4.19) and could be implemented with or without GPZs and SPZs of the proposed D1MPA. The second option uses the first option as a starting point and permits an increase in the Subarea 48.1 cap to the "2max" level (395 000 tonnes, WG-EMM-2024 Table 5) over three years. This increase could be accompanied by spreading of the Subarea 48.1 catch across three groups of MUs in year two, increases in monitoring of the fishery, krill stock and krill dependent predators, implementation of GPZs and simplified SPZs (with consistent closed periods) and limitations on how much of the catch could be taken in summer.

2.36 SC-CAMLR-44/BG/23 outlined a proposal for the initial implementation of a revised Krill Fishery Management Approach (KFMA) in Subarea 48.1, marking a transition from a fixed catch limit regime to a more dynamic and ecosystem-based management framework. The proposal includes removing Subarea 48.1 from the current trigger level of 620 000 tonnes as

defined in CM 51-01 and keeping the Subarea-specific trigger levels for Subareas 48.2-4. The updated total trigger level for Subareas 48.2-4 would be 500,769 tonnes following the 130% logic of the expired CM 51-07. A new CM 51-08 is proposed for Subarea 48.1, which would spread a total catch limit of 668 101 tonnes across five MUs and between summer and winter according to the SOA. The proposed CM 51-08 would further implement GPZs and SPZs and contribute to the harmonisation of KFMA and a marine protected area in the Antarctic Peninsula region. An implementation of a monitoring framework to inform the KFMA and later revisions would be developed within the initial five years of this proposal. Key tasks requiring further consideration by the Scientific Committee and the Commission, including the revision of CM 51-01 and the establishment of a new CM 51-08 to regulate krill fishing in Subarea 48.1 were identified.

2.37 The Scientific Committee thanked the authors of SC-CAMLR-44/02 and SC-CAMLR-44/BG/23 for their constructive proposals.

2.38 The Scientific Committee recalled that the current trigger level of 620 000 tonnes specified in CM 51-01 was introduced in 1991 and was based on the sum of maximum historic catches reported at the time in each Subarea. It also noted that the trigger level is not linked to the assessment of krill biomass (WG-EMM-2025/05).

2.39 Some Members noted that an initial implementation of the KFMA, as proposed in SC-CAMLR-44/BG/23, may be premature at this stage, as key elements such as a sustainable financial and logistical framework to support data collection are still lacking.

2.40 Some Members raised concerns about the high catch allocation in the Gerlache Strait included in the option presented in SC-CAMLR-44/BG/23 and suggested that limits on permissible harvest rates could be used. This issue was previously discussed in WG-EMM-2024 (paragraph 5.36, 5.46 to 5.48)

2.41 Dr Kasatkina noted that the proposals to amend CM 51-01 and establish new CM 51-08 did not take into account existing knowledge about the patterns of krill distribution in Area 48 under the influence of water mass dynamics and that these proposals were not accompanied by sufficient data to justify the proposed conservation measures.

2.42 The Scientific Committee noted that WG-EMM-2025 (paragraph 4.12) recognised further work is required towards the full implementation of the KFMA in Subarea 48.1 and that additional work includes inter alia:

(i) development and implementation of a monitoring program that includes CEMP monitoring and at-sea monitoring;

(ii) detailed documentation of the KFMA processes that led to the recent calculations of putative catch limits for Subarea 48.1;

(iii) urgent need to develop a sustainable funding mechanism;

(iv) a time-bound implementation plan, including periodic updates of biomass, and review of monitoring (5–7 years cycle); and

(v) a mechanism to objectively evaluate the performance of any implemented measure.

2.43 The Scientific Committee further noted the need for additional consideration of how to use data collected from monitoring programs during the implementation of KFMA to provide advice on updating catch limits.

2.44 The Scientific Committee requested that the Commission address the urgent issue of developing sustainable funding mechanisms to support enhanced management of the krill fishery, including the collection of data necessary for the KFMA, and that funding mechanisms may differ between at-sea and land-based data collection.

2.45 The Scientific Committee discussed the design of Management Units (MUs) within Subarea 48.1 over which catch limits could be spread. It recalled that it had previously endorsed a set of nine candidate MUs (SC-CAMLR-43, paragraph 2.63) but acknowledged differing opinions about the appropriate number of MUs for interim and long-term solutions. The Scientific Committee also discussed options of increasing the number of MUs over time in conjunction with increasing catch limits and monitoring.

2.46 The Scientific Committee recognised that a common understanding of what a staged approach means is required. Options under consideration include those that include increases in both catch limits and monitoring in Subarea 48.1 over time and those that extend the KFMA from Subarea 48.1 to other Subareas over time. Discussions should be clear about which form of staging is being considered.

2.47 The Scientific Committee discussed the inclusion of GPZs and SPZs in potential interim solutions, and the eventual implementation of both the KFMA and a D1MPA.

2.48 Some Members supported the inclusion of SPZs and GPZs as proposed in SC-CAMLR-44/02 and SC-CAMLR-44/BG/23. Others suggested that more work on the design and validity of such zones was necessary.

2.49 The Scientific Committee agreed that clarification of whether a clear roadmap for the full implementation of the KFMA and proposed D1MPA is needed, and what such a roadmap would look like, is necessary. Possible elements of such a roadmap include time-bound milestones, associated performance reviews and potential fallback options if milestones are not reached.

2.50 The Scientific Committee discussed the evaluation of the performance of any implemented solution. It would be necessary to identify the frequency of such evaluations, their data requirements and the specific evaluation methods.

2.51 The Scientific Committee considered an additional option which maintained the CM 51-01 trigger level in its first two years and remove the trigger level in the third year.

2.52 The Scientific Committee did not reach consensus on how to manage the krill fishery in Area 48.

2.53 SC-CAMLR-44/BG/02, authored by WG-EMM and the CCAMLR Secretariat, summarised the development of the revised KFMA up to and including developments in 2024. This is intended as a public-facing document to accompany krill Fishery Reports and to be updated annually to reflect further developments in the KFMA.

2.54 The Scientific Committee endorsed publication of SC-CAMLR-44/BG/02 as part of the Fishery Reports and encouraged ongoing review of the document by WG-EMM. It noted that future updates should include consistent language when referring to the "Spatial Overlap Analysis/Risk Assessment Framework" and clear statements about the spatial scales at which the various KFMA components are applied.

2.55 SC-CAMLR-44/01 documented the use of the Spatial Overlap Analysis (SOA) to develop potential advice on the KFMA which has been presented in SC and WG-EMM reports (SC-CAMLR-41 Table 2 and WG-EMM-2025 Table 5). The paper aimed to facilitate reproduction and validation of this potential advice and the development of future advice. The paper provided a summary of the SOA, its input data and settings and its outputs. It documented changes that have been made to these inputs and settings over time, provides links to code and input data files, and list the settings used to generate the outputs presented in SC and WG-EMM reports. The authors identified some changes to reported outputs that are not currently documented, and which affect the values in SC-CAMLR-41 Table 2. They also noted the conflation of SOA-derived MUs (which cover c. 56 % of Subarea 48.1) and acoustic survey strata (which cover 100% of subarea 48.1) in SC-CAMLR-41 Table 3.

2.56 The Scientific Committee welcomed SC-CAMLR-44/01. It suggested that the document be further reviewed by WG-EMM-2026 and could then be considered for publication as an appendix to SC-CAMLR-44/BG/02 as part of the Fishery Reports. It also encouraged Members to develop accompanying documentation of other components of the KFMA, including precautionary yield estimates (based on the Grym) and biomass estimation (based on acoustic surveys). It encouraged the Working Groups and the authors of WG-EMM-2022/05, WG-FSA-2022/39 to add information on changes to output values documented in SC-CAMLR-44/01 (Table 1).

2.57 The Scientific Committee noted that the aspects of the original three components of the KFMA have been used to develop existing potential advice on potential spatial and seasonal catch limits (SC-CAMLR-44/BG/02, CCAMLR-38, paragraph 5.17), and that other aspects, including the krill stock hypothesis and ecosystem health checks, are intended to be used in future advice. The Scientific Committee encouraged documentation of all relevant aspects.

2.58 SC-CAMLR-44/P01 presented an article recently published in Proceedings of the National Academy of Sciences by authors affiliated with the SCAR Krill Expert Group. The authors proposed a management framework that integrates variability in krill recruitment and key pathways between spawning and nursery areas – a krill stock hypothesis - to inform decisions on catch limits and CMs. The authors highlighted that implementing this approach will require targeted data collection which can be accomplished through a multi-sector collaborative network, including partnering with industry.

2.59 The Scientific Committee endorsed the recommendation by WG-EMM (SC-CAMLR-44/10, paragraph 2.42) to incorporate a continuously updated KSH into the relevant components of the KFMA to inform the development of measures to conserve krill stocks and hence their predators.

2.60 The Scientific Committee endorsed the recommendation by WG-EMM-2025 (paragraph 2.130) to consider an enhanced CEMP as an integral part of implementing the KFMA.

2.61 SC-CAMLR-44/05 presented the main findings from the 2024 and 2025 summer surveys conducted by Chinese fishing vessels, which covered all five core candidate Management Units of the KFMA in Subarea 48.1. The surveys demonstrated a consistent pattern on the spatial separation between spawning and juvenile krill with spawning adults being mainly distributed in deep offshore waters beyond the shelf break of the South Shetland Islands and Elephant Islands, and juveniles being concentrated in the Antarctic Peninsula shelf area in the Bransfield Strait and around Joinville Island. The findings highlighted the need for considering the spatial distribution and connectivity of krill stocks as well as their association with oceanographic features across MUs.

2.62 The Scientific Committee thanked China for their efforts in conducting structured surveys in Subarea 48.1 and recognised the valuable findings on the spatial distribution and connectivity of krill stocks. It further emphasised the potential for such structured surveys to provide valuable data for the KFMA and KSH and encouraged aligning the survey transects with those suggested by WG-ASAM-2025 (paragraphs 3.5 – 3.15).

2.63 The Scientific Committee acknowledged the value of research conducted on fishing vessels in advancing Southern Ocean research and informing fisheries management. It further highlighted the importance of joint efforts between Members to implement such surveys.

2.64 The Scientific Committee noted that China had conducted similar surveys during winter (SC-CAMLR-43/BG/14), and welcomed further analysis from these surveys to be presented to the Scientific Committee and the relevant Working Groups.

2.65 The Scientific Committee noted that surveys conducted in core strata could be done annually, and that biomass estimates should not be extrapolated beyond the area surveyed (WG-ASAM-2025 paragraph 3.7).

2.66 The Scientific Committee endorsed the recommendation by WG-ASAM-2025 (paragraph 3.9) that if winter surveys were required, they could be conducted in late April/May before the development of sea ice that will reduce survey coverage.

2.67 The Scientific Committee endorsed the recommendation by WG-ASAM-2025 (paragraph 3.11) that the distance between sampling stations for acoustic biomass surveys should be 40 nm with the goal of a least 2 sampling stations on each transect, noting exceptions as specified in WG-ASAM-2025, paragraphs 3.15 (v) and 3.13. The Scientific Committee noted that sampling station spacing required for acoustic biomass estimates may differ from those required for ecological monitoring or to inform the KSH.

2.68 The Scientific Committee noted that the SOA boundaries in the PB1 and PB2 MUs could be revised in the future, since PB2 is unlikely to be accessible in summer or winter due to persistent sea ice conditions (WG-ASAM-2025 paragraph 3.18).

2.69 The Scientific Committee endorsed the recommendation by WG-ASAM-2025 (paragraph 3.41) to task the Secretariat with identifying the modifications needed to CM 23-06 (or other CMs) to permit fishing vessels conducting acoustic surveys to submit acoustic trawl catch data from research trawls exclusively through the acoustic survey metadata form instead of through the C1 form, and to develop a proposal for the Scientific Committee.

2.70 The Scientific Committee endorsed the recommendation by WG-EMM-2025 (paragraph 2.28) to task the Secretariat with circulating a survey form to develop practical guidelines for standardising and comparing different research trawl types to Members.

2.71 The Scientific Committee endorsed the recommendation by WG-EMM-2025 that a maximum stretched mesh size of 9 mm (paragraphs 2.29, 2.40) be used for the sampling of post-larval krill, and a maximum mesh size of 330 micrometres (paragraph 2.40) for research trawls and acoustic surveys.

2.72 The Scientific Committee endorsed the sampling plans proposed by WG-EMM-2025 (Tables 4 to 6) to support the implementation of the revised KFMA.

2.73 The Scientific Committee further noted that these sampling protocols should be used in conjunction with existing protocols developed by WG-ASAM-2024. The Scientific Committee requested that the Secretariat coordinate with relevant Members to develop a guidance note compiling all relevant protocols, with a view to streamlining their use.

2.74 The Scientific Committee endorsed a proposed research topic to Antarctica InSync (WG-EMM-2025, paragraph 2.121) on krill fishery-ecosystem interactions in Area 48, as well as a circumpolar assessment of krill biomass, krill biology and characterisation of krill flux.

2.75 The Scientific Committee noted recommendations by WG-FSA-2025 (paragraph 6.13):

(i) to adopt the new upscaling method for future by-catch analyses;

(ii) to separate annual reports of total by-catch and fish by-catch and update Figures 6 – 9 of the fishery report using the new method; and

(iii) to highlight the usefulness of additional comments and photos in observer cruise reports to help verify large by-catch events and unusual specimens.

2.76 The Scientific Committee noted that the Fishery Reports currently provide per-haul upscaled by-catch estimates and not estimates of total extrapolated by-catch including for additional hauls that were not inspected by observers.

Krill in Statistical Area 58

2.77 The Scientific Committee noted WG-FSA-2025/P01, which provided an update of a krill stock assessment and precautionary catch rates for Divisions 58.4.1 and 58.4.2 that were previously presented in WG-FSA-2023/68. It also noted that WG-FSA-2025 (paragraph 5.5) supported the assessment of the harvest rates for *E. superba* in Divisions 58.4.1 and 58.4.2-East and recommended a total catch limit for Division 58.4.1 of 391 754 tonnes (141 970 tonnes west of 103°E, 58 256 tonnes between 103°E and 123°E, and 191 528 tonnes east of 123°E) and 2 088 872 tonnes (1.448 million tonnes west of 55°E and 640 872 tonnes east of 55°E) in Division 58.4.2. The trigger level set under CM 51-03 remains in force.

2.78 The Scientific Committee recommended further review of the input parameters of the Grym stock assessment and resulting precautionary harvest rates for these two Divisions,

alongside those for the Grym stock assessment in Subarea 48.1 (WG-FSA-2022 paragraph 7.27) at WG-EMM to ensure consistent approaches and data quality standards across krill assessments.

Harvested species - finfish general issues

3.1 The Scientific Committee considered several general issues related to finfish fisheries, including the toothfish Management Strategy Evaluation (MSE) workplan, toothfish ageing, review of research proposals, Trend Analysis and developments towards integrated stock assessments in data limited fisheries for toothfish, and tagging.

3.2 Proposed precautionary finfish catch limits (tonnes) for 2025/26 are given in Table 1.

Toothfish MSE workplan

3.3 The Scientific Committee noted the progress made by WG-SAM-2025 and WG-FSA-2025 towards addressing the workplan outlined by SC-CAMLR-43, paragraph 3.8.

3.4 The Scientific Committee noted that there were likely to be significant difficulties in evaluating the current CCAMLR toothfish Decision Rules (Component 1 of Phase 1 MSE in WG-SAM-2025, paragraph 5.13). The Scientific Committee also noted that such constant catch rules were unlikely to be optimal when stocks were approaching or near target levels and were not considered best practice in most other fisheries.

3.5 The Scientific Committee also noted the difficulty with longer-term projections given the assumptions associated with using historical data for projections and the current CCAMLR toothfish Decision Rules for toothfish that require a 35-year projection, but that there were a range of alternative harvest strategies where such a long-term projection is not required.

3.6 The Scientific Committee noted that the current constant-catch-based CCAMLR toothfish Decision Rules, with a 35-year projection period, no longer constitute a best practice approach to fisheries management, and agreed that the future development of MSEs for toothfish should focus on Harvest Control Rules (HCRs) that are based on harvest rates.

3.7 The Scientific Committee noted that the objectives of the current CCAMLR toothfish Decision Rules would continue to form the basis for the development of HCRs based on harvest rates.

3.8 The Scientific Committee agreed that the work on stock-specific MSEs (Component 2 of Phase 1 MSE, WG-SAM-2025, paragraph 5.13) using HCRs based on harvest rates should be a priority. The Scientific Committee noted that while the objectives and general implementation principles would need to be consistent among stock-specific MSEs, the resulting HCRs may be different depending on the stock specific characteristics, productivity, data collection and uncertainties.

3.9 The Scientific Committee noted that good progress had been made in the development of HCRs for toothfish and encouraged Members to continue to collaborate on the development of MSEs for toothfish.

3.10 The Scientific Committee agreed that:

(i) MSE work focus on HCRs based on harvest rate such as those recommended by WG-SAM-2024 (paragraph 6.7). The Scientific Committee also noted that other HCRs may be suitable for a particular stock, including for example HCRs that define changes in catch limits relative to current catch limits

(ii) the key uncertainties to be included in the MSE could be specific to each stock but should include plausible ranges of key uncertainties including potential changes due to climate change

(iii) the potential performance indicators proposed by WG-SAM-2024 (paragraph 6.10), average annual variability (AAV) and the preliminary performance measures proposed in WG-FSA-2025/11 and WG-FSA-2025/41 should be further considered and developed over the intersessional period when developing MSEs

(iv) a framework for the scientific and management response for when exceptional circumstances are triggered should be developed.

Ageing of toothfish

3.11 The Scientific Committee noted the value of the inter-laboratory collaboration and mentoring for toothfish ageing programmes. The Scientific Committee also recommended that the current research proposal template be expanded, so that question 3(c) specifies how readers will be trained, otoliths will be prepared, aged, and calibrations conducted, and a milestone detailing when these data will be submitted to CCAMLR.

3.12 The Scientific Committee thanked the convenors K. Owen (UK), Dr P. Hollyman (UK), Dr J. Devine (NZ), Dr C. Brooks (USA) and the UK for hosting the WS-ADM3.

3.13 The Scientific Committee requested that CCAMLR Otolith Network (CON) develop a timetable for incorporating age data that could be used in assessments into the CCAMLR age database. The Scientific Committee also requested that CON develop a categorisation of age data quality to facilitate the consideration of these data into future stock assessments.

Trend analysis

3.14 The Scientific Committee requested the Secretariat publish a full time series of CPUE trends (or CPUE-derived biomass estimates) and catch limits for each Research Block, and agreed that:

(i) the trend analysis procedure did not need to be presented to future meetings of WG-SAM for methodological review, unless there were methodological changes

(ii) the influence of updates in the GEBCO bathymetry would only need to be investigated if requested.

