

SCHEME OF INTERNATIONAL SCIENTIFIC OBSERVATION

7.1 In accordance with CCAMLR's Scheme of International Scientific Observation, scientific observers were deployed on all vessels in all finfish fisheries in the Convention Area.

7.2 Information collected by scientific observers on board longline, finfish trawl, pot and krill trawl cruises were summarised by the Secretariat in SC-CAMLR-XXVI/BG/8 and outlined in paragraph 1.9.

7.3 The Scientific Committee also noted the discussions on the observer program by ad hoc WG-IMAF (Annex 6, paragraphs I.45 to I.48), and WG-FSA (Annex 5, paragraphs 11.1 to 11.10) and in paragraphs 4.21, 4.22 and 4.28 to 4.72 of the WG-EMM report (Annex 4).

7.4 The Scientific Committee noted WG-FSA's advice that an ad hoc technical group be established that reports to the Scientific Committee on discussion of issues in relation to the Scheme of International Scientific Observation identified as impacting on the work of the Scientific Committee, as well as an other technical issues related to at-sea implementation of management measures in the Convention Area (Annex 5, paragraphs 11.1 to 11.12).

7.5 The Scientific Committee further noted the advice from WG-FSA that:

- (i) The ad hoc technical group should comprise experienced observers, regional technical coordinators, representatives of fishers and operators, science representatives, the Secretariat and any other expertise identified as necessary.
- (ii) The following issues should be specifically addressed:
 - (a) ensure an equivalent level of training and accreditation for observers across the Convention Area, considering the results provided in SC-CAMLR-XXVI/BG/9 Rev. 1, which indicated that level of training across all Member States is variable;
 - (b) the context of the specific data types collected, and their use in developing management advice. This would further enable observers to focus on collecting important data, rather than data which are redundant, or would be better collected through remote sensing if required, e.g. estimates of sea-surface temperature or sea state;
 - (c) design or refinement of sampling and data collection protocols for recording by-catch of benthic invertebrate fauna to enable the identification and description of VMEs (Annex 5, paragraphs 6.31 to 6.33 and Agenda Item 14.1);
 - (d) time management and prioritisation of observer tasks, considering that any increase in workload for observers is likely to cause issues for the quality of data able to be collected by observers, as well as the range of target species, gear types and stage of development of fisheries and research priorities within the Convention Area;

- (e) additional tasks that will be required by the proposed Year of the Skate and the impact that these additional tasks will have on the workload of observers and on the quality of other required tasks (Annex 5, paragraphs 6.34 to 6.39);
- (f) consideration of technological improvements in data capture and management systems, and the potential for increased use of hardware and software to improve the quality and quantity of data collected by observers. This could include semi-automated methods of observing fisheries operations, measuring catch and by-catch and wildlife interactions using cameras and portable computers;
- (g) exchange of expertise and experience between technical coordinators and experienced observers on methods of recruiting, training and managing observers, and systems of acquisition, quality assurance, securing and delivering observer data to the Secretariat;
- (h) review the *Scientific Observers Manual* and the electronic logbooks to incorporate outcomes from the meeting;
- (i) any other technical issues related to at-sea implementation of management measures in the Convention Area.

7.6 The Scientific Committee also noted that WG-FSA had developed a matrix to describe all data collected at sea by vessels and observers, identifying user groups and data types, a description of the data and how they are used by the working groups and the Scientific Committee, the optimal sampling scheme for each data type, and consideration of practical limitations on optimal data collection (Annex 5, Table 21).

7.7 Dr Constable thanked WG-FSA for its work, and supported the idea of setting up an ad hoc technical group as being very timely. Many issues could be usefully addressed by such a group, including what are appropriate measures of effort and ways of operationalising by-catch sampling in the krill fishery. It would represent a useful way of introducing new expertise into the discussion of the Scientific Committee, including industry representatives which would assist with understanding the implementation of conservation measures at sea.

7.8 The Scientific Committee supported the establishment of the ad hoc group and noted that provisions would need to be made for the group in the budget discussions by SCAF. The Scientific Committee requested that a small group be convened to determine when the group could meet and for how long, and to develop points to be included in preliminary terms of reference and an agenda.

7.9 The Scientific Committee noted the small group's recommendation that the ad hoc Technical Group for At-Sea Operations (TASO) meet for two days in 2008, on the weekend between the meetings of WG-SAM and WG-EMM. This timing has the benefit of using an existing venue, Secretariat support would be available for the other meetings, and would make it more straightforward for all the necessary technical experts (scientists, observers, technical coordinators and industry representatives) to attend.

7.10 The Scientific Committee noted that TASO would not in the first instance need extra Secretariat support to produce a translated report, but rather the convener/s would present the outcome of its work in the form of a background paper to the Scientific Committee, which would also be produced so as to be available to assist the work of WG-EMM and WG-FSA in 2008. However, it would be useful for the Scientific Observer Data Analyst to attend, along with the Data Manager.