(iii) the retrospective analysis of the catch limit advice would only be calculated on request.

Review of new research proposals for *Dissostichus* spp. notified under CMs 21-02 and 24-01

3.15 The Scientific Committee recommended that the research plans for *Dissostichus* spp. notified under CMs 21-02 and 24-01 should provide information on how data collection quality is evaluated to identify any potential issues and ensure reliable data collection at sea. The Scientific Committee also noted that evaluating the likelihood of success of new and ongoing research plans would be assisted by the inclusion of a summary of the achievement of previous milestones in the research plan.

3.16 The Scientific Committee discussed that as research plans have developed, the progress of the research plans notified under CM 21-02 beyond the first year should be evaluated based on:

(i) the quality of at sea data collection

(ii) the quality of parameter estimates towards a stock assessment

(iii) progress towards developing a stock assessment, and

(iv) the progress of other milestones.

3.17 The Scientific Committee agreed that research plans should be evaluated in their first year based on the criteria summarised in Table 7 of WG-FSA-2025. The Scientific Committee requested that the Conveners of WG-SAM and WG-FSA, and the Chair of the Scientific Committee develop a paper for review by WG-SAM and WG-FSA in 2026 which outlines metrics for reviewing research plans in subsequent years. The Scientific Committee tasked WG-FSA with undertaking a preliminary assessment using the revised evaluation criteria for research plans.

3.18 The Scientific Committee noted that if there was any revision of the evaluation criteria, then this may require changes to the template format used to propose research plans (paragraph 3.11).

Tagging

3.19 The Scientific Committee welcomed the development of the tagging training video (WG-FSA-2025/53), noting that it will be a useful resource for scientific observers and crew training. The Scientific Committee requested the Secretariat translate the video into the other official CCAMLR languages (French, Spanish and Russian) as well as Bahasa Indonesian to support broader use across fishing nations.

3.20 The Scientific Committee requested the Secretariat develop a survey in 2026 to gather information from vessels which have not achieved an 80% tag overlap statistic in exploratory CCAMLR fisheries. The data from this survey could be used to educate vessel crews on practices leading to high tag overlap and also to gather information on factors that may hinder better performance (WG-FSA-2025, paragraphs 5.15 – 5.19). The Scientific Committee also requested the Secretariat survey include vessels with a high tag overlap to allow a better understanding of the procedures and strategies used on those vessels.

Progress towards assessments in data limited fisheries

3.21 The Scientific Committee welcomed the success of the first Cap-DLISA workshop (CCAMLR-44/BG/31 Rev. 1) and thanked the workshop participants for the large amount of work that substantially progressed the scientific understanding of toothfish in Subarea 48.6. The Scientific Committee agreed that a further workshop in 2026/27 would be valuable to further progress the capacity in undertaking stock assessments in data limited fisheries such as Subarea 48.6 (and other areas notified under CM 24-01, such as Subarea 88.3) so that it can be used for management advice.

3.22 The Scientific Committee noted that the workshop had been supported by contributions from the CCAMLR General Capacity Building and General Science Capacity Funds. The Scientific Committee encouraged the Cap-DLISA participants to develop a second General Capacity Building Fund application to further progress the capacity development in stock assessments for toothfish in data-limited fisheries.

3.23 The Scientific Committee noted that there was an urgent need to develop more stable funding mechanisms to help the work of the Scientific Committee and its Working Groups.

Statistical Area 48

Icefish

3.24 The Scientific Committee noted the recommendations in both WG-SAM-2025 (paragraph 3.21) and WG-FSA-2025 (paragraph 3.4) that research plans submitted under paragraph 3 of CM 24-01 which include an acoustic survey should be reviewed by WG-ASAM in the first instance and that this may require a change in the submission deadline for these research proposals.

3.25 The Scientific Committee recommended that for research plans notified under CM 24-01, paragraph 3, which include an acoustic biomass estimate as a primary objective, WG-ASAM is the relevant Working Group and such plans should be reviewed there in the first instance. The Scientific Committee suggested that these research plans should be notified by submitting documents to WG-ASAM in addition to the current research notification process submitted by June 1st.

3.26 The Scientific Committee recommended that WG-ASAM add to its workplan the development of acoustic survey protocols for finfish similar to those developed for krill.

3.27 The Scientific Committee recommended that future research proposals that include an acoustic survey for finfish should include a self-assessment table to support the development, implementation, standardisation and review of survey protocols (as requested by SC-CAMLR-39, Annex 7, paragraph 4.28 and Table 9).

Icefish (*Champsocephalus gunnari*) in Subarea 48.3

3.28 The Scientific Committee noted the discussion in WG-FSA-2025 on mackerel icefish (*Champsocephalus gunnari*) in Subarea 48.3 (paragraphs 3.5 to 3.11).

3.29 The Scientific Committee noted that the current length-based assessment is robust, highly precautionary, and a suitable basis for providing management advice, given the significant difficulty in age-reading otoliths from this species. The Scientific Committee further noted that collection of otoliths may be beneficial for potential future ageing and connectivity studies, and such data may also potentially be useful for any future age-based stock assessment.

3.30 The fishery for *C. gunnari* in Subarea 48.3 operated in accordance with CM 42-02 and associated measures. In 2024/25, the catch limit for *C. gunnari* was 1 824 tonnes and 9 tonnes was taken as of 31 July 2025. Details of this fishery and the stock assessment of *C. gunnari* are contained in the Fishery Report (https://fisheryreports.ccamlr.org).

3.31 The Scientific Committee recommended that the catch limit for mackerel icefish in Subarea 48.3 should be set at 3 430 tonnes for 2025/26 and 2 230 tonnes for 2026/27 seasons (Table 1).

Toothfish (*Dissostichus* spp.)

Toothfish (*Dissostichus* spp.) in Subarea 48.4

3.32 The Scientific Committee noted deliberations by WG-FSA-2025 on *Dissostichus* spp. in Subarea 48.4 (WG-FSA-2025, paragraphs 4.28 to 4.37), which included discussions on a tag-based population assessment (WG-FSA-2025/12) and the harvest rate applied to the result of this assessment.

3.33 The Scientific Committee endorsed the advice of WG-FSA-2025 (WG-FSA-2025, paragraph 4.34) and recommended that the catch limit for *D. mawsoni* in Subarea 48.4 be set at 32 tonnes for the 2025/26 fishing season. It further recommended that assessments for this Subarea be carried out every two years, starting in 2026 to be in line with other toothfish stock assessments.

3.34 The Scientific Committee endorsed the advice of WG-FSA-2025 (WG-FSA-2025, paragraph 4.37) and recommended that the catch limit for *D. eleginoides* in Subarea 48.4 be set at 33 tonnes for the 2025/26 and 2026/27 seasons and noted the intention for an updated stock assessment to be presented in 2026 in line with other integrated toothfish stock assessments.

Toothfish (*Dissostichus spp.*) in Subarea 48.6

3.35 The Scientific Committee noted deliberations by WG-FSA-2025 on *D. mawsoni* in Subarea 48.6 (WG-FSA-2025, paragraphs 4.87 to 4.110) which included discussions on the considerable scientific advances in this Subarea following the Cap-DLISA workshop.

3.36 The Scientific Committee endorsed the advice of WG-FSA-2025 (paragraphs 4.109 and 4.110) and recommended that the research plan specified in WG-SAM-2025/02 continue and with the catch limits for *D. mawsoni* in Subarea 48.6 as specified in Table 1.

Toothfish (*Dissostichus spp.*) in Subarea 48.2

3.37 The Scientific Committee noted the discussions and extensive review of the two research plans proposed by Chile and Ukraine, respectively, to undertake research in the Subarea 48.2, which is classified as a closed area, at WG-SAM-2025 (paragraphs 6.10 to 6.15) and WG-FSA-2025 (paragraphs 4.126 to 4.138).

3.38 The Scientific Committee noted that whilst significant development had been undertaken on the proposals between WG-SAM-2025 and WG-FSA-2025, the proponents had not been able to develop a joint proposal in that time. The Scientific Committee further noted WG-FSA-2025 advice (paragraph 4.133) that the Working Group was unable to reach consensus on both proposals being undertaken in parallel with their own catch limits as there was no basis to determine if the combined effects of these two research plans submitted under CM 24-01 were precautionary.

3.39 The Scientific Committee recalled discussions in CCAMLR-XXXI (paragraph 5.28) regarding joint research plans to be developed when several Members propose research in the same area.

3.40 The Scientific Committee noted the request from WG-FSA-2025 (paragraph 4.137) to provide guidance to the proponents of the two proposals in Subarea 48.2 under CM 24-01 for coordinating their research plans or combining into a single proposal, as encouraged by WG-SAM-2025 (WG-SAM-2025, paragraph 6.15). The Scientific Committee recommended a coordinated or joint proposal should provide justification for:

(i) conducting research fishing in the closed area,

(ii) proposing a higher catch limit than in previous research (75 tonnes), and

(iii) be restructured to align with the purpose of the research linked to Commission or Scientific Committee priorities.

3.41 The Scientific Committee recommended that when multiple Members propose research plans in the same area and the primary objectives and sampling methodology are similar, then a joint multi-member proposal should be submitted. If there are differences in the primary objectives and/or sampling methodology, then coordination of the research plans should include:

(i) coordination of the catch limits across the total area (Subarea/Division),

(ii) coordination of complementary objectives, and

(iii) coordination of complementary data collection.

3.42 In these cases, the research proponents should detail where their research plans differ and why they cannot be aligned. The relevant Working Groups should then evaluate the different research plans and provide advice if one, some, or all research plans should proceed given their objectives and sampling designs.

3.43 The Scientific Committee noted that there was no consensus on the research plans submitted under CM 24-01in Subarea 48.2 proceeding in the 2025/26 season.

3.44 The Scientific Committee requested that the Commission provide guidance on whether scientific research fishing notified under CM 24-01 mainly focusing on data collection within closed areas is a priority for the current work of the Commission.

Toothfish (*Dissostichus eleginoides*) in Subarea 48.3A

3.45 The Scientific Committee noted the discussions and extensive review of the research plan proposed by Chile to undertake research in the closed Management Area 48.3A at WG-SAM-2025 (paragraphs 6.16 to 6.20) and WG-FSA-2025 (paragraphs 4.139 to 4.148).

3.46 The Scientific Committee noted that whilst significant developments had been undertaken on the proposal between WG-SAM-2025 and WG-FSA-2025, WG-FSA-2025 had not been able to reach consensus on conducting the proposed research (WG-FSA-2025, paragraph 4.146).

3.47 The Scientific Committee noted the discussions in WG-FSA-2025 (paragraphs 4.142 and 4.144) had included that this research proposal was an unusual situation as Management Area 48.3A has previously had a catch limit of 0 tonnes but is an area that is included within the 48.3 stock assessment for *D. eleginoides*. The Scientific Committee noted that Area 48.3A has been closed to fishing for 18 years with a catch limit of 0 tonnes, with the associated benefits of undisturbed benthic habitats.

3.48 The Scientific Committee further noted that in order to achieve the intention of the Convention, some parts of the Convention Area need to be closed to fishing and those areas must include some toothfish habitat. The Scientific Committee, noting the request for advice from the Commission regarding scientific research fishing within closed areas (paragraph 3.1.22), recommended that a very strong justification for scientific research fishing in a closed area should be provided.

3.49 Dr. Collins noted that in his view, the catch limit proposed and a marginal improvement in the stock assessment is not a strong enough justification for fishing in a closed area. Dr. Collins further noted that some of the objectives covered in the proposal (e.g. size-depth patterns) are already well established.

3.50 Dr. Montenegro noted that in order to determine if the proposed catch limit for the research plan is appropriate, collection of data in the area through fishing needs to be undertaken. Moreover, Dr. Montenegro noted that once the data from the first season of this

research plan are obtained, the catch limits can be adjusted to levels that do not endanger the conservation of the *D. eleginoides* in Management Area A.

3.51 The Scientific Committee noted that there was no consensus on the research plan proposed in Management Area 48.3A proceeding in the 2025/26 season.

Statistical Area 58

Icefish

3.52 The fishery for *C. gunnari* in Division 58.5.2 operated in accordance with CM 42-02 and associated measures. In 2024/25, the catch limit for *C. gunnari* was 1 824 tonnes and 383 tonnes was taken as of 31 July 2025. Details of this fishery and the stock assessment of *C. gunnari* are contained in the Fishery Report (https://fisheryreports.ccamlr.org).

3.53 The Scientific Committee noted that WG-FSA-2025 reviewed a preliminary assessment of *C. gunnari* in Division 58.5.2 (WG-FSA-2025/17) that was based on the results of the trawl survey described in WG-FSA-2025/18. The 2025 survey showed a large 3+ cohort in the population and high estimated biomass. The assessment projected forward the proportion of the lower one-sided 95 percentile CI of fish aged 1+ to 3+ (9 901 tonnes). The assessment resulted in yields of 1 429 tonnes in the 2025/26 season and 1 126 tonnes in the 2026/27 season following the CCAMLR decision rules for icefish.

Advice to the Commission

3.54 The Scientific Committee recommended that the catch limit for mackerel icefish in Division 58.5.2 should be set at 1 429 tonnes in the 2025/26 season and 1 126 tonnes in the 2026/27 season.

Toothfish

Dissostichus mawsoni in Divisions 58.4.1 and 58.4.2

3.55 The Scientific Committee noted the discussion at WG-SAM-2025 (paragraphs 7.4 to 7.10) and WG-FSA-2025 (paragraphs 4.111 to 4.125) regarding the research conducted in the *D. mawsoni* exploratory fishery in Divisions 58.4.1 and 58.4.2 and an updated research plan for 2025/26, the last year of the research plan, by Australia, France, Japan, the Republic of Korea, and Spain under CM 21-02, paragraph 6(iii).

3.56 The Scientific Committee noted that exploratory fishing under this research plan has been conducted in Division 58.4.2 in the past season by two Members using autoline equipped vessels, but that no exploratory fishing for toothfish has been allowed in Division 58.4.1 since 2018/19.

3.57 The Scientific Committee noted that macrourid otoliths had been collected for use in ageing studies, and that the analysis of by-catch species is planned as a milestone for 2026.

3.58 The Scientific Committee noted the considerable work that had been undertaken by the proponents to modify the research plan for Division 58.4.1 to allow for an evaluation of the effects of gear type on the collected data using an experimental design which had been developed based on a recommendation by WG-SAM-2024 (paragraph 8.19). These revisions allow for the integration and calibration of different gears and modelling approaches and are essential to address one Member's concerns about meeting the reporting format of CM 24-01/A, Format 2.

3.59 Dr Kasatkina reiterated that the research plan in Division 58.4.1 does not meet the requirements of CM 21-02, paragraph 6 (iii), under which this research plan is submitted. She noted that multiple gear types should not be used for multi-vessel research proposals submitted under CM 21-02, paragraph 6(iii), as research plans should be reported in accordance with Conservation Measure 24-01, Annex 24-01/A, Format 2, which refers to calibration/ standardisation of sampling gear.

3.60 Dr Kasatkina noted that the issue of gear standardisation had been ongoing for many years but that there are no proposals to provide investigations in this aspect. She noted that in previous years several papers on the different results (abundance indices, population structure and productivity indices, distribution of toothfish and dependent species; results of tag-recapture) obtained using different gears had been presented but this data was not taken into account (WG-FSA-17/16;WG-SAM-17/23; WG-FSA-16/13 Rev. 1; SC-CAMLR-XXXVII/BG/23). Dr Kasatkina also noted that using standardised fishing gear and standard procedures for adjusting and monitoring of its parameter when conducting multi-vessel research programs is a traditional and mandatory practice in ICES areas (WG-SAM-2019/34). She noted that currently there is no scientifically based evidence adopted by the Scientific Committee that would allow proponents of the research plan in Division 58.4.1 to ignore the use of standardised fishing gear in multi-vessel research plan for toothfish in data-poor area (WG-FSA-IMAF-2024/77; SC-CAMLR-43, paragraph 3.68).

3.61 Dr Kasatkina also noted that tag recapture rates had been low in Division 58.4.1 which could be a result of the use of different gear types (WG-FSA-2025/19). Dr. Kasatkina noted that the use of different types of gear should be considered as a critical factor for achieving the efficiency and reliability of research program on toothfish in Division 58.4.1. She reemphasised that the same gear type is used in the research conducted by Ukraine and Korea in Subarea 88.3.

3.62 Dr Kasatkina recalled that for period 2005 – 2018 number of releases was 11 235 fish and number of recaptures was 57 fish (WG-FSA-2025/19).

3.63 All other Members noted that the proposed research plan represents an appropriate scientific experiment to calibrate and test the effects of multiple gear types on the data collection in a tagging program and recommended it to go ahead. They recalled that WG-FSA-2025 had noted that there are many established methods to allow for calibration between gears and that the proposed research satisfies the requirements of CM 24-01 Annex 2, Format 2- paragraph3a. (WG-FSA-2025 paragraph 4.120). They expressed disappointment that the Scientific Committee could again not find consensus on the research plan proceeding in Division 58.4.1 and it was regrettable that the work has not proceeded for 6 years.

3.64 These Members also noted that there was no evidence that the tag recapture rates were unusually low in Division 58.4.1, that these recapture rates were consistent with independent

biomass estimates from CPUE by seabed area, and that progress has been made on tagging best practices since 2018 (WS-TAG-2023, video tutorials (WG-FSA-2025/53).

3.65 The Scientific committee recalled that there had been extensive discussions over the last 6 years about the use of different gear types for conducting research to estimate toothfish biomass with no agreement reached for the research to proceed.

3.66 The Scientific Committee noted that the interpretation of CMs is a matter for the Commission and recommended that it provides advice to the Scientific Committee on the definition and interpretation of 'calibration/standardisation of sampling gear' within Annex CM 24-01/A Format 2 paragraph 3(a).

3.67 The Scientific Committee endorsed the research plan for the exploratory fishery in Division 58.4.2 but was unable to reach consensus on how to proceed in the exploratory *D. mawsoni* fishery in Division 58.4.1.

3.68 The Scientific Committee recommended that the catch limit for D. mawsoni in Division 58.4.2 be based on the trend analysis shown in Table 1 for the 2025/26 fishing season.

Patagonian toothfish (*D. eleginoides*) in Division 58.5.1

3.69 The fishery for D. eleginoides in Division 58.5.1 is conducted in the French Exclusive Economic Zone (EEZ) of the Kerguelen Islands. Details of the fishery and the stock assessment are contained in the Fishery Report (https://fisheryreports.ccamlr.org).

3.70 No new information was available on the state of fish stocks in Division 58.5.1 outside areas of national jurisdiction. The Scientific Committee, therefore, recommended that the prohibition of directed fishing for D. eleginoides, described in CM 32-02, remain in force in 2025/26.

Patagonian toothfish (*D. eleginoides*) in Division 58.5.2

3.71 The fishery for D. eleginoides in Division 58.5.2 operated in accordance with CM 41-08 and associated measures. In 2024/25, the catch limit for D. eleginoides was 2 120 tonnes and 1 456 tonnes was taken as of 31 July 2025. Details of the fishery and the stock assessment are contained in the Fishery Report (https://fisheryreports.ccamlr.org/).

3.72 No new information was available on the state of fish stocks in Division 58.5.2 outside areas of national jurisdiction. Therefore, the Scientific Committee recommended that the prohibition of directed fishing for D. eleginoides, described in CM 32-02, remain in force in 2025/26.

Patagonian toothfish (*D. eleginoides*) in Subarea 58.6

3.73 The fishery for D. eleginoides at Crozet Islands is conducted within the French EEZ and includes parts of Subarea 58.6 and Area 51 outside the Convention Area. Details of this

fishery and the stock assessment are contained in the Fishery Report (https://fisheryreports.ccamlr.org/).

Statistical Area 88

Toothfish

Ross Sea region (Subarea 88.1 and SSRUs 882AB)

3.74 The Scientific Committee noted that vessels entered the Convention Area into the Ross Sea region (Subarea 88.2) up to 46 days prior to the opening of the fishery. It noted that this behaviour might affect the interpretation of the catch and effort data and be a contributing factor in the short season in the N70 Management Area. The Scientific Committee noted that the lack of constraints on entering an area a long time prior to the commencement of fishing was at odds with the requirement to leave any management area as soon as that area was closed to fishing (WG-FSA-2025, paragraphs 2.2, 2.3 and 2.8).

3.75 The Scientific Committee noted that N70 Management Area was closed four days after the start of the season and had exceeded the catch limit for the Management Area by 54% (SC-CAMLR-44/BG/01 Table 3). It noted that the combination of a low catch limit and high catch rates had led to difficulties forecasting the closure date. It noted that the early arrival of vessels and the short fishery may create risks for achieving the objectives of the Convention.

3.76 The Scientific Committee recommended that further investigations into catches, catch rates, tag release, tag recapture data and tag overlap statistics from vessels which operated in the N70 Management Area be undertaken.

3.77 The Scientific Committee noted that the late retrieval of gear and departure by some vessels in the fishery may also affect the quality of data collection and recommended that the investigations also include this factor in the analysis.

3.78 The Scientific Committee noted that although the catch in the N70 Management Area had exceeded the catch limit, this was taken into account in the determination of the closure of the Ross Sea S70 region, and the overall catch limit in the Ross Sea region fishery had not been exceeded.

3.79 The Scientific Committee recommended that Commission note that the large number of vessels notified to fish in the Ross Sea region fishery may lead to further difficulties forecasting a closure date for the N70 Management Area that ensure the catch limit is not exceeded.

Ross Sea Shelf Survey

3.80 The Scientific Committee noted that WG-SAM-2025 had evaluated the proposal and the self-assessment provided in Appendix 1 of WG-SAM-2025/08 and agreed that the survey design would achieve its objectives.

3.81 The Scientific Committee noted that an updated proposal had been presented in WG-FSA-2025/43, and that WG-FSA-2025 had evaluated the proposal in the assessment table (WG-FSA-2025, Table 4) and agreed that the catch limit was appropriate for the research.

3.82 The Scientific Committee endorsed the recommendations of WG-FSA-2025, paragraph 4.155, that the research outlined in WG-FSA-2025/43 for the 2025/26–2027/28 seasons proceed, with a catch limit set at 64 tonnes for 2025/26, 85 tonnes for 2026/27 and 64 tonnes for the 2027/28 season.

Subarea 88.3

3.83 The Scientific Committee endorsed the recommendation of WG-FSA-2025 that the research outlined in WG-FSA-2025/49 Rev. 1 for Subarea 88.3 for the 2025/26 season proceed.

3.84 The Scientific Committee recommended that the catch limits for Subarea 88.3 be based on the trend analysis as shown in Table 1, with the effort-limited Research Block 2 being conducted with seven sets for each vessel and a catch limit of 20 tonnes.

3.85 The Scientific Committee recalled the discussions in the Commission (CCAMLR-XXXVI, paragraphs 5.20 to 5.24) on a proposal to establish 88.3 as an exploratory fishery. The Scientific Committee noted that the proponents have completed the research plan discussed in 2017 and another 3-year research plan since then. It further noted that research in this area has been undertaken for a long time now and is on its way to developing a stock assessment. The Scientific Committee considered whether Subarea 88.3 could move to an exploratory fishery notified under CM 21-02, paragraph 6 (iii).

3.86 The Scientific Committee noted that CM 21-02, paragraph 1 provided for new fisheries to be reclassified as exploratory fisheries, but that new fisheries were defined in CM 21-01, paragraph 1 as those where fishing had not previously occurred, which did not apply to Subarea 88.3.

3.87 The Scientific Committee noted that a directed fishing for *Dissostichus* spp. In Subarea 88.3 was currently prohibited in the area under CM 32-02, Annex A, with the exception of research under CM 24-01, until a survey of stock biomass is carried out and Commission decides to open the area based on advice from the Scientific Committee.

3.88 The Scientific Committee noted that despite proposals from some Members to develop a regulatory framework for toothfish fisheries, this had not been agreed and there was not yet an agreed mechanism for moving from one category of fishery to another.

3.89 The Scientific Committee noted that the proposed exploratory fishery would overlap with the proposed D1MPA and that the impact of any fishing activities and locations would need to be consistent with the objectives of the proposed D1MPA.

3.90 The Scientific Committee noted the challenges of establishing exploratory fisheries under the Conservation Measures in force and requested that the Commission provide guidance on the development of an exploratory fishery in this area and on the harmonisation of the proposals for an exploratory fishery with the proposed D1MPA.

3.91 ASOC made the following statement

> 'ASOC welcomed the progress on toothfish research and management including the development of a Management Strategy Evaluation workplan. ASOC is concerned at the impact of climate change on future recruitment and looks forward to seeing further discussion over the coming year.'

Non-target catch

Fish and invertebrate by-catch

4.1 The Scientific Committee considered the discussion during WG-FSA-2025 regarding by-catch management in krill fisheries (WG-FSA-2025, paragraphs 6.27-6.42).

4.2 The Scientific Committee recalled that all by-catch taxa, total weight and numbers, should be reported in the C1 form from every haul (traditional) or every two hours period (continuous), and that observers are tasked (not mandatorily required) to sample 25 kg of catch on a daily basis from which they separate and identify by-catch in accordance with instructions in the Scientific Observer Logbook (2025 Observer Krill Trawl Logbook - Instructions, 2025). However, the Scientific Committee further noted the disparity between the upscaled observer by-catch estimates and that reported by the vessels, with observer data indicating that by-catch is an order of magnitude higher than that reported by vessels (WG-FSA-2025/03).

4.3 The Scientific Committee noted that clear guidance on vessel subsampling protocols was required to ensure comparability between observer and vessel derived datasets, and that this work would strengthen compliance with CM 23-06 requiring vessels to report total by-catch, while also improving the accuracy of estimates of by-catch (WG-FSA- 2025, paragraph 6.35).

4.4 The Scientific Committee noted that the key distinction for data collection by vessel crew should be between krill and non-krill catch and that a trial implementation could provide useful feedback on sampling practicality and data reporting (WG-FSA-2025, paragraph 6.36).

4.5 The Scientific Committee endorsed the recommendation by WG-FSA (WG-FSA-2025, paragraph 6.38) that improvements be made to existing reporting structures and that the revised methodology (WG-FSA-2025 Figure 2) could be implemented together with an updated by-catch reporting form (WG-FSA-2025 Table 8) on a trial basis.

4.6 The Scientific Committee further endorsed the recommendation by WG-FSA (WG-FSA-2025, paragraph 6.39) that:

(i) As a trial, the proposed method would require vessels to continue to separate and report large fish by-catch in the C1 forms, but also take samples of at least 2 kg from the catch from every haul (traditional) or every two hours (continuous) and report the weight of each component of the catch (krill and non-krill, without the need to identify by-catch species)

(ii) An additional worksheet would be added to the revised C1 form, with a proposed target for introduction in 2026/27 season (Table 8).

4.7 The Scientific Committee also requested that the Secretariat analyse the by-catch sampling frequency among vessels and its effect on by-catch variability from the first year of the trial and consider additional changes to the worksheet (paragraph 4.6(ii)).

Incidental mortality of seabirds and marine mammals associated with fisheries

4.8 The Scientific Committee considered discussions held by WG-SAM regarding the development of Generalised Additive Models (GAMs) to extrapolate SISO warp strike observations to the total fishing effort in the krill fishery (WG-SAM-2025, paragraphs 2.1 to 2.4).

4.9 The Scientific Committee welcomed the work and noted that further development of this method could take into consideration the behaviour of birds around fishing vessels under different risk periods of fishing operation and environmental conditions (relating to light, wind, and the relationship between wind and vessel course) (WG-FSA-2025, paragraph 6.6). The Scientific Committee suggested continuing discussion on this method at WG-IMAF-2026.

4.10 The Scientific Committee endorsed the proposed modifications to the IMAF and warp strike worksheets for observer trawl finfish and krill fisheries logbooks (WG-EMM-2025, paragraph 3.22) and agreed to implement these in the 2026 season.

4.11 The Scientific Committee noted the discussion by WG-EMM-2025 on the methods for calculating the sampling rate for warp-strike observation on trawlers towing twin nets concurrently (WG-EMM-2025, paragraph 3.24). It referred further discussion on the appropriate calculation method to WG-IMAF-2026.

4.12 The Scientific Committee noted a summary of IMAF and warp strike activities presented at WG-FSA-2025 (paragraph 6.1) and extrapolated estimates for the 2024/25 season based on data up to and including 15 September 2025, and that full analyses for the 2024/25 season will be presented at WG-IMAF-2026. The extrapolated number of seabird mortalities in the longline fisheries for the season to date was 30 individuals, which is the second lowest on record.

4.13 The Scientific Committee further noted one southern elephant seal (*Mirounga leonina*) in Subarea 48.3 was the only reported marine mammal mortality from the longline fisheries.

4.14 The Scientific Committee noted one humpback whale (*Megaptera novaeangliae*) mortality (detailed in WG-EMM-2025/27) and one unidentified Otariid seal (WG-FSA-2025/07) reported in the krill trawl fishery in the 2024/25 season (WG-EMM-2025, paragraphs 3.33 and 3.34). The Scientific Committee thanked Chile for the transparent report which provided information that WG-IMAF and the collaborative IWC Discussion group could use to further minimise the occurrence of these incidents. Noting that this is the eighth humpback mortality reported since the start of the krill fishery (all since 2021), the Scientific Committee also noted that further work is needed to minimise whale entanglements or entrapments.

4.15 Some Members recalled vessel and area limits on seabird incidental mortality (CM 42-01 paragraph 8) and noted that a similar approach could prove effective to limit cetacean incidental mortality.

4.16 The Scientific Committee noted the low estimates of seabird and mammal mortality from longline fisheries operating in the Convention Area (WG-FSA-2025, paragraph 6.2). It recalled that low mortalities in the longline fishery had not always been the case, and such continued low rates in mortalities was welcome progress.

4.17 The Scientific Committee recalled that most frequently struck birds for krill trawlers are small petrels, which are highly manoeuvrable while flying, and this characteristic may mitigate the potential injury caused by strikes (SC-CAMLR-43, paragraph 4.15). It also noted that warp strikes may cause longer term injuries to the birds that result in mortality above the level that is observed. It suggested future research to investigate the post-contact status of sea birds interacting with krill fishing gears.

4.18 SC-CAMLR-44/BG/30 presented a preliminary report on the result of the trial on net monitoring cable seabird-strike mitigation measures conducted by the Chinese continuous fishing vessels *Shen Lan*, *Fu Xing Hai* and *Fu Yuan Yu 9199* during the 2024/25 fishing season, from which detailed information will be submitted to the WG-IMAF-2026 as per the requirements of CM 25-03. The on-vessel observation coverage of the three vessels were from 5.5% to 24.0%, with 44 seabird strikes observed across all the three vessels.

4.19 The Scientific Committee commended the efforts of Members to conduct detailed trials of net monitoring cable mitigation showing progress to address this issue. It also noted differences in the observation coverage among the three vessels, and the authors clarified that the particularly high observation efforts for the new vessel *Fu Yuan Yu 9199* were conducted in order to achieve effective mitigation measures as soon as possible. It was noted that a detailed report of these trials would be presented at WG-IMAF-2026.

4.20 The Scientific Committee noted the level of heavy strikes on the trawl warps on the *Fu Xing Hai*, which contributed to general concerns about seabird strikes across the trawl fleet from the Scientific Committee. The Scientific Committee noted that video recordings of warp strikes would be useful for WG-IMAF-2026 to consider the classification of seabird strike severity. The Scientific Committee also noted that the video observations were conducted from different cameras during the same fishing event, and welcomed further details to be presented at WG-IMAF-2026. Further details should include clarification on the calculation on total observation time to better understand the proportion of operations that were observed and to also avoid potential non-independence issues in subsequent data analyses.

4.21 ACAP appreciated the ongoing trials by China in its continuous trawl fishery to mitigate the impacts of fishing on seabirds. ACAP remained concerned at the levels of bird strikes within CCAMLR krill trawl and continuous trawl fisheries. ACAP recommended that CCAMLR consider approaches to better reflect these interactions in the seabird mortality figures, as birds subject to 'heavy strikes' are more likely than not to have life-threatening injuries. ACAP advised that its next meetings, including the 13th meeting of ACAP's Seabird By-catch Working Group (SBWG13), will be held in Namibia in mid-2026. As SBWG13 will continue to consider specific mitigation measures that may be effective for continuous trawl fisheries, ACAP encouraged any Members conducting research into mitigation of the impacts of continuous trawling on seabirds to submit their research findings to the ACAP Secretariat.

Bottom fishing and vulnerable marine ecosystems

4.22 The Scientific Committee considered discussions during WG-EMM-2025 regarding Vulnerable Marine Ecosystems (VMEs) (WG-EMM-2025, paragraphs 5.38 to 5.43). This included consideration of a proposal to list a potential VME off the east coast of Cuverville Island in the Errera Channel (Subarea 48.1). The site holds a diversity of demosponges and hard bryozoans.

4.23 The Scientific Committee recalled that benthic ecosystems have rarely been considered by CCAMLR, although they represent an important part of CCAMLR ecosystemic approach to fisheries management and conservation.

4.24 The Scientific Committee noted that the methods presented in WG-EMM-2025/68 using a quantitative approach derived from video analysis had already been presented to WG-EMM (WG-EMM-18/35; WG-EMM-2022/34 Rev. 1; WG-EMM-2022/46 Rev. 1; WG-EMM-24/48 Rev. 1) and to the Scientific Committee (SC-CCAMLR-XXXVII, paragraphs 5.30 to 5.36; SC-CCAMLR-41, paragraphs 5.37 and 5.38; SC-CCAMLR-43, paragraphs 4.31 and 4.32) resulting in the addition of 11 VMEs to the CCAMLR VME registry.

4.25 The Scientific Committee also noted that the CCAMLR VME registry was an important tool to preserve knowledge of the position of VMEs in the Convention Area in order to potentially monitor these important components of the ecosystem often difficult to access.

4.26 The Scientific Committee further recalled that Annex 22-06/B provided clear guidelines specifying categories of information to be included in VME notification and that it was left to the Scientific Committee to provide advice to the Commission. The Scientific Committee also noted that paper WG-EMM-2025/68 had provided all required information as set out in Annex 22-06/B.

4.27 Some Members considered that a threat was necessary to grant VME status to ecosystems and that a specific threat was not demonstrated in the case presented. Most Members considered that the designation of new VME areas is not contingent on the presence of a specific threat like fishing pressure.

4.28 Some Members expressed their concern about the absence of formally consolidated Scientific Committee approved criteria for using video imagery in VME identification, and considered that further development of standardised, quantitative protocols was necessary to ensure consistency and comparability with existing criteria, especially with new technology being developed in the future.

4.29 Most Members recalled that guidelines for the preparation and submission of notifications of encounters with VME are outlined in CM 22-06 using criteria such as species composition and abundance, and that this definition was independent of the technology used for observation. The guidelines include the use of video recordings and additional ecological criteria described during the VME workshop in 2009 (paragraphs 3.1-3.6, 3.11), and WG-EMM-2010 (paragraphs 3.3, 3.46 – 3.49).

4.30 The Scientific Committee did not reach consensus on the inclusion of the site in the Errera Channel (Subarea 48.1) in the CCAMLR VME registry.

4.31 The Scientific Committee considered whether a new 'potential VME' category could be introduced to the VME registry to record the location of ecologically relevant benthic areas that did not achieve consensus for the VME registry, and whether that could include the Errera Channel (Subarea 48.1) potential VME.

4.32 The Scientific Committee considered paper SC-CAMLR-BG/27 that describes the ASOC initiative 'SOCSI' designed to identify VMEs from in situ video observations. SOCSI collaborates with the specific tourism operators that deploy submarines to observe seabed communities. Video footage recorded during dives are analysed using annotation techniques and VME indicator taxa identified. All data produced are submitted to the SCAR Antarctic Biodiversity Portal/ AntOBIS database.

4.33 The Scientific Committee welcomed the paper and noted that the collaboration with the tourism industry that regularly revisit the same sites will help monitor changes in benthic communities.

Ecosystem monitoring and management

5.1 SC-CAMLR-43/BG/19 reported that the Chilean National Oceanographic Committee (CONA) will conduct its first Antarctic expedition under the CIMAR programme (1–12 October 2025) following 30 previous cruises in Chilean fjords and oceanic islands. The cruise will implement nine projects across geology, biogeochemistry and physics, and biology.

5.2 SC-CAMLR-44/BG/20 reported British Antarctic Survey conducted aerial surveys of penguin colonies on the Antarctic Peninsula and South Shetland Islands during 2013/14, 2015/16 and 2019/20. Aerial photography can enable large-scale monitoring of various species. Survey photographs are currently being analysed, with results expected to be presented to WG-EMM in 2026. Periodic surveys (e.g. every five years) using new technology cameras could provide broad-scale penguin survey data to contribute to an integrated penguin monitoring programme in Subarea 48.1.

5.3 The Scientific Committee welcomed the work, noting that it helped close some gaps in distribution and abundance data on *Pygoscelis* species and is also of importance for SOA. The Scientific Committee further noted that Oceanites work could provide ground-truthing data to support count interpretation that might be useful in the future. The Scientific Committee also noted that aerial camera imagery collected as part of this work may capture other species, such as fur seals, providing valuable additional information.

5.4 SC-CAMLR-44/BG/22 informed CCAMLR about the current status of the Weddell Sea Observatory of Biodiversity and Ecosystem Change (WOBEC) project. In its first year, WOBEC has delivered scientific outputs supporting the development of a systematic ecosystem monitoring framework for the eastern Weddell Sea / Kong Haakon VII Sea, contributing to the research and monitoring plans of the proposed Weddell Sea MPAs (Phases 1 and 2). Key outputs include a first Data Management Plan (https://zenodo.org/records/15040396), a prototype interactive dashboard (https://wobec.shinyapps.io/data-summary/) and a factsheet (https://wobec.aq/news/). A first WOBEC sampling campaign across sea-ice, pelagic, and seafloor habitats combining biological, physical, and biogeochemical measurements will take place December 2025 – February 2026.

5.5 The Scientific Committee welcomed the WOBEC project and highlighted the importance of establishing an international research network to support research and monitoring activities in the Weddell Sea.

5.6 The Scientific Committee noted that data on *D. mawsoni* from the WOBEC *Polarstern* cruise (PS 152) could, inter alia, contribute to the stock hypothesis for Area 48 and to development of a Casal2 assessment model.

5.7 SC-CAMLR-44/BG/31 presented progress on developing a regular CCAMLR State of Antarctic Environment (SOAE) report. It aims to provide the Commission, Scientific Committee, and stakeholders with an accessible status report summarising environmental conditions and data relevant to marine living resources. WG-EMM-2025 discussions identified two levels of reporting: (i) a technical report (Level 1) for scientists, and (ii) a summarised, illustrative version for Commissioners (Level 2). These reports will synthesise multiple data streams to support an assessment of the state of the Antarctic ecosystem and management decisions. Members are invited to suggest key content and additional metrics for future iterations and contribute to the development of regional status reports.

5.8 The Scientific Committee welcomed the work on a regular SOAE report and thanked UK for initiating this project. The Scientific Committee noted that the two-level approach is helpful and looks forward to a refined draft for WG-EMM-2026.

5.9 The Scientific Committee also recognised that the topics considered (climate, ocean, and biodiversity) already have established sets of essential variables developed by international organisations, including GCOS, GOOS, and GEOBON, which could inform and strengthen the status report.

5.10 The Scientific Committee noted that SCAR research programmes, such as ANT-ICON, and expert groups, such as ANTOS, as well as SCAR web-tools and databases, and SOOS' data portal, SOOSmap, and a new project initiative (SC-CAMLR-44/BG/34) could contribute to the development of the SOAE report.

5.11 Some Members noted the potential challenge of presenting different areas, each based on varying data availability, within a single status report format. In addition, the challenge of processing data in different formats for inclusion in the report was highlighted.

5.12 The Scientific Committee acknowledged differences between regions but noted the collective expertise available to address these challenges and encouraged efforts to develop reports for regions other than Area 48.

5.13 The Scientific Committee agreed to provide an update on progress and next steps with SOAE reporting to the Commission.

5.14 SC-CAMLR-44/BG/37 reported 2024/25 surveys of *Pygoscelis* penguins on Galindez, Petermann, and Yalour. Gentoo numbers peaked at ~4 000 adults and 1 423 nests, with 1.34 chicks per nest, showing a general population increase since 2017 despite a 2024 nest decline. Time-lapse cameras lagged direct observations for egg-laying and hatching but detected crèche formation dates accurately, revealing minimal phenological change for Gentoos on Petermann, later clutch initiation and hatching dates for Adélie penguins on Yalour, and spatial variability in clutch initiation for Gentoos on Galindez. UAV surveys expanded

coverage, including 4 670 penguins on Pleneau Island, demonstrating their utility for broader monitoring.

5.15 The Scientific Committee welcomed the work and noted the importance of the CEMP review given its role in monitoring the potential effects of the krill fishery and links to the proposed D1MPA. The Scientific Committee noted the CEMP review should be a focus of discussions at WG-EMM-2026.

5.16 Some members acknowledged the significant scientific contributions to CCAMLR of the Ukrainian scientist Dr Leonid Pshenichnov and expressed their regret regarding his detention by the Russian Federation.

5.17 The Coalition of Legal Toothfish Operators (COLTO) presented SC-CAMLR-43/BG/10, where several toothfish vessels are collecting high-quality oceanographic data in the CCAMLR Area using temperature-depth recorders through the Fishing vessels Ships Of Opportunity Program (FishSOOP).

5.18 The Scientific Committee noted that over 400 recordings had been undertaken to date and that additional toothfish vessels are expected to join the programme soon. The Scientific Committee thanked COLTO for presenting this report and encouraged COLTO and toothfish vessels work together continuously to collect high-quality oceanographic data.

5.19 The International Association of Antarctica Tour Operators (IAATO) presented SC-CAMLR-44/BG/12 Rev. 1 on its operational procedures to reduce risk of ship strike and further developments in its marine mammal monitoring programs. IAATO's four mandatory Geofenced Whale Areas require a 10-knot speed restriction, and the Acoustic Awareness Zone includes further restrictions to limit acoustic disturbance. The paper highlights that the Voluntary Cetacean and Pinniped Sightings (V-CaPS) program, established in 2022/23, will collect data via the ORCA OceanWatchers app starting in the 2025/26 season. The program standardises marine mammal monitoring, integrates opportunistic data from IAATO Operators into a large dataset, and provides a source of information for ongoing cetacean population monitoring and management of IAATO vessel operations in the Antarctic Peninsula region. Over 18 700 cetacean observations have been submitted to the program to date, and these data have been valuable to the continued development of the Geofenced Whale Areas.

5.20 The Scientific Committee welcomed the report and noted that the procedure for incidental sightings implemented in the V-CaPS data could be standardised with observing protocols being developed by the CCAMLR-IWC collaboration on cetacean data to inform the KFMA/proposed D1MPA. The Scientific Committee invited IAATO to the CCAMLR Discussion group on cetacean monitoring to advance this work.

5.21 The Scientific Committee further noted that a ship strike database managed by the IWC (IWC Global Vessel Strikes Database) exists and encouraged CCAMLR Members to report incidents to this database.

5.22 SCAR presented SC-CAMLR-44/BG/29 which introduced a new plastic pollution webtool produced in collaboration with the SCAR Plastic in Polar Environments Expert Group. The paper highlighted that growing understanding of the pervasive presence of plastic pollution in the Southern Ocean necessitates assessing its distribution, intensity, and local sources, as well as combined effects with other stressors such as climate change. The paper highlights

recent research by Hunter et al. (2024) which maps microplastic hotspots to identify high-risk areas for plastic-biota interactions in the Southern Ocean. To accompany this work, an online interactive web-based tool (https://southernoceanplastic.data.bas.ac.uk) has been developed to map microplastic hotspots and high-risk plastic-biota interactions, supporting coordinated monitoring and mitigation.

5.23 The Scientific Committee welcomed the paper and associated web tool, noting that the information provided is valuable. It was suggested that the spatial distribution data could be complemented by abundance information and that the inclusion of oceanic current data would further strengthen the analysis. The Scientific Committee also noted that monitoring heavy metals would be a valuable addition to the webtool.

5.24 The Scientific Committee recognised that marine plastic pollution is a major concern and that monitoring efforts are important. The Scientific Committee encouraged continued joint efforts between the CEP and CCAMLR to continue to improve plastic pollution management practices and reduce the input of plastics from the Antarctic continent into the Southern Ocean.

5.25 SC-CAMLR-44/BG/33 reported on the new SCAR Action Group on Fish, SCARFISH. SCARFISH facilitates knowledge exchange, coordinates priorities, promotes data sharing, and broadens participation. Updates include progress towards objectives, connections to CCAMLR, and new Working Groups: Horizon Scan; Biology and Life History; Biogeography, Modelling and Management; Genomics, Physiology and Pathology; Fieldwork; Data; and Outreach. The SCARFISH Horizon Scan Working Group aims to identify the major knowledge gaps and prioritise the most important scientific questions regarding Southern Ocean fish. There will be a community survey coming to CCAMLR in the near future inviting participation in this Southern Ocean fish Horizon Scan. SCARFISH encourages widespread participation from the CCAMLR community.

5.26 The Scientific Committee thanked SCAR for the update on the SCAR Action Group SCARFISH and highlighted the contribution of this group particularly to the objectives of WG-FSA, such as the investigation of biological parameters of by-catch species and identification of larval fish by-catch, as well as climate change effects, and noted that the SCARFISH efforts align well with several CCAMLR Members' national research programmes. The Scientific Committee further noted the importance of collaboration with SKEG to identify areas of overlap and encouraged participation in the joint workshop at the SCAR Open Science Conference in 2026 (paragraph 10.2.30).

5.27 SC-CAMLR-44/BG/39 provided an update on High Pathogenicity Avian Influenza (HPAI) H5N1 in Antarctica during 2024/25 season. Following its first detection in February 2024, the virus is established in the northern Antarctic Peninsula and has spread across sub-Antarctic islands. By September 2025, 32 sites in the Antarctic were affected, with multiple introductions via natural wildlife migration. HPAI H5N1 affects skuas, penguins, seals, and giant petrels, causing mass mortality events and asymptomatic infections. Human risk remains low, but strict biosecurity is essential. SCAR confirms that recommendations endorsed by the ATCM46 in 2024 remain relevant and additional recommendations were endorsed by the ATCM47 in 2025. IAATO and SCAR, along with other community partners including the Council of Managers of National Antarctic Programs (COMNAP) and CCAMLR, will continue to actively report on the HPAI topic in the CCAMLR Area.

5.28 The Scientific Committee thanked SCAR for the update on HPAI H5N1 and recognised the importance of the work conducted in collaboration with IAATO and COMNAP. The Scientific Committee noted particular concern regarding the situation at the Antarctic Peninsula. The Scientific Committee further noted the importance of protocols, including updated guidance for persons operating in Antarctica, monitoring of seabirds in Antarctica, and the implementation of biosecurity measures to minimise risk to Antarctic wildlife.

5.29 The Scientific Committee endorsed the recommendation of WG-EMM-2025 (paragraph 2.72) to implement revisions to CEMP data submission forms to allow reporting of HPAI presence at CEMP sites.

5.30 Dr Ghigliotti provided an update on investigations conducted in Terra Nova Bay (Subarea 88.1). The protocols followed were aligned with COMNAP, and blood samples collected from Adélie and emperor penguins tested negative.

5.31 The Scientific Committee noted discussions at WG-EMM-2025 on the utility of alternative indices for monitoring predator diet, including faecal DNA analyses. Such molecular analyses can offer higher taxonomic resolution than is often possible in standard stomach lavage samples.

5.32 The Scientific Committee endorsed the development of a standard faecal DNA metabarcoding method for diet analysis as an additional CEMP standard method to complement Standard Method A8 (WG-EMM-2025 paragraph 2.83).

5.33 The Scientific Committee considered how the incorporation of cetacean data into CCAMLR ecosystem monitoring could be supported by molecular methods. The Scientific Committee encouraged further collaboration between cetacean experts noting the possible relevance of ongoing eDNA research and welcomed the strengthening of links between SC-CAMLR and the IWC-SC (WG-EMM-2025 paragraph 2.114).

Spatial management of impacts on the Antarctic ecosystem

Existing Marine protected areas, including research and monitoring plans for MPAs

6.1 The Scientific Committee endorsed the recommendation of WG-EMM on the proposed framework timeline (WG-EMM-2025, table 9; WG-EMM-2025/36, Table 1) for the review process that will be in 2027.

6.2 The Scientific Committee noted that the research approach and the specific indicators are consistent with the requirements of CM 91-05 including priority elements and the research and monitoring plan topics. The framework is informed by baseline data contained in the CMIR database and associated indicators, and integrates suggestions from the SMART goal proposal (CCAMLR-42/44, SC-CAMLR/42/BG/08).

6.3 The Scientific Committee endorsed the recommendation of WG-EMM-2025 (paragraph 5.17) on the approach for the objective-based reporting to support the 10-year review of the RSRMPA as set out in CM 91-05.

6.4 CCAMLR-43/48 offered suggestions for the establishment of Marine Protected Areas (MPAs) within the CAMLR Convention Area specifically focusing on regulating a standardised process for the designation and management of MPAs considering current legal and scientific considerations. The authors proposed the development of a roadmap as a tool to support the achievement of MPA objectives, and a draft version of this roadmap was included in the paper. The proposal included: (i) amending CM 91-04 to introduce adequate procedural and implementation provisions for a unified process governing the establishment and management of MPAs in the Convention Area; (ii) suspending discussions on new MPA proposals until the rules for this unified process, as outlined in CM 91-04 and Annexes 1–3, have entered into force; and (iii) transitioning the South Orkney Islands Southern Shelf MPA (SOISS MPA, CM 91-03) to fall under the revised governance framework of CM 91-04, based on the submission of all necessary documentation and by consensus of both the Scientific Committee and the Commission.

6.5 The Scientific Committee recalled that CAMLR-43/48 was discussed at SC-CAMLR-43 and referred to its response to the paper at that meeting (SC-CCAMLR 43, paragraph 6.7).

6.6 China expressed its support for the concerns raised in paper CCAMLR-43/48 and noted that their Working Paper (CCAMLR-44/09) proposed the RMP should identify the indicators and their parameters, identify states of ecosystem or decision triggers, and include assessment mechanisms and relevant procedures. China noted that CCAMLR-43/48 suggested who, where and how the Research and Monitoring Plan (RMP) will be conducted for each phase, and WG-EMM-2025 contains Table 9 presenting such elements. China further noted the practise could help the roadmap mentioned in their papers.

6.7 SC-CAMLR-44/BG/21 Rev. 1 presented the outcomes of the inaugural meeting of the Ross Sea region Marine Protected Area (RSRMPA) Research Coordination Network (RCN), held in June 2025 in Boulder, Colorado (USA). The meeting gathered 128 participants from 22 countries, including many CCAMLR Members, representing diverse sectors such as science, government, NGOs, industry, and Indigenous and international organisations. The RCN will advance three core components: policy engagement, community partner engagement, and integrated science which encompasses data science and cyberinfrastructure, biophysical modelling, and observation and process studies.

6.8 The Scientific Committee welcomed the establishment of the RCN, noting the potential to enhance coordination and collaboration among Members. The SC emphasised the importance of the RMP for collecting valuable data.

6.9 The Scientific Committee noted that an upcoming workshop at SCAR Open Science Conference, led by Dr C. Brooks, would provide further opportunities for engagement and encouraged participation.

6.10 Russia noted that the rationale and description of the indicators and criteria for achieving the RSRMPA's objectives remain unknown and the proposed indicative. Russia also noted that the proposed indicative species still do not correspond to the spatial structure of the MPA and the stated objectives of the MPA. Russia also noted that the proposed indicative species do not correspond to the spatial structure of the MPA. Russia emphasized that the absence of a RMP for the MPA approved by the Commission makes it impossible to evaluate the effectiveness of the MPA and adopt the report for the first review period 2017 – 2027.

6.11 China noted that an operable and well-designed RMP should be included in MPA proposals rather than be prepared after the MPA is established.

6.12 New Zealand noted that these comments relate to policy instead of science and further discussion can take place when paper CCAMLR-44/BG/20 is presented at Commission.

6.13 SC-CAMLR-44/BG/35 updated the papers WG-EMM-2025/35 and WG-EMM-2025/36 to capture the discussions in WG-EMM-2025. The paper outlines the objective-based review framework for the 10-year review of the RSRMPA due in October 2027. CM 91-05 requires the Scientific Committee to advise the Commission on progress toward achieving the 11 objectives of the RSRMPA and the ongoing relevance of the objectives.

6.14 The Scientific Committee thanked the authors of this paper and recognised the science-based framework for the RSRMPA review. The Scientific Committee noted the progress of the work since WG-EMM-2025 and highlighted the role of the Ross Sea RCN in promoting collaborative research projects.

6.15 The Scientific Committee noted that the framework and review plan meets the requirements of CM 91-05 and includes clear and measurable indicators, which will allow for a robust and transparent evaluation. Members highlighted the importance of analysing ecological trends and climate change impacts across trophic levels.

6.16 Russia noted that there is not enough justification for the criteria used to assess whether the MPA's objectives are being met and the species indicators included in the MPA objective are not enough and make it difficult to evaluate its effectiveness.

6.17 China suggested some species such as crystal krill (*Euphausia crystallorophias*) and Antarctic silverfish (*Pleuragramma antarctica*) are still not well understood and their current baseline data are difficult to support MPA review related to the objective of protecting core distributions of dominant pelagic prey species, and these species whose data are limited and the site surveys should cover their core habitats.

6.18 Most Members considered this a significant milestone for CCAMLR, noting that the RSRMPA review could serve as a model for the assessment of other MPAs currently under discussion. Most Members expressed their continued support for the MPA network through 2027.

6.19 Dr Kasatkina noted that toothfish is a critical test species for the RMP. Regular surveys on the Ross Sea shelf are conducted by NZ within the RSRMPA. However, these surveys are insufficient by themselves to meet the stated objectives of the MPA. Furthermore, CM 91-05 lacks clarity regarding the source of resources for toothfish research, noting the need for the Scientific Committee and WG-FSA to consider the source of resources necessary to support meet the stated objectives of the MPA.

6.20 Most Members observed that there appears to be an imbalance in the level of scrutiny applied to MPAs compared to that applied to fishing activities, noting that the expectations for MPA-related science are high in comparison.

6.21 The Scientific Committee highlighted that the RSRMPA has facilitated the development of targeted scientific work, including Korea's research and monitoring plan within the MPA (WG-EMM-2025, paragraph 2.15 and paragraphs 5.23 to 5.28). The Scientific Committee also

acknowledged the significant contribution of experts from SCAR to this process, as well as the involvement of the SOOS Ross Sea Regional Working Group and usefulness of SOOSmap, which further strengthens the scientific foundations of the RSRMPA review.

6.22 IUCN supported the effort to bring forth this MPA evaluation approach from the delegations of Italy, Korea, Norway and Argentina under the excellent leadership of New Zealand. IUCN sees significant value in the approach being taken for the evaluation of the RSRMPA, in particular as a positive example for other high seas protected areas in other parts of the world and for other international agreements where IUCN's efforts are also focused. IUCN looks forward to supporting the RCN and this evaluation process as it evolves through to 2027.

Review of the scientific elements of proposals for new MPAs

6.23 SC-CAMLR-44/04 presented key elements of the monitoring design behind the draft RMP to accompany the proposed D1MPA, presented in SC-CAMLR-44/BG/06, including spatial and temporal scales, baseline data, metrics, and methods, and outlines a potential framework based on a counterfactual approach to evaluate the effectiveness of the proposed D1MPA. Although not formally required for the establishment of an MPA, there are multiple benefits that can be gained from the development of an RMP.

6.24 The authors noted that as an initial step, the draft RMP focuses on penguins as a case study, providing baselines and criteria against which changes will be evaluated. The intention is to expand this approach in future iterations to other conservation objectives, namely those for krill, seals, and whales. The draft RMP is designed to enable assessments of observed changes relevant to the MPA objectives, and to provide information to support the adaptive management of the MPA. It is connected to ongoing data and information collection initiatives. The authors proposed to hold a workshop in April 2026 and invited Members to contribute to the continued development of the RMP.

6.25 The authors noted that a potential framework to evaluate the impacts of the proposed D1MPA by establishing the foundations for a robust RMP is further described in document SC-CAMLR-44/BG/06. The draft RMP takes advantage of current monitoring efforts and is able to reflect ecological outcomes aligned with the objectives of proposed D1MPA. The draft RMP aims to: (i) identify existing long-term ecological monitoring sites and propose key areas for ongoing and future in-situ monitoring initiatives, (ii) list relevant ecological metrics to assess the impacts of the proposed D1MPA, (iii) present a preliminary design of a rigorous impact evaluation employing sites with and without the influence of the MPA (spatial and temporal) and (iv) ensure results feed into CCAMLR's adaptive management approach.

6.26 The authors noted that various reliable sources for *Pygoscelis adeliae*, *Pygoscelis antarcticus*, *Pygoscelis papua* and *Aptenodytes forsteri* were reviewed. Indicators were reviewed against several criteria to assess their suitability as potential candidate indicators of the proposed D1MPA ecological relevance. To evaluate prey and predator responses to the MPA implementation, a simple change-based indicator comparing pre- and post-implementation conditions will be developed. All candidate indicators will be further validated in a second expert consultation. The document describes types of comparisons that can help evaluate the effectiveness of the proposed D1MPA, including a counterfactual approach.

Control and treatment sites have to be selected for each comparison type. The authors further noted that the document provides a comprehensive review of available data and ongoing monitoring, provides suggestions of penguin colonies that can be used for the specific types of comparison, discusses metric types that can be used as ecological indicators, and identifies potential data gaps.

6.27 The Scientific Committee welcomed the document and highlighted several aspects. The experimental set-up was deemed robust and the usefulness of evaluating areas in the proximity of fishing was discussed. The Scientific Committee supported the counterfactual approach, highlighting the difficulty of finding control sites that are sufficiently similar to sites within the MPA. The Scientific Committee noted that a lot of data from, for example, CEMP, are available for assessing the effectiveness of the MPA. It further highlighted the need for increased monitoring in the proximity of Elephant Island, as a survey of research activities reported in SC-CAMLR-44/BG/06 identified only one research group working in this area. Additionally, there is a critical need to monitor trends in abundance of several small colonies of South Shetland Islands Antarctic fur seals at Elephant Island, whose regional population has declined rapidly over the last two decades (Krause et al. 2022). The Scientific Committee regarded penguins as a good indicator for a case study as they are central-place foragers, sentinel species, indicators of the status of the ecosystem and penguin monitoring is already in place. It also noted the relevance on the information collected both for the RMP of the proposed D1MPA and the KFMA.

6.28 China proposed to add more details of monitoring related to other objectives into the RMP such as monitoring fish populations in support of assessing objectives of protecting important areas for fish life-cycles.

6.29 Russia noted that the selection of penguins as the baseline and currently sole indicator for the research and monitoring plan does not meet the stated objectives of the MPA proposals, which are aimed at achieving specific objectives for the conservation of Antarctic marine living resources and biodiversity, such as pelagic, benthic, and other communities, seabirds and mammal populations. Furthermore, there is a lack of scientific evidence to justify the selection of penguins as the baseline indicator.

6.30 Some Members noted that penguin species were used as a case study and that the process will later continue with other species such as krill, seals and whales. This approach will be developed through consultations with experts following a collaborative and co-constructed approach. A fully developed RMP will be presented in 2026 and introduced at WG-EMM-2026.

6.31 The Scientific Committee supported the suggestion of a workshop and many Members expressed their willingness to contribute to the development of the proposed D1MPA RMP. The workshop can be used to define and agree on indicators.

Other spatial management issues

6.32 SC-CAMLR-44/03 proposed a workshop in 2026 to develop a harmonised marine spatial plan for Subarea 48.2. The goal is to create a science-based framework for managing the krill fishery and monitoring the ecosystem while ensuring it aligns with the conservation

objectives of the proposed D1MPA. The workshop aims to address the unique challenges of this area and avoid future conflicts between separate conservation and fishing management plans.

6.33 The Scientific Committee supported the workshop and recognised the need to harmonise fishery management and conservation objectives. Several Members highlighted the importance of also addressing management in Subarea 48.1 and suggested coordination, potentially through WG-EMM, to ensure the workshops are complementary. The Scientific Committee also noted that the CCAMLR MPA Special Fund could be used to support the workshop (paragraph 13.7).

6.34 The Scientific Committee considered the possibility of discussing CM 91-03 during this workshop, though different views were expressed about the matter. Some Members understand it as a necessary discussion, while other Members expressed that it should remain in force until there is any evidence supporting the need to change it.

6.35 The Scientific Committee noted that the workshop would be coordinated by the steering committee outlined in SC-CAMLR-44/03 and convened by Mr F. Santa Cruz (Chile) and Dr A. Lowther (Norway).

6.36 SC-CAMLR-44/07 detailed the outcomes of the major international workshop held in South Africa in 2025 and the ongoing work of the PHOCIS project, which aims to use scientific data and Systematic Conservation Planning to design a representative system of MPAs in the pelagic high seas of the sub-Antarctic Indian Ocean. The project has drafted specific conservation objectives, compiling vast datasets on oceanography, biodiversity (including seabirds and mammals), and human activities. The workshop identified the strategy for applying a systematic conservation planning approach to develop priority areas for protection in 2026 to contribute to CCAMLR's goal of a representative system of MPAs.

6.37 The Scientific Committee welcomed the substantial progress and the comprehensive, methodologically structured approach of the project.

6.38 The Scientific Committee noted that a representative MPA system in CCAMLR should include the sub-Antarctic area.

6.39 The Scientific Committee noted the project request for scientific advice on its conservation objectives and strategy and looked forward to the planned meeting in Paris in 2026.

6.40 The Scientific Committee also noted the importance of integrating data from various initiatives and the challenges of data collection across such a large area, parts of which lie outside the Convention Area.

6.41 The authors welcomed the comments and highlighted that at this stage data is being processed and invited members to further engage and contribute both in the data processing and in providing new data to be incorporated into the project.

6.42 The authors highlighted that the annual meeting of PHOCIS in 2026 in Paris will provide the first results on systematic conservation planning which will be presented afterwards in WG-EMM-2026. An application to the CCAMLR MPA Special Fund will be submitted for inviting members to the Paris workshop.

6.43 Norway congratulated those leading the PHOCIS project, recalling that the MPA Special Fund supported the initial workshop in South Africa in 2019 and noted that the initial formulation of the project included discussions on including Bouvetøya. Norway highlighted that a new multidisciplinary study of the marine environment around the island would start in 2026 and looked forward to increasing its involvement in PHOCIS in the future.

6.44 ASOC thanked South Africa for this report and thanked all of the scientists from South Africa, France, Australia and others that have been involved in this work for many years. Several ASOC colleagues attended this workshop and found it to be extremely well-organised and productive. ASOC highlighted the PHOCIS project as a great contribution and complementary to the work of CCAMLR on establishing a representative system of MPAs in the Convention Area, including through its cooperation with other bodies in the service of conservation. ASOC has been pleased to support the PHOCIS project and the work of Dr Carpenter-Kling. ASOC is looking forward to seeing the results of the systematic conservation process and other work planned for 2026.

6.45 SC-CAMLR-44/BG/26 introduces two new web tools developed in relation to a NASA-funded project which sought to better understand the importance of Antarctic polynyas (areas of open water) for sustaining Antarctic marine ecosystems as biological hot-spots. The first webtool is a platform that features multi-media storytelling that uses videos, photos, and narratives to showcase results from a newly developed Antarctic Ecosystem Value Index which identifies and maps ecologically critical areas around the continent. The second web tool is an interactive index comparison tool (shiny application) that allows users to visualise and compare the Ecosystem Value Index with existing ecological indices, important biodiversity areas in the Southern Ocean and existing or proposed MPAs. The document presents these tools to help CCAMLR identify ecologically important areas for conservation and support the planning of a representative system of MPAs.

6.46 The Scientific Committee welcomed these valuable tools for supporting MPA planning, highlighting that the data, which has already been used systematically by some Members, can be incorporated into the MPA propositions.

6.47 The Scientific Committee suggested that CCAMLR consider hosting the index comparison tool (‘shiny application’) on its platform.

6.48 ASOC introduced CCAMLR-44/BG/28 which examines how the Shifting Baseline Syndrome (SBS) – the gradual acceptance of lower standards – is reflected in CCAMLR’s conservation actions. In ASOC's view, in krill fishing the lapse of CM 51-07 marked a retreat from the precautionary principle. In MPAs, momentum has stalled since the 2016 RSRMPA was adopted, with new MPA proposals and RMPs still pending despite strong scientific support. This contrasts with global progress toward the ‘30x30’ target and the BBNJ Agreement. ASOC argues these trends reflect a downward shift in CCAMLR’s conservation baseline and urges Members to restore ambition, complete the MPA representative system, and reinforce precautionary krill management. CCAMLR’s Scientific Committee has a key role in reversing this trend.

Climate change

7.1 The Scientific Committee noted that WG-FSA-2025 (paragraphs 10.1 and 10.2) reflected a summary of how climate change is being integrated into the work of WG-FSA. The Scientific Committee considered it important to highlight how the effects of climate change are an integrated into its work. The Scientific Committee further noted it could be useful for other Working Groups to do similarly with future reports.

7.2 SCAR presented SC-CAMLR-44/BG/13, noting that 2024 was likely the first year where average global temperatures exceeded 1.5°C above the pre-industrial era average, and the warmest year in the 175-year observational record. SCAR reported how abrupt changes are either already underway in the Antarctic region or are imminent. A regime shift has reduced Antarctic sea-ice extent far below its natural variability of past centuries. The tipping point for unstoppable ice loss from the West Antarctic Ice Sheet could be exceeded, potentially initiating global cascades. Regime shifts are occurring in marine systems through habitat transformation or exceeding physiological thresholds, and breeding failures of some species are increasing extinction risk. Stabilising Earth's climate with the minimal overshoot of 1.5°C will be imperative alongside global adaptation measures to minimise and prepare for the far-reaching impacts of abrupt changes in the Antarctic. The paper noted that Southern Ocean warming and acidification are already driving, and will likely continue to drive, substantial changes to ecosystems, food webs and interactions, emphasising the importance of greenhouse gas emissions reductions. SCAR noted that it is committed to providing regular scientific updates to CCAMLR on climate change and encourages CCAMLR Members to continue their efforts to implement research to understand the implications of climate change for the region.

7.3 The Scientific Committee welcomed the independent scientific updates provided by SCAR's ACCE report, which highlighted increasingly concerning environmental change in the Antarctic region. The Scientific Committee noted the growing body of evidence showing significant shifts in physical systems and ecosystems, including sea-ice loss, changes in oceanographic dynamics, and impacts on species distribution. These findings are considered central for CCAMLR work.

7.4 The Scientific Committee recognised the importance of continuing to support the integration of climate change considerations across the Scientific Committee's work programme. The Scientific Committee welcomed recent work within Working Groups to embed climate-related discussions throughout their agendas and emphasised the importance of tools such as the proposed State of Antarctic Environment (SOAE) reporting (paragraphs 5.7 to 5.13). The Scientific Committee also noted the need to ensure that relevant climate indicators inform CCAMLR's science-based precautionary management decisions.

7.5 ASOC expressed concern about the acceleration of observed and projected climate change impacts noted in the SCAR report and urged the SC-CAMLR to advise the Commission of the urgent need for management action.

7.6 Ecuador provided an update on ocean acidification research noting that the Latin American Antarctic programmes have created a dedicated Working Group on Ocean Acidification Observation focused on regional monitoring.

7.7 The Scientific Committee also supported the upcoming joint SC-CAMLR/CEP workshop on climate change and monitoring and encouraged relevant contributions to inform

its agenda, including the recommendations from the CCAMLR climate change workshop (WS-CC-2023) (paragraphs 10.10 to 10.13).

Illegal, unreported and unregulated (IUU) fishing in the Convention Area

8.1 There was no discussion by the Scientific Committee under this agenda item.

CCAMLR Scheme of International Scientific Observation

9.1 SC-CAMLR-44/06 examined differences in krill length-distributions between samples collected from continuous pumping trawlers and traditional trawlers which indicate spatial heterogeneity in krill distribution in the fishing area. The authors expressed concern that the Scientific Observer requirements do not account for number of hauls per day or catch per haul and is therefore not representative of the fishery. Furthermore, the authors expressed concern that the Scientific Observers' sampling requirements have not been implemented by all observers.

9.2 The Scientific Committee welcomed the analysis. It recalled that this paper had also been discussed at WG-EMM-2025 (paragraphs 3.28 and 3.29) and noted that a longer time-series of sampling might be needed to gain a better understanding of these results. It also suggested including parameters such as codend mesh size when comparing continuous and traditional trawling systems.

9.3 SC-CAMLR-44/BG/07 details a workshop conducted in 2025 aimed at training scientific observers and inspectors to work in CCAMLR fisheries. The workshop included training aimed at observers in both krill and toothfish fisheries covering recent modifications to the CCAMLR data forms and paid particular attention to the procedures and results of tagging toothfish.

9.4 The Scientific Committee thanked Russia for presenting a description of their annual observer training workshop.

9.5 SC-CAMLR-44/BG/09 summarises the outcomes of Chile's fourth national training course for Scientific Observers. The course focused on SISO requirements, conservation measures and best practices to avoid ecosystem impacts. It included objectives to strengthen coordination among observers, industry and national authorities to support effective fisheries research and compliance and resulted in 24 newly certified scientific observers.

9.6 The Scientific Committee thanked Chile for presenting results related to conducting the workshop. The report highlights the importance of these workshops to ensure well-trained observers and high-quality data.

9.7 CCAMLR-44/BG/15 introduced a survey to assess the level of technical knowledge, skills, and experience on the use of Electronic Monitoring Systems (EMS) among CCAMLR Members. Previous work on utilising EMS suggests a reduction in discards and by-catch, improved compliance and more sustainable practices. The survey aims to collect perspectives on awareness, advantages, challenges and opportunities related to the potential implementation

of EMS in CCAMLR fisheries. The authors invited CCAMLR Members, Scientific Committee participants, members of the fishing industry, and others to participate in the survey.

9.8 The Scientific Committee welcomed the survey, noting the potential value of implementing EMS on vessels participating in fisheries in the CAMLR Convention Area. It highlighted the need to exchange best practices and experiences, noting that some toothfish vessels in the Ross Sea have been using EMS for some time (WG-SAM-18/20, WG-FSA-19/13), which could offer experiences to draw from through the survey. The Scientific Committee noted that AI technology can be combined with EMS to assist observers to achieve their tasks.

9.9 The Scientific Committee endorsed the recommendation by WG-SAM-2025 (paragraph 3.24) and WG-FSA-2025 (paragraph 7.7) to implement the conversion factor sampling scheme by observers and requested that its effectiveness be assessed periodically. The Scientific Committee endorsed the changes to the forms and protocols presented by the Secretariat as in paper WG-FSA-2025/02.

9.10 The Scientific Committee endorsed the recommendations by WG-FSA-2025 (paragraphs 7.9 and 7.10) requesting Members to provide the methods used by vessels to determine the conversion factors reported in their C2 data and requested that the Commission consider including an additional requirement in fisheries operation plans within CM 21-02 paragraph 6(ii), which would specify the conversion factors used and the methods by which they are derived (WG-FSA-2025, Appendix F).

9.11 The Association of Responsible Krill harvesting companies (ARK) announced the winners of the 2025 'Krill Scientific Observer Prizes' to recognise the significant contributions made by scientific observers on behalf of CCAMLR. ARK identified three scientific observers onboard krill fishing vessels who excelled in their overall performance during the 2023/24 fishing season. First place was awarded to N. Idowu; second place was awarded to H. Poole; and third place was awarded to F. Xue. ARK congratulated the recipients and thanked the Secretariat for their help in identifying the winners. The Scientific Committee noted that scientific observers have done significant and high-quality work in the past decades and contribute valuable data to be used in CCAMLR work.

9.12 The Scientific Committee endorsed the recommendation by WG-FSA-2025 (paragraph 7.5) to acknowledge the vital role of observers, emphasising their essential contributions to data collection, including biological data collection and tagging, which support scientific assessments, and recommended maintaining the names of observers on the CCAMLR website provided that their consent is confirmed for this.

9.13 The Scientific Committee noted the recommendation by WG-FSA-2025 (paragraph 7.7) highlighting the importance of assessing various tasks conducted by scientific observers. The Scientific Committee discussed the importance of defining how collected data are to be used within the KFMA and monitoring strategy.

9.14 The Scientific Committee noted the advice from WG-FSA-2025 (paragraph 7.2) that the number of observer tasks on krill vessels continues to rise. The Scientific Committee further noted the advice from WG-FSA-2025 that two observers on a vessel may be needed to manage these tasks (WG-FSA-IMAF-2024, paragraph 5.32, WG-FSA-2025, paragraph 7.2). The

Scientific Committee also emphasized the need for balancing and prioritizing of observer tasks (WG-FSA-2023, paragraphs 3.49 and 3.50).

Cooperation with other organisations

10.1 CCAMLR-44/06 presented the actions taken by the CCAMLR Secretariat in response to the Second Performance Review recommendations. The paper presents the progress achieved showing the proposed status for each recommendation.

10.2 The Scientific Committee noted the current status for the recommendations and thanked the Secretariat for its work.

10.3 The Scientific Committee considered SC-CAMLR-44/BG/18 containing the Scientific Committee on Antarctic Research (SCAR) annual report to CCAMLR 2024/25, highlighting activities of relevance to discussions within SC-CAMLR.

10.4 The SCAR annual report noted the ever-increasing pressure from global warming on the Antarctic environment and ecosystems. Many of SCAR's Scientific Research Programs, Action and Expert groups, including its new Action Group on Climate, are focussed on these issues.

10.5 SCAR further noted that in 2025 there were three new SC-ATS/Ant-ICON Fellows who attended either the ATCM/CEP or the WG-EMM/SC-CAMLR meetings. The call for new fellows is now open and available on the SCAR website. SCAR encouraged early career scientists to apply. Finally, SCAR shared an invitation to join the 2026 SCAR Open Science Conference which will take place in August 2026 in Oslo, Norway.

10.6 The Scientific Committee thanked SCAR for the paper and noted the importance of facilitating the attendance of former SCAR fellow Noémie Friscourt as part of the French delegation and Zuzana Zajková as part of the Spanish delegation to WG-EMM-2025 where their work was warmly received. The Scientific Committee thanked them for their excellent work and both France and Spain for facilitating their participation.

Cooperation within the Antarctic Treaty System

10.7 The Scientific Committee considered SC-CAMLR-44/BG/05 which provided the annual report of the Committee on Environmental Protection (CEP) observer to the CCAMLR Scientific Committee. The report presented by the Chair of CEP Ms C. (New Zealand) provides information on the discussions at CEP27 on five topics of common interest between the CEP and SC-CAMLR: Climate Change, Biodiversity and Non-native Species, Species requiring Special Protection, Spatial Management and Area Protection, and Ecosystem and Environmental Monitoring. The outcomes of these discussions were:

(i) on the joint topic of 'Climate Change', the CEP noted the work continues on the status of climate-vulnerable species, enhancing coordination on climate change response in the marine realm with SC-CAMLR, decontamination of past sites of activities in the Antarctic, and assessing the risk of climate change for Antarctic

infrastructure and on 'Changing sea-ice' as a new item on the Climate Change Response Work Program (CCRWP) during the intersessional period

(ii) on the joint topic of 'Biodiversity and non-native species', the CEP discussed the growing risks of HPAI in Antarctica based on a joint report by SCAR, COMNAP, IAATO and CCAMLR, noting that the virus is reaching new geographic locations in the Antarctic Treaty Area and in the sub-Antarctic region, with continuing indications that the virus was brought to the Antarctic Treaty Area through natural migration and activity of wildlife

(iii) on the joint topic of 'Species requiring special protection', the CEP considered a paper on emperor penguin population which indicated declines of approximately 22% in the emperor penguin populations over the period of 2009–2023. The status of the IUCN Red List risk assessment of the emperor penguin was also discussed where a reassessment of its status would be expected early 2026

(iv) on the joint topic of 'Spatial Management and Area Protection', the CEP considered draft management plans for three proposed new Antarctic Specially Protected Areas (ASPA), including a draft ASPA for the wreck of *Endurance* in the Weddell Sea.

(v) finally, on the joint topic of 'Environmental Monitoring and Reporting', the CEP discussed a proposal inviting Members to step up efforts to end plastic pollution in Antarctica and recognised plastic pollution as a global problem that required attention. The Committee also discussed the report of the ICG on the development of an international environmental monitoring framework.

10.8 The Scientific Committee thanked Ms Poirot for presenting the paper and congratulated her for the successful first meeting as Chair of CEP.

10.9 The USA also thanked New Zealand for the presentation, as Dr A. Titmus (CEP Observer to SC-CAMLR) could not attend this Scientific Committee meeting.

10.10 SC-CAMLR-43/BG/14 presented an update on the upcoming joint CEP/SC-CAMLR climate change and monitoring Workshop to be held in Hiroshima, Japan on 8–9 May 2026 in conjunction with ATCM48/CEP28. The Terms of Reference, agenda, budget considerations, and practical information including location, format, participation and outputs were presented. The workshop objective is to identify synergies and collaboration opportunities between CEP and SC-CAMLR to monitor and manage climate change effects. The workshop outputs will be a Convener's Report focusing on the identification of common research, monitoring and information needs; prioritisation of mutually important areas of work, along with the practical steps required to advance them; and mechanisms to strengthen cooperation and coordination between CEP and SC-CAMLR on topics of mutual interest.

10.11 The Scientific Committee thanked the CEP/SC-CAMLR joint workshop steering committee for the update, Japan for hosting the workshop and the confirmed voluntary contributors.

10.12 The Scientific Committee highlighted the importance of the collaborative approach between CEP and SC-CAMLR, noting areas of mutual interest, including state of the

environment reporting and environmental monitoring, and encouraged Members in-person participation in this workshop. The Scientific Committee noted the outcomes of the CCAMLR Workshop on climate change (WS-CC-2023) held in 2023 as a relevant input to be considered by the joint workshop and encouraged submission of papers to the agenda items.

10.13 As the host country, Japan encouraged SC Members timely arrangements as Japanese national holidays are celebrated in early May, and the event is organised in conjunction with the ATCM48/CEP28.

Reports of observers from other international organisations

10.14 The Scientific Committee considered SC-CAMLR-44/BG/18, submitted by the International Association of Antarctica Tour Operators (IAATO) noting IAATO's continued collaboration with the scientific community and contribution to research, management, and conservation.

10.15 IAATO reported that its membership comprised 54 operators, including provisional operators, and 74 associates. A total of 118 141 visitors travelled to Antarctica during the 2024–25 season, representing a slight decrease from the previous year. IAATO outlined its close cooperation with the SCAR and the COMNAP on biosecurity, wildlife health, and conservation - particularly in response to HPAI. It was noted that 92 suspected cases had been reported by operators during the 2024–25 season. IAATO also highlighted its logistical and financial support for research programmes and collaborations with Oceanites, Penguin Watch, the Antarctic Wildlife Research Fund and a range of national programmes. IAATO further noted its joint fellowship with COMNAP for early-career scientists and reaffirmed its commitment to supporting conservation objectives and research. IAATO collected more than 16 000 marine mammal observations under the Voluntary Cetacean and Pinniped Sighting Programme to inform vessel management and minimise wildlife disturbance and entered into a new partnership with ORCA for this program. IAATO additionally reiterated its support for proposed MPAs, confirmed the continued use of CCAMLR electronic forms for reporting marine debris and wildlife entanglements, and reported the approval of 19 new or updated visitor site guidelines. The organisation noted its continued collaboration with SCAR, projects funded by the Dutch Research Council and others on tourism-related research initiatives, and its continued commitment to safe and environmentally responsible travel to Antarctica.

10.16 The Scientific Committee thanked IAATO for its comprehensive report and acknowledged the continued logistical and scientific support that the tourism sector continues to provide to Antarctic research - including the facilitation of site access and data collection. The Scientific Committee noted IAATO's collaboration with the scientific community and its efforts to align tourism activities with conservation objectives, such as those relevant to the proposed D1MPA.

10.17 The Scientific Committee highlighted the increasing scale of tourism activities and emphasised the importance of assessing potential cumulative impacts in the region.

10.18 IAATO informed the Scientific Committee that it participates as an invited expert in discussions at the ATCM, including on the development of a framework for the regulation of tourism and other non-governmental activities in Antarctica. IAATO also noted that it operates

within the Antarctic Treaty System to have no more than a minor or transitory impact on the Antarctic environment and supports scientific research to assess and minimise environmental impacts.

10.19 The Scientific Committee welcomed CCAMLR-44/BG/30 submitted by the Antarctic and Southern Ocean Coalition (ASOC), noting ASOC's continued efforts to advance Antarctic conservation and support policy-relevant science.

10.20 ASOC stated that during the intersessional period, ASOC and its members funded research, promoted dialogue among CCAMLR stakeholders, and participated in major international fora, including the Biodiversity COP16, Climate COP29, Our Ocean and UN Ocean Conferences, the ATCM, and the PHOCIS meeting in Cape Town. Additionally, ASOC supported projects on krill ecology, carbon sequestration, whale recovery, along with the development of an East Antarctic Marine Biodiversity Observation Network and launched the report Protecting a Changing Southern Ocean in all CCAMLR languages. ASOC also partnered with 'Outernet London' on a multimedia exhibition showcasing Southern Ocean biodiversity and received the Gulbenkian Prize for Humanity for its leadership in international cooperation and science-based advocacy.

10.21 The Scientific Committee thanked ASOC for its continued engagement and valuable contributions to the work of CCAMLR and Antarctic region at large. In addition, the efforts in supporting scientific research, outreach, and international collaborations with relevance to CCAMLR objectives was acknowledged.

10.22 The Scientific Committee expressed its support for the work of the Antarctic Wildlife Research Fund (AWR) Advisory Group and appreciation for ASOC's assistance to scientists contributing to that work.

10.23 The Scientific Committee thanked the scientists serving on the AWR Science Advisory Group for their time and expertise in evaluating projects and for their valuable contributions to the group's activities.

10.24 SC-CAMLR-44/BG/11, submitted by Oceanites, highlighted the long-term Antarctic Site Inventory (ASI) program.

10.25 Oceanites reported that the 2025/26 field season will mark its 32nd consecutive year of penguin monitoring under the ASI programme, representing its largest operation to date, with 19 teams across seven IAATO vessels and over 100 site visits. Since 1994, Oceanites has completed 2 267 census counts at 242 sites, covering more than 3.5 million penguins, with data showing continued gentoo increases, chinstrap declines, and variable Adélie trends. Expanded monitoring this season will include drone-based surveys, avian influenza surveillance, and seal and seabird counts, with results made publicly available in near real time. Oceanites also reported its ongoing relationship with ARK, contributing penguin data to assess interactions between krill fishing and predator foraging areas. The organisation continues collaborations with IAATO, SCAR's Wildlife Health Network, and research partners, maintaining the open-access MAPPPD database with 5 407 records from 725 sites in support of transparent, collaborative science consistent with Article III of the Antarctic Treaty.

10.26 The Scientific Committee acknowledged the report from Oceanites and expressed appreciation for the continuation of its long-term ASI program. It noted, furthermore, that the

data generated through the ASI and MAPPPD databases provide valuable baseline information in support of CCAMLR's objectives, including MPA development, along with ecosystem monitoring, and contributes to the identification of priority areas for scientific research - particularly those relevant to the D1MPA proposal.

10.27 The Scientific Committee encouraged continued collaboration between Oceanites and CCAMLR monitoring programmes to enhance data integration and exchange.

10.28 The Scientific Committee also noted how these new technologies and innovative approaches enhance monitoring, highlighting the usefulness of data from Subarea 48.1 and Voluntary Restricted Zones (VRZs) for assessing predator population changes and environmental impacts within VRZs.

10.29 Many Members noted that VRZs provide an opportunity to assess ecological changes over time, particularly in the context of the development of the proposed D1MPA R MP.

10.30 Oceanites thanked the Scientific Committee for their support and would be happy to collaborate and contribute to the work of the Scientific Committee.

10.31 The Scientific Committee welcomed SC-CAMLR-44/BG/19, submitted by the ARK, highlighting responsible krill harvesting amid environmental and management challenges.

10.32 ARK informed the Scientific Committee that the 2024/25 fishing season was constrained by extensive sea ice around the South Orkneys, preventing early access to Subarea 48.2. ARK noted that despite the lapse of CM 51-07, ARK members voluntarily upheld previous fishing patterns and maintained precautionary VRZs, resulting in a well proportioned catch distribution between Subareas 48.1 (57.5%) and 48.2 (41.7%). Twelve vessels operated during the season, fully complying with VRZs that protected more than 74 000 km² of penguin foraging habitat.

10.33 The Scientific Committee noted the collaborative acoustic surveys undertaken in Subareas 48.1 and 48.2, a joint effort between the Yellow Sea Fisheries Research Institute (China) and the Institute of Marine Research (Norway), which provided valuable within-season biomass data to WG-ASAM-2025.

10.34 SC-CAMLR-44/BG/28 submitted by the Southern Ocean Observing System (SOOS) recognised ocean observing systems as essential infrastructure. The paper emphasised the importance of sustained, standardised observations as foundational infrastructure supporting both research and policymaking. SOOS noted global efforts to harmonise essential ocean variables (EOVs) and called for integration of CCAMLR's monitoring priorities into these discussions to ensure the Southern Ocean is adequately represented.

10.35 SC-CAMLR-44/BG/34, also submitted by SOOS, provided its 2024–2025 Annual Report. SOOS outlined activities undertaken through regional working groups, including multiple virtual workshops and the establishment of the SOOS/GOA-ON Southern Ocean Hub for Ocean Acidification. SOOS also highlighted ongoing work on emperor penguin monitoring and acidification impacts through collaborations with SCAR and other partners.

10.36 SOOS highlighted recent publications relevant to SC-CAMLR work, a review on the observing system in the Indian Sector of the Southern Ocean and air-sea flux observing system requirements. SC-CAMLR was also reminded of SOOS tools and networks which could assist

SC-CAMLR with its work including SOOSmap (soosmap.aq), DueSouth (polardex.org/due-south), and SOOS' inventory of Southern Ocean long-Term monitoring programmes- which is currently being developed. SOOS presented its plans for 2026 to commence a new project developing interactive maps of observational coverage and summary visualisations for key Southern Ocean essential variables, the development of a new Science and Implementation Plan (2026-2030), and continued partnerships with 'Antarctica InSync' and the International Polar Year.

10.37 The Scientific Committee noted how SC-CAMLR-44/BG/24, SC-CAMLR-44/BG/28, and SC-CAMLR-44/BG/34 are of relevance to CCAMLR objectives. Particular interest was expressed in the studies addressing observing requirements for air–sea fluxes, the status of ocean observations in the Indian Sector, and the updated capabilities of the SOOSmap - which hosts a substantial number of data layers.

10.38 The Scientific Committee further noted that SC-CAMLR-44/BG/28, which provides an important foundation for the development of ocean-related indicators and observation infrastructure, aligned with CCAMLR's ecosystem reporting and assessment needs. In this regard, the Scientific Committee recognised the critical role of SOOS in coordinating sustained ocean observations across the Southern Ocean and emphasised the importance of continued collaboration to ensure that CCAMLR's priorities, along with associated data streams, were effectively incorporated within the wider Southern Ocean observing framework.

10.39 The Scientific Committee welcomed SC-CAMLR-44/BG/41 submitted by the Food and Agriculture Organization (FAO) on Deep-sea Fisheries under the Ecosystem Approach Project (2022–2027). The paper summarised activities within the GEF-7 ABNJ Common Oceans Programme, focusing on strengthening management of deep-sea fisheries under an ecosystem approach.

10.40 SC-CAMLR-44/BG/41 noted that while CCAMLR is not a formal project partner, the expertise and experience within the CCAMLR community are highly relevant to the FAO Deep-sea Fisheries (DSF) Project's objectives. The FAO project aims to strengthen the management of deep-sea fisheries globally through improved data, science, and capacity building. Four main areas of work are outlined, including a global mapping initiative of deep-sea fishing effort designed to produce a comprehensive overview of the spatial extent and intensity of bottom-contact gear use. To support this effort, a data request to CCAMLR was included.

10.41 The paper also highlighted the project's capacity-building activities, which included a joint FAO–SEAFO observer training workshop in Namibia scheduled for January 2026. This workshop aims at strengthening observer programmes and creating synergies with global sustainable fishery frameworks, including those under CCAMLR. Finally, the paper acknowledged contributions from industry experts, including members of COLTO, in developing terms of reference for a potential global industry network to promote sustainable deep-sea fisheries.

10.42 The Scientific Committee acknowledged the forthcoming FAO–SEAFO observer training workshop to be held in Namibia (2026) and welcomed the capacity that will be developed through this initiative. The Scientific Committee further noted that the training of observers will contribute to strengthening data collection and reporting efforts across deep-sea

fisheries relevant to CCAMLR and encouraged the FAO to engage with the CCAMLR Secretariat to share materials and expertise to support the workshop.

10.43 The Scientific Committee endorsed the FAO data request (SC-CAMLR-44/BG/41 Appendix 1) and encouraged continued support for participation in relevant FAO Deep-sea Fisheries Project activities that strengthen coordination and promote alignment in approaches to ecosystem-based fisheries management.

10.44 The International Union for Conservation of Nature (IUCN), Coalition of Legal Toothfish Operators (COLTO) and International Agreement on the Conservation of Albatrosses and Petrels (ACAP) are amongst the organisations that updated the Scientific Committee about their activities.

10.45 IUCN acknowledged the paper WG-FSA-2025/44, specifically the recommendation that the two icefish species, *Chaenocephalus aceratus* and *Pseudochaenichthys georgianus*, be re-assessed (see WG-FSA-2025; paragraph 6.41-6.42). In this regard, IUCN encouraged CCAMLR Members and experts from Antarctic-related scientific group, such as SCARFISH, to contribute to this process to ensure that updated assessments reflect the best available scientific information. IUCN also stressed that they organise a workshop from 16–20 March 2026 in Puerto Varas, Chile, to assess the extinction risk of about 300 marine bony fish species of the Southern Ocean and Antarctica for the IUCN Red List, fostering closer cooperation with the CCAMLR community (see WG-FSA-2025, paragraph 6.42).

10.46 The Scientific Committee supported the participation in IUCN Red List processes and recommended the attendance of the CCAMLR Secretariat at relevant IUCN meetings to strengthen coordination and facilitate timely data sharing (paragraph 10.45).

10.47 The Scientific Committee also emphasised that any data requests associated with forthcoming IUCN assessments should be submitted as early as possible, recognising that sufficient lead time is required to prepare, review, and approve data in accordance with CCAMLR's established data access procedures.

10.48 COLTO thanked all crew and observers for their continued at-sea efforts. In addition, COLTO announced and congratulated the winners of the toothfish tag return lottery as follows:

(i) 1st place, Blue Ocean (Korea);

(ii) 2nd place, Janas (New Zealand); and

(iii) 3rd place, Proa Pioneer (Uruguay).

10.49 ACAP announced that it did not submit a report to SC-CAMLR this year, as its Advisory Committee and Working Groups did not meet in 2025; the next meetings are planned for mid-2026 in Namibia. An intersessional expert group continues to develop advice on the impacts of the HPAI H5N1 panzootic on albatrosses and petrels, including seabird handling guidelines and a global albatross and petrel case map on the ACAP website. ACAP marked the sixth World Albatross Day on 19 June 2025 under the theme Effects of Disease, highlighting the threats these species face. It welcomed eradication efforts in the sub-Antarctic—France's feral cat removal on Kerguelen Island and South Africa's progress towards eradicating house mice on Marion Island—and Australia's first research expedition in over 20 years to Heard and McDonald Islands. ACAP also expressed interest in contributing to the 2026 WG-IMAF

meeting to support development of best-practice advice on bird-strike monitoring, mitigation in krill fisheries, and assessment of impacts on species such as the Cape Petrel and Snow Petrel.

Reports of representatives at meetings of other international organisations

10.50 Dr Kelly introduced paper SC-CAMLR-44/BG/14, which summarises the research activities conducted within the collaboration between the IWC-SC and SC-CAMLR in the 2024/25 intersessional period. Dr Kelly highlighted the work accomplished on the consideration of cetaceans for the ecosystem-based approach to krill fishery management, CEMP and common ecosystem modelling needs. Results of this work were presented and discussed at WG-EMM-2025 and further integrated to the WG-EMM workplan. The collaboration on minimising whale entanglements in the krill trawl fishery will have an opportunity to provide advice on the recent humpback whale entanglements during the upcoming IWC-SC meeting in April 2026.

10.51 The Scientific Committee welcomed the report, highlighting the importance of this joint work for the further development of the KFMA and CEMP, as well as for the work of WG-IMAF. It emphasised the importance of continued collaboration, which may be strengthened further if a Memorandum of Understanding between IWC and CCAMLR is agreed.

Scientific Committee activities

11.1 SC-CAMLR-44/BG/03 provided a report on the science tasks undertaken by the Secretariat during the 2024/25 intersessional period, which were mostly tasked during 2024.

11.2 The Scientific Committee thanked the Secretariat for their work on various science tasks and for the subsequent report and noted that CCAMLR's spatial data viewer has been used extensively to support the discussions of WG-EMM and WG-FSA. It also recognised the importance of celebrating long-term meeting attendance and contributions by participants through awards such as the Wombat and acknowledged that 30 years is a long time to be involved in CCAMLR. The Scientific Committee also recognised the productive relationship between CCAMLR and SIOFA and commended the collaboration.

11.3 The Scientific Committee endorsed the recommendations to:

(i) implement the protocol for sharing toothfish fishery data with SEAFO

(ii) continue development of the spatial data viewers and make them continuously available to Members with consideration of appropriate access restrictions

(iii) further develop the concept of a new category of CCAMLR participation awards, with suggestions for a name for a category to be developed, including names with a Tasmanian flavour, such as 'echidna' or 'platypus'

(iv) with the agreement of an MOU, extend an invitation to Peruvian scientists to the 2026 meetings of WG-ASAM and WG-EMM, and

(v) implement the described approach to maintain CM 91-02 and inform Members of changes in relevant ASPAs and ASMAs.

11.4 SC-CAMLR-44/BG/15 provided an update on ongoing discussions on the workflow for data requests in addition to a detailed overview of data requests received by the Secretariat between1 September 2024 and 31 August 2025 along with their outcomes. The update also noted the issue of a continued non-response from Vanuatu regarding access to C1 krill catch data from the 2004 and 2005 seasons. If the Secretariat does not receive a reply or receives a refusal, the current procedure removes data from those data owners but releases the remaining data, which creates a biased dataset.

11.5 The Scientific Committee thanked the Secretariat for the interesting and comprehensive analysis of data requests coming into CCAMLR. It also thanked the Secretariat for its patience providing guidance on crafting data requests to ensure the correct data is provided, as well as data holders who responded to requests in a timely manner.

11.6 The Scientific Committee noted that during the 2025 reporting period, most data requests approved under paragraph 2(a) of the Rules for Access and Use of CCAMLR Data – which does not require approval from data owners as they relate to work specifically outlined and endorsed by the Commission or the Scientific Committee – were processed in less than 7 days. In comparison, requests for data to conduct work not specifically endorsed by the Commission or the Scientific Committee, approved under paragraph 2(b) were processed in an average of 29 days, and publication requests in an average of 44 days.

11.7 The Scientific Committee noted that the 2(b) requests facilitate research into emerging but important scientific questions that have not yet been reviewed or identified as priorities for the work of the Scientific Committee, and that such flexibility added significant value to the work of CCAMLR and to Antarctic science more widely. It also noted the benefit of having Scientific Committee or Commission endorsement for analyses to streamline data requests via the 2(a) request process.

11.8 The Scientific Committee confirmed that the request and publication processes as described in the process diagram are functioning satisfactorily and requested the Secretariat to make the process diagram (SC-CCAMLR-44/BG-15, Figure 1) available through the CCAMLR website.

11.9 The Scientific Committee noted the importance for data holders to nominate alternative contacts to help ensure rapid responses. It also suggested that data holders could authorise a ‘perpetual’ agreement for access to data, removing the need to ask them again in the future to eliminate the risk of non-response refusals.

Science Fund reporting and the CCAMLR Scientific Scholarship Scheme

11.10 SC-CAMLR-44/BG/16 reported that the CCAMLR Scientific Scholarship Scheme received two applications in 2025 (one from South Africa and one from Argentina).

11.11 The Scientific Committee enthusiastically endorsed the recommendations to award the two scholarships to Dr T. Carpenter-Kling (South Africa), for work on identifying priority conservation areas in the Indian Ocean sub-Antarctic (Prof. P. Koubbi (France) as mentor), and

to Dr D. Deregibus (Argentina), for work to develop a RMP for the proposed D1MPA (Mr Pardo as mentor).

11.12 The Scientific Committee recognised the importance of the CCAMLR Scholarship Scheme, reflecting on the considerable contributions the scholars have made to the work of CCAMLR since the scheme's inception. It also noted the importance of this scheme in bringing in early career researchers into the work of CCAMLR, highlighting that some of them have taken key roles such as conveners of the working groups, vice Chairs of the Scientific Committee, or national representatives at the Scientific Committee. The Scientific Committee also thanked the scholarship review panel for its work.

11.13 The Scientific Committee noted the projected dwindling of the General Science Capacity Fund (from which the CCAMLR Scholarship funds come from) to zero in 2027 (CCAMLR-44/04).

11.14 The Scientific Committee recommended that the Commission develop a sustainable financing plan to maintain this and other capacity development programs (e.g. Workshop support, convener travel support) which would reflect the importance of the scheme for supporting the work of CCAMLR. The Scientific Committee also recalled paper SC-CAMLR-43/BG/07 which summarised the large amount of work that scholarship recipients had undertaken over the years and suggested the Secretariat periodically provide a similar summary to support the sustainable financing plan.

11.15 SC-CAMLR-44/BG/17 presented the summary of the review of the proposal submitted to this year's round of the CEMP Special Fund. The CEMP Special Fund Management Panel reviewed the research proposal by Dr Warwick-Evans et al. (UK) on studying penguin population trends and potential impacts of the fishery at the South Orkney Islands using satellite-linked cameras, requesting A$110 054 in total over three years, with A$49 525 in the first year. The management panel recommended funding the proposal noting it was a useful pilot study that fit the CEMP Special Fund assessment criteria. Five ongoing CEMP Special Fund projects were monitored in 2025/26 and progress reports were included.

11.16 The Scientific Committee welcomed the proposal and endorsed the recommendation of the panel to fund the proposal by Dr Warwick-Evans.

11.17 The Scientific Committee endorsed the Proposal 2024/01 (on reconciling divergent population trends in gentoo penguins) for Drs Hinke and Krause (US) to receive a no-cost one-year extension to allow a catch up in fieldwork in the 2026/27 season after logistical uncertainties in the 2025/26 field season.

Scientific Committee strategic plan and working group priorities

11.18 The Secretariat introduced and updated the format for the Scientific Committee Strategic Workplan, which combined the workplans of the Scientific Committee and its Working Groups into a single table to improve clarity and reduce duplication.

11.19 The Scientific Committee agreed on the insertion of an additional column to allow filtering of items related to climate change to better align with the CCAMLR Climate Change Workshop (WS-CC-2023) recommendations.

11.20 The Scientific Committee noted that some formats of the workplan table might need to be elaborated in the future, and further noted that the tasks of DSAG were completed and will be removed from the workplan table. The Scientific Committee thanked the current and previous conveners of DSAG (Drs A. Van de Putte, A. Dunn, T. Okuda, G. Walters, C. Reiss) for their contributions.

11.21 The Scientific Committee considered the WG-ASAM workplan tasks in paragraph 8.1 in WG-ASAM-2025 and noted that with the broader uses of acoustic data and analysis, the topics discussed by ASAM may exceed its Terms of Reference (WG-ASAM-2025 paragraph 9.3). It endorsed updating the ASAM Terms of Reference when revising the Scientific Committee strategic workplan during 2026.

11.22 The Scientific Committee considered the WG-SAM workplan and, noting the current task list is ambitious (WG-SAM-2025 paragraph 8.4), highlighted that with limited resources WG-SAM may fail to complete some tasks (WG-SAM-2025 paragraphs 3.4 and 9.2).

11.23 The Scientific Committee considered the WG-EMM workplan and noted the fragmented handling of krill-related issues across multiple Working Groups (WG-EMM-2025 paragraphs 6.7 and 6.8) and supported the need for focus in each group. The Scientific Committee further noted the importance of integrating the work of different Working Groups and the current adjacent meetings (WG-ASAM and WG-EMM) was a very good opportunity for having experts attending both meetings discussing topics of mutual interest (WG-EMM-2025 paragraph 2.32).

11.24 The Scientific Committee noted that no meeting for WG-IMAF was scheduled during 2025 and that WG-IMAF will discuss its workplan during its next meeting in 2026.

11.25 The Scientific Committee considered the WG-FSA workplan and noted the tasks and the changes in paragraph 8.1 in WG-FSA-2025.

11.26 The Scientific Committee discussed the possibility of re-convening WG-Krill in WG-EMM this year (WG-EMM-2025 paragraphs 6.7) and requested the Scientific Committee Bureau to draft its Terms of Reference for further consideration by SC-CAMLR-45 (also considering the potential implication for other Working Groups).

11.27 The Scientific Committee noted the need to expedite the work in respect of the KFMA, and that the Working Group conveners should prioritise papers and discussions that address the specific tasks on their workplans.

11.28 The Scientific Committee agreed that external experts would be invited for the WG-ASAM and WG-IMAF meetings to contribute their experience and knowledge for these Working Groups. Specifically, the Scientific Committee recommended that ACAP, IWC, COLTO and ARK be invited to send experts to contribute to discussions at WG-IMAF. The Scientific Committee also recommended that ARK experts be invited to WG-ASAM.

Election of Scientific Committee Chair, Vice chair and next meeting

11.29 The Scientific Committee sought nominations for a new Junior Vice-Chair. Dr A. Panasiuk (Poland) was unanimously elected to the position for a term of two regular meetings

(2026 and 2027). A warm welcome was extended to the incoming Junior Vice-Chair. Dr Panasiuk thanked the Scientific Committee for the opportunity to increase her contribution to CCAMLR.

11.30 The current Scientific Committee chair Dr C. Cárdenas (Chile) was unanimously elected to continue to take the chair for another two years (2026 and 2027). Dr Cárdenas thanked the Scientific Committee for its support and looked forward for this new term in order to continue progressing the work of the Scientific Committee.

11.31 The Scientific Committee thanked Dr S. Chung (Korea) for taking on the role of Junior Vice Chair a year early and noted he would continue the role of Senior Vice-Chair in 2026.

11.32 The Scientific Committee noted Dr L. Ghigliotti (Italy) had finished her role as Senior Vice Chair, and thanked her contribution to the Committee, including chairing the Scientific Committee when the Scientific Committee Chair was reporting to SCIC and SCAF.

11.33 The Scientific Committee noted that Dr T. Okuda (Japan) had finished his role as co-chair of WG-SAM and thanked him for his leadership that had started online in 2021 and through the COVID period along with Dr C. Péron (France) and then Dr D. Maschette . The Scientific Committee further noted that Dr Okuda accepted his nomination as the convener for WG-FSA and looked forward to his leadership of this Working Group.

11.34 The Scientific Committee noted that Mr S. Somhlaba had finished his role as chair of WG-FSA and thanked him for his leadership that had started in 2020.

11.35 The Scientific Committee noted that Mr N. Walker (New Zealand) had stepped down his role as co-convener of WG-IMAF and thanked him for his leadership.

11.36 The Scientific Committee noted that Dr S. Fielding (UK) had finished her role as co-convener of WG-ASAM and thanked her for her leadership that had started in 2019. The Scientific Committee further noted that Dr H. Murase (Japan) was nominated as the co-convener for WG-ASAM and looked forward to his leadership in this Working Group.

11.37 Dr A. Makhado (South Africa) informed the Scientific Committee that the upcoming CCAMLR Mid-Year meeting will be hosted in South Africa. Dr A Makhado further informed that the venue of the meeting will be communicated to CCAMLR Secretariat and to Members via Circular.

SC-CAMLR supported working group meetings and workshops for 2025/2026

11.38 The Scientific Committee endorsed the following meetings and workshops in 2026:

(i) WG-ASAM in Shanghai, China (18th to 22nd May 2026)

(ii) WG-IMAF in South Africa (15th to 19th June 2026)

(iii) WG-EMM in South Africa (29th June to 10th July 2026)

(iv) WG-SAM in South Africa (13th to 17th July 2026)

(v) WG-FSA in Hobart (5th to 16th October 2026)

(vi) Scientific Committee in Hobart (19th to 23th October 2026)

(vii) Harmonisation of Marine Spatial Planning for Subarea 48.2 Workshop in South Africa (22nd to 27th June 2026)

(viii) CEMP review/proposed D1MPA RMP Workshop

(ix) Joint SC-CEP Climate Change (8-9 May) and CEP (11-15 May) in Hiroshima, Japan

(x) XII SCAR open Science Conference in Oslo, Norway (8-19 August).

Advice to SCIC and SCAF

12.1 The Scientific Committee collated its advice relative to funding required to support its activities in 2025/2026.

12.2 For General Science Capacity Fund expenses, the Scientific Committee noted:

(i) support for two new scholarships plus two existing scholarships totalling A$60 000 (paragraph 11.11), and

(ii) ongoing convener travel assistance for one working group convener totalling A$25 000.

12.3 The Scientific Committee reiterated the importance of a sustainable funding mechanism to support capacity building initiatives within CCAMLR to support the work of the Scientific Committee (x-ref paragraphs 3.23 and 11.14).

12.4 The Scientific Committee also noted 2026 support from the CEMP Special Fund for:

(i) a new proposal from Dr Warwick-Evans et al. for $110 054 (paragraph 11.16)

(ii) a one-year delay with the project from Drs Hinke and Krause for A$32 177 (paragraph 11.17)

(iii) a final instalment for the Dr Labrousse project for A$15 347

(iv) continuation of the CEMP Camera equipment fund.

12.5 The Scientific Committee also requested Secretariat support for the Subarea 48.2 workshop, a Subarea 48.1 workshop, participation in an IUCN Southern Ocean fish species vulnerability workshop (paragraph 10.2.31), and the IWC Scientific Committee in 2026 (SC-CAMLR-42 paragraph 8.4).

12.6 The Chair of the Scientific Committee provided advice to SCIC regarding the potential depth distributions of fish nests in the Convention Area, potential effects of early entry of vessels into Subareas 88.1 and 88.2, and on the utility of collecting additional information on

the causes of late gear retrieval in toothfish fisheries, the effects of late gear retrieval on the quality of data collected, the tagging rate and tag overlap statistic.

12.7 The Chair of the Scientific Committee requested SCIC provide the definitions of the terms calibration and standardisation in CM 24-01, Annex 24-01/A, Format 2, which refers to calibration/standardisation of sampling gear, and clarify why vessels are requested to leave an area immediately after a season closes (CM 31-02) but are allowed to enter an area at any time prior to the start of a fishing season.

Other business

13.1 SC-CAMLR-44/BG/04, presented by Chile, summarised the Chile-Antarctic Smart Cable Project, which aims to deploy the first fibre-optic submarine cable between continental Chile and the South Shetland Islands and the northern Antarctic Peninsula, providing high-speed wired connectivity to support Earth's systems monitoring and to enhance scientific collaboration among Members.

13.2 The Scientific Committee welcomed the initiative and the potential for an increase in communications capacity for science in Antarctica and looked forward to additional updates as this project progresses.

13.3 SC-CAMLR-44/BG/40, presented by Australia on behalf of Canada, summarised the Canadian Antarctic Research Expedition (CARE) 2025, which carried out a multidisciplinary survey in the South Shetland Islands and Antarctic Peninsula to address scientific issues in marine geology and sediment sampling, oceanography, and contaminants on board the HMCS *Margaret Brooke*. The experience Canada has gained from CARE 2025 will inform future Canadian Antarctic research activities, expeditions, and collaborations and contribute to the work of the Scientific Committee.

13.4 The Scientific Committee welcomed the engagement of Canada in the Antarctic marine research community and looked forward to benefiting from its substantial experience with polar marine ecosystems and to collaborations on work with future voyages, especially in the Antarctic Peninsula area.

13.5 Australia informed the Scientific Committee it would be conducting the annual Random Stratified Trawl Survey at Heard Island and McDonald Islands in CCAMLR Division 58.5.2 in March 2026.

13.6 Australia also informed the Scientific Committee as circulated in COMM CIRC 25/116/SC CIRC 25/87 that it plans to conduct marine science activities as part of a voyage to Heard Island during December 2025 to January 2026. The aims of marine science activities include assessments of benthic habitats and biodiversity, demersal and pelagic fish biodiversity and the importance of inshore settlement for ecologically important fish species, distribution and abundance of main phytoplankton groups, and biodiversity and spatial distribution of species occurrences through eDNA.

13.7 The Scientific Committee noted that the MPA Special Fund was seeking new management panel members to develop new terms of reference and manage the fund.

13.8 The Scientific Committee congratulated Mr N. Walker (New Zealand) on his appointment to the role of CCAMLR Executive Secretary, noting that although the Secretariat will gain a valuable and experienced leader, the Scientific Committee will feel the loss of his significant contributions. The Scientific Committee looked forward to future work with the Secretariat under his leadership.

Adoption of the report of the Forty-fourth meeting

14.1 The report of the meeting was adopted, requiring 7.7 hours of discussion.

Close of the meeting

15.1 The Scientific Committee noted the passing of Dr Robert Hofman. Dr Hofman was a former member of the USA delegation to CCAMLR and passed away earlier this year after declining health. He was an integral member of USA delegations to many Antarctic negotiations and assisted in developing U.S. positions for those negotiations. His career in conservation work with the U.S. Marine Mammal Commission allowed him to play an important role in the development of the ecosystem-based conservation obligations that are the hallmark of CCAMLR. Dr Hofman was also the first US Representative to the Scientific Committee of CCAMLR and to the CEP. He was always an advocate for basing management decisions on science and for carrying out the necessary research. He was a mentor to many in the USA delegation and he would always say "Lead by example". He leaves behind an impressive legacy for marine mammal science and CCAMLR and will be missed.

15.2 ASOC also noted that Dr Hofman shared his CCAMLR expertise and knowledge generously even in retirement and expressed appreciation for Dr Hofman and his commitment to CCAMLR.

15.3 Mr Walker thanked the Chair for his excellent leadership, hard work, knowledge and guidance in running the meeting. He also thanked the Secretariat Science team, interpreters, and all Secretariat support for a job well done.

15.4 Mr F. Santa Cruz (Chile) noted that he has witnessed the Chair’s impressive skills in their work together, thanked the Chair for his work, and looked forward to providing active and constructive support to the Chair during the next two years to promote Antarctic Conservation.

15.5 Dr Rodriguez echoed the thanks of other Members and especially appreciated the highly dynamic and well-structured sessions. In particular, he appreciated the standardisation of the use of the term ‘Romanitos’ and calibration of the timing to finish the meeting.

15.6 Dr Eléaume added his thanks to the Chair, the interpreters and translators for their support.

15.7 Mr Somhlaba thanked the Chair and also thanked Dr Agnew for his leadership for the past eight years, noting his retirement from the Executive Secretary position in the upcoming months (paragraph 2.4).

15.8 The Chair of the Scientific Committee thanked the Committee members for their good will and appreciation of his efforts. He noted that although improving their Spanish was a big achievement, but that the Committee sought even bigger achievements in Antarctic marine conservation and he looked forward to working together to reach those goals. He thanked the interpreters (especially those interpreting his Spanish), rapporteurs, translators, Congress for audio-visual support, and the Secretariat.

15.9 The meeting was closed.

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Table 1: Proposed precautionary finfish catch limits (tonnes) for consideration by the Commission for 2025/26. AUS – Australia; ECU – Ecuador; CHL – Chile; ESP – Spain; FRA – France; GBR– United Kingdom; JPN – Japan; KOR – Republic of Korea; NAM – Namibia, NZL – New Zealand; RUS – Russian Federation; UKR – Ukraine; URY – Uruguay.

Subarea/ division	Fishing area	Target species	Catch limit		*Macrourus* spp.	Skates and rays	Other species	Conservation measure	Notifying Members
			2024/25	2025/26					
48.3	48.3	*C. gunnari*	3 579	3 430[4]	-	-	See CM 33-01	33-01, 42-01	Not applicable
48.3[1]	48.3A	*D. eleginoides*	-	-	-	-	See CM 33-01		Not applicable
	48.3B	*D. eleginoides*	619	619	-	-	See CM 33-01		Not applicable
	48.3C	*D. eleginoides*	1 443	1 443	-	-	See CM 33-01		Not applicable
	Total	*D. eleginoides*	2 062	2 062	103	103	See CM 33-01		Not applicable
48.4	48.4_SSI	*D. eleginoides*	19	33	10.4	3.3		41-03	Not applicable
	48.4_SSI	*D. mawsoni*	37	32	10.4	3.3		41-03	Not applicable
48.6	48.6_2	*D. mawsoni*	152	182	29	9	29	33-03, 41-04	ESP, JPN, KOR
	48.6_3	*D. mawsoni*	50	60	9	3	9	33-03, 41-04	ESP, JPN, KOR
	48.6_4	*D. mawsoni*	151	181	28	9	28	33-03, 41-04	ESP, JPN, KOR
	48.6_5	*D. mawsoni*	242	290	46	14	46	33-03, 41-04	ESP, JPN, KOR
	Total	*D. mawsoni*	595	713	-	-	-		
58.4.1	58.4.1_1[2]	*D. mawsoni*	112 (50 sets)	112 (50 sets)	17	5	17	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	58.4.1_2[2]	*D. mawsoni*	80 (50 sets)	80 (50 sets)	12	4	12	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	58.4.1_3[2]	*D. mawsoni*	79 (60 sets)	79 (60 sets)	12	3	12	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	58.4.1_4[2]	*D. mawsoni*	46 (30 sets)	46 (30 sets)	7	2	7	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	58.4.1_5[2]	*D. mawsoni*	116 (50 sets)	116 (50 sets)	18	5	18	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	58.4.1_6[2]	*D. mawsoni*	50 (50 sets)	50 (50 sets)	8	2	8	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
	Total	*D. mawsoni*	483	483	-	-	-	33-03, 41-11	AUS, ESP, FRA, JPN, KOR
58.4.2	58.4.2_1	*D. mawsoni*	124	149	23	7	23	33-03, 41-05	AUS, FRA
	58.4.2_2	*D. mawsoni*	165	132	21	6	21	33-03, 41-05	AUS, FRA
	Total	*D. mawsoni*	289	281	-	-	-	33-03, 41-05	AUS, FRA

Subarea/ division	Fishing area	Target species	Catch limit		*Macrourus* spp.	Skates and rays	Other species	Conservation measure	Notifying Members
			2024/25	2025/26					
58.5.2	HIMI	*C. gunnari*	1 824	1 429[5]			See CM 33-02	33-02, 42-02	Not applicable
	HIMI	*D. eleginoides*	2 120	2 120			See CM 33-02	33-02, 41-08	Not applicable
88.1	North of 70° S	*D. mawsoni*	623	623	99	31	31	41-09	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR
	South of 70° S	*D. mawsoni*	2 163	2163	316	108	108	41-09	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR
	SRZ	*D. mawsoni*	393	428	72	21	21	41-09	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR
	Shelf Survey	*D. mawsoni*	99	64	-	-	-	24-05, 41-09	NZL
	Total	*D. mawsoni*	3 278	3 278	487	160	160	41-09	
88.2	88.2_1	*D. mawsoni*	184	184	29	9	29	33-03, 41-10	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR, URY
	88.2_2	*D. mawsoni*	378	454	72	22	72	33-03, 41-10	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR, URY
	88.2_3	*D. mawsoni*	390	468	74	23	74	33-03, 41-10	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR, URY
	88.2_4	*D. mawsoni*	266	319	51	15	51	33-03, 41-10	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR, URY
	88.2H	*D. mawsoni*	166	199	31	9	31	33-03, 41-10	AUS, ECU, ESP, FRA, GBR, KOR, NAM, NZL, RUS, UKR, URY
	Total	*D. mawsoni*	1384	1624					
88.3	88.3_1	*D. mawsoni*	10	12	1	0.6	1	24-05	KOR, UKR
	88.3_2[3]	*D. mawsoni*	20	20 (14 sets)	3	1	3	24-05	KOR, UKR

Subarea/ division	Fishing area	Target species	Catch limit		*Macrourus* spp.	Skates and rays	Other species	Conservation measure	Notifying Members
			2024/25	2025/26					
	88.3_3	*D. mawsoni*	30	24	3	1	3	24-05	KOR, UKR
	88.3_4	*D. mawsoni*	30	24	3	1	3	24-05	KOR, UKR
	88.3_6	*D. mawsoni*	52	52	8	2	8	24-05	KOR, UKR
	88.3_11	*D. mawsoni*	23 (30 sets)	100	16	5	16	24-05	KOR, UKR
	88.3_12	*D. mawsoni*	23 (30 sets)	168	26	8	26	24-05	KOR, UKR
	Total	*D. mawsoni*	188	400	-	-	-		

[1] Consensus could not be reached on catch limits for *D. eleginoides* in Subarea 48.3 for the 2024/2025 and the 2025/2026 seasons (SC-CAMLR-43 paragraph 3.51).
[2] Catch limit for effort-limited research fishing as per WG-SAM-2025/03.
[3] Catch limit for effort-limited research fishing as per WG-FSA-2025/49 Rev.1.
[4] The proposed catch limit for *C. gunnari* in 48.3 for 2026/27 is 2230 t
[5] The proposed catch limit for *C. gunnari* in 58.5.2 for 2026/27 is 1126 t

Annex 1

List of Registered Participants

List of Registered Participants

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Annex 2

List of Documents

List of Documents

SC-CAMLR-44/01	Documenting the Spatial Overlap Analyses as a contribution to documenting the krill fishery management approach Warwick-Evans, V., S. Hill and M. Collins
SC-CAMLR-44/02	Krill fishery management in Area 48 – options for spatial distribution of catches Delegation of the United Kingdom
SC-CAMLR-44/03	Proposal for a workshop to support the harmonisation of marine spatial planning for Subarea 48.2 Lowther, A.D., E.D. Johannessen, U. Lindstrøm, N. Kelly, B. Krafft., A.B. Makhado, M. Santos, F. Santa Cruz and X. Wang
SC-CAMLR-44/04	Framing the Research and Monitoring Plan of the proposed Marine Protected Area in Domain 1 (D1MPA) Delegations of Argentina and Chile
SC-CAMLR-44/05	Spatial structure of krill stock in the Antarctic Peninsula region and implication for krill fishery management Delegation of China
SC-CAMLR-44/06	Comments on efficiency of the Scientific Observer's sampling for the krill fishery Delegation of the Russian Federation
SC-CAMLR-44/07	Strategic approach to identify areas for spatial protection using pelagic ecoregionalisation in the subantarctic Indian High Seas Makhado, A.B., P. Koubbi, K.M. Swadling, T. Carpenter-Kling, A.T. Lombard, J.A. Huggett, P. Marras - Aït Razouk, M. Connan, C. Cotté and E. Goberville
SC-CAMLR-44/08	Report of the Working Group on Statistics, Assessment and Modelling (WG-SAM-2025) (Tenerife, Spain, 16 to 20 June 2025)
SC-CAMLR-44/09	Report of the Working Group on Acoustic Survey and Analysis Methods (WG-ASAM-2025) (Geilo, Norway, 30 June to 4 July 2025)

SC-CAMLR-44/10	Report of the Working Group on Ecosystem Monitoring and Management (WG-EMM-2025) (Geilo, Norway, 7 to 18 July 2025)
SC-CAMLR-44/11	Report of the Working Group on Fish Stock Assessment (WG-FSA-2025) (Hobart, Australia, 6 to 16 October 2025)
	**********
SC-CAMLR-44/BG/01	Catches of target species in the Convention Area CCAMLR Secretariat
SC-CAMLR-44/BG/02	CCAMLR's revised Krill Fishery Management Approach (KFMA) in Subareas 48.1 to 48.4 as progressed up to 2024 Working Group on Ecosystem Monitoring and Management and CCAMLR Secretariat
SC-CAMLR-44/BG/03	Secretariat science support for the Scientific Committee in 2025 CCAMLR Secretariat
SC-CAMLR-44/BG/04	Chile–Antarctic Smart Cable Project Delegation of Chile
SC-CAMLR-44/BG/05	2025 Annual Report to the Scientific Committee of CCAMLR Delegation of the United States of America
SC-CAMLR-44/BG/06	First steps towards the development of the Research and Monitoring Plan of the proposed Marine Protected Area in Domain 1 (D1MPA) Delegations of Argentina and Chile
SC-CAMLR-44/BG/07	Information about a Workshop for Training Russian Scientific Observers and Inspectors to Work in Fisheries in the CCAMLR Convention Area (Russia, 4-8 August 2025) Delegation of the Russian Federation
SC-CAMLR-44/BG/08	CIMAR 1 Antartica: Chile's Contribution to ecosystem monitoring in subarea 48.1 Delegation of Chile
SC-CAMLR-44/BG/09	Report of the Fourth Training Course of Chilean Scientific Observers under the CCAMLR SISO Scheme Delegation of Chile

SC-CAMLR-44/BG/10	COLTO–FishSOOP Collaboration on Oceanographic Data Collection from Toothfish Vessels COLTO
SC-CAMLR-44/BG/11 Rev.1	2025 Report by Oceanites, Inc. — Monitoring Update Oceanites
SC-CAMLR-44/BG/12 Rev. 1	Developments in cetacean monitoring and IAATO operational procedures in Antarctica 2019-2026 IAATO and ASOC
SC-CAMLR-44/BG/13	Antarctic Climate Change and the Environment: 2025 Update SCAR
SC-CAMLR-44/BG/14	Summary of research activities for the collaborations between SC-CAMLR and IWC-SC in the 2024/25 intersessional period Kelly, N.
SC-CAMLR-44/BG/15	CCAMLR data requests and the rules for Access and Use of CCAMLR Data CCAMLR Secretariat
SC-CAMLR-44/BG/16	CCAMLR Scientific Scholarship Scheme review panel recommendations in 2025 CCAMLR Scientific Scholarship Scheme review panel
SC-CAMLR-44/BG/17	CEMP Special Fund activities 2025 CEMP Special Fund Management Panel
SC-CAMLR-44/BG/18	The Scientific Committee on Antarctic Research (SCAR) Annual Report to CCAMLR 2024/25 SCAR
SC-CAMLR-44/BG/19	ARK report 2025: Responsible Krill Harvesting amid climate and management challenges ARK
SC-CAMLR-44/BG/20	Census of penguins on the Antarctic Peninsula & South Shetland Islands (Subarea 48.1) Collins, M.A., A. Bennison, N. Ratcliffe, M.L. Romero Martinez, C.M. Waluda and N. Fenney
SC-CAMLR-44/BG/21 Rev. 1	Report on the Ross Sea Region Marine Protected Area Research Coordination Network Inaugural Meeting SCAR, co-sponsored by SOOS

SC-CAMLR-44/BG/22	Establishing a Weddell Sea observatory: Advances through the WOBEC initiative for long-term biodiversity and ecosystem monitoring Teschke, K, .A. Van de Putte, F. Schaafsma, T. Vandenberghe, E. Campbell, K. Campbell, Y. Ming Gan, M. van Leeuwe, M. Lenss, H. Link, F. Mark, Z. Mohamed, S. Moreau, S. Niiranen, M. Pluta, C. Papetti, R. Roura, N. Van den Steen, J. Stefels, W. Werna, M. Vortkamp, M. Wietz, J. Wiktor, A. Wold and H. Flores
SC-CAMLR-44/BG/23	From Fixed Quotas to Adaptive Management: A Proposal for Implementing KFMA in Subarea 48.1 Delegation of Norway
SC-CAMLR-44/BG/24	Inventory of Southern Ocean Long-Term Monitoring Programmes SOOS
SC-CAMLR-44/BG/25	Krill fishery management in Area 48: comments and proposals Delegation of the Russian Federation
SC-CAMLR-44/BG/26	Hot Spots in the Ice: New Tools for Exploring Ecosystem Value ASOC
SC-CAMLR-44/BG/27	Introduction to ASOC's new and novel Southern Ocean Citizen Submersible Initiative (SOCSI) ASOC
SC-CAMLR-44/BG/28	Observation systems are essential infrastructures (for CCAMLR and beyond) Delor, C.A.
SC-CAMLR-44/BG/29	Plastic Pollution Hotspots Originating from Local Sources in the Southern Ocean SCAR
SC-CAMLR-44/BG/30	Preliminary report of the trial on net monitoring cable/warp seabird-strike mitigation measures conducted by the Chinese continuous fishing vessels during the 2024/25 fishing season Delegation of China

SC-CAMLR/44/BG/31	Progress in developing CCAMLR State of Antarctic Environment (SOAE) reporting Delegations of the United Kingdom, New Zealand, France, Belgium, Chile and CCAMLR Secretariat
SC-CAMLR-44/BG/32	Progress report on the joint CEP/SC-CAMLR workshop 2026 CEP/SC-CAMLR Joint Workshop Steering Committee
SC-CAMLR-44/BG/33	SCAR Action Group on Fish (SCARFISH): Updates and Opportunities SCAR
SC-CAMLR-44/BG/34	Southern Ocean Observing System (SOOS) Annual Report (2024-2025) SOOS
SC-CAMLR-44/BG/35	The Framework and Science to support the 10-year review of the Ross Sea region MPA Delegations of Italy, New Zealand, Republic of Korea, Norway and Argentina
SC-CAMLR-44/BG/36 Rev. 2	Summary of krill fishery operations in the 2024/25 season CCAMLR Secretariat
SC-CAMLR-44/BG/37	The state of Gentoo and Adelie penguin populations at Galindez, Petermann, and Yalour islands, time-lapse camera validation, and nearby island colonies inspection Davydenko, S., E. Dykyi, P. Khoetsky, O. Savenko, G. Milinevsky, A. Simon, L. Pshenichnov, V. Tkachenko, K. Demianenko, A. Dzhulai, S. Gogol and Y. Shepeta
SC-CAMLR-44/BG/38	Changes in apparent fishing effort in Subareas 48.1 following the lapse of CM 51-07 ASOC
SC-CAMLR-44/BG/39	Update on High Pathogenicity Avian Influenza in Antarctica 2024/25 SCAR
SC-CAMLR-44/BG/40	Canadian Antarctic Research Expedition 2025 Delegation of Canada
SC-CAMLR-44/BG/41	FAO Deep-sea Fisheries Under an Ecosystem Approach Project (2022–2027) FAO Deep Sea Fisheries Project

Other

SC-CAMLR-44/P01	Adjusting the Management of the Antarctic Krill Fishery to Meet the Challenges of the 21st Century SCAR *PNAS*, 122(37): e2412624122 (2025). doi: https://doi.org/10.1073/pnas.2412624122
CCAMLR-43/48	Suggestions for establishing Marine Protected Areas in the CCAMLR Convention Area: regulation of the uniform process for establishing MPAs and the Commission's management of MPAs Delegation of the Russian Federation
CCAMLR-44/06	Performance Review 2 – summary of outcomes CCAMLR Secretariat
CCAMLR-44/BG/15	Survey for the Development of Electronic Monitoring Systems (EMS) in CCAMLR Fisheries Delegation of Chile
CCAMLR-44/BG/18	International Association of Antarctica Tour Operators 2024-2025 Report to CCAMLR-44 IAATO
CCAMLR-44/BG/28	CCAMLR and the 'shifting baseline syndrome': Issues of concern ASOC
CCAMLR-44/BG/29	Krill Fishery Management Approach and the D1MPA – Moving forward with the harmonisation process ASOC
CCAMLR-44/BG/30	ASOC Report to CCAMLR ASOC

Annex 3

**Agenda for the Forty-fourth Meeting
of the Scientific Committee**

Agenda for the Forty-fourth Meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources

1. Opening of the meeting

    1.1 Adoption of the agenda
    1.2 Chair's report

2. Harvested species - General Issues

    2.1 Krill in Statistical Area 48
    2.2 Krill in Statistical Area 58

3. Harvested species - Finfish General issues

    3.1 Statistical Area 48
        3.1.1 Icefish
        3.1.2 Toothfish

    3.2 Statistical Area 58

        3.2.1 Icefish
        3.2.2 Toothfish

    3.3 Statistical Area 88

        3.3.1 Toothfish

4. Non-target catch

    4.1 Fish and invertebrate by-catch

    4.2 Incidental mortality of seabirds and marine mammals associated with fisheries

    4.3 Bottom fishing and vulnerable marine ecosystems

5. Ecosystem monitoring and management

6. Spatial management of impacts on the Antarctic ecosystem

    6.1 Existing marine protected areas, including research and monitoring plans for MPAs

    6.2 Review of the scientific elements of proposals for new MPAs

    6.3 Other spatial management issues

7. Climate change

8. Illegal, unreported and unregulated (IUU) fishing in the Convention Area

9. CCAMLR Scheme of International Scientific Observation

10. Cooperation with other organisations

    10.1 Cooperation within the Antarctic Treaty System

    10.2 Reports of observers from other international organisations

    10.3 Reports of representatives at meetings of other international organisations

11. Scientific Committee activities

    11.1 Science Fund reporting and the CCAMLR Scientific Scholarship Scheme

    11.2 Scientific Committee strategic plan and working group priorities

    11.3 Election of Scientific Committee Chair, Vice chair and next meeting

12. Advice to SCIC and SCAF

13. Other business

14. Adoption of report of the Forty-fourth Meeting

15. Close of meeting