7.11 The Scientific Committee noted the small group's concern that there was limited time within this meeting to fully develop terms of reference or a work plan for TASO. The Scientific Committee also noted that the time limit of two days for the meeting would require a limit on the number of issues that could be addressed by TASO in its first meeting. The Scientific Committee therefore agreed that TASO would deal with only the highest priority issues which would assist the working groups. These were determined to be:

- (i) description of the design and operation of krill fishing vessels and gear used in the Convention Area, including conventional trawling, continuous trawling and pair trawling;
- (ii) description of the design and operation of the trotline longlining method;
- (iii) consideration of observer priorities across different fisheries in the Convention Area, based on the framework provided by the at-sea data matrix developed by WG-FSA and ad hoc WG-IMAF;
- (iv) development of terms of reference and a long-term work plan for TASO.

7.12 The Scientific Committee noted that there was a need for intersessional work to ensure that a streamlined agenda could be developed and requested that Members nominate participants to the Secretariat who would be involved in these consultations. The Scientific Committee also noted that the conveners of all working groups be included in intersessional consultations on the agenda. The Scientific Committee welcomed Dr Welsford and Mr C. Heineken (South Africa) as Co-conveners for this group.

7.13 The Scientific Committee also noted the discussions by WG-EMM on observer issues from krill fisheries (Annex 4, paragraphs 4.57 to 4.60).

7.14 Five scientific observer (four international and one national) datasets were submitted for the 2005/06 season. These data were collected by CCAMLR scientific observers on board the vessels *Niitaka Maru* (Japan), *Konstruktor Koshkin* (Ukraine) and *Saga Sea* (Norway). At present, the CCAMLR database holds scientific observer data from 35 trips/deployments between 1999/2000 and 2005/06 in Subareas 48.1, 48.2 and 48.3, most of which were from Subarea 48.3 (WG-EMM-07/5, Appendix 1).

7.15 Two CCAMLR scientific observers had been deployed in the 2006/07 season at the time of the WG-EMM meeting, both of them on the *Saga Sea* which is employing the continuous fishing system (WG-EMM-07/5).

7.16 WG-EMM discussed the use of CCAMLR scientific observer cruise reports as potential means for assessing accuracy and completeness of data collected by observers (WG-EMM-07/22). It was agreed that the main purpose of observer cruise reports should remain the provision of summary information on observations conducted and data collected,

including detailed descriptions of fishing gear and general comments of observers on the use of the *Scientific Observers Manual* and observer logbooks and any difficulties encountered during observation. Information contained in observer cruise reports has been used by the Secretariat, when required, as an additional source of information for the verification of data collected by observers and submitted in observer logbooks.

7.17 The Scientific Committee noted the recommendation from WG-EMM, that the Secretariat be requested to prepare a summary of the data collected by scientific observers on board krill fishing vessels during the 2006/07 season, similar to the summaries of information annually prepared by the Secretariat on observations conducted in finfish fisheries, in particular for toothfish (e.g. WG-FSA-06/37 and 07/38), and to submit it to the next meeting of WG-EMM for review and approval. The Scientific Committee agreed that this type of analysis would be particularly useful for WG-EMM in determining priority areas of observer coverage of the krill fishery in terms of vessels, gear types, timing during the fishing season and areas where data had not been collected before.

7.18 The Scientific Committee also noted that krill length-frequency data are accumulated through scientific observation and these allow some comparison in selectivity between vessels and between fishing methods, but that these observations were spatially and temporally limited. Coverage in time and space could be improved through systematically increasing observer coverage or through the collection of such data by fishing vessels.

7.19 WG-EMM requested the Secretariat to look into the issue of krill fishing gear descriptions in consultation with technical coordinators of national observer programs and gear experts, prepare the required illustrations and update the cruise report form. The Scientific Committee noted that this issue would be dealt with in part by the meeting of TASO in 2008.

7.20 The Scientific Committee thanked the Secretariat for completing the update of the *Scientific Observers Manual* as requested last year (SC-CAMLR-XXV, section 2). The Scientific Committee also thanked the Secretariat for completing the survey of observer training by Members presented in SC-CAMLR-XXVI/BG/9 Rev. 1.

7.21 Prof. Moreno emphasised that CCAMLR observers are highly skilled, having qualifications and expertise to observe the operations of fisheries and to collect biological information, as well as having qualifications in safety at sea and an understanding of the goals of CCAMLR.

7.22 Dr Welsford agreed that CCAMLR observers could be considered to be trained professionals, and drew the Scientific Committee's attention to SC-CAMLR-XXVI/BG/9 Rev. 1, describing the training and recruitment of Australian observers. The system Australia uses includes training in the specific tasks of CCAMLR observers, and also includes minimum standards of skills and experience with fishery operations and scientific data collection, as well as requiring first-aid and safety-at-sea training, police background checks and declaration of financial interests in the commercial fishing industry.

7.23 Dr Shust described the work of CCAMLR observers from VNIRO. Russia has had a long history of placing observers on krill and finfish vessels in the Convention Area, and Dr Shust invited Members to visit VNIRO to learn more about the methods Russia uses in training observers, and work together on the issue of training observers.

7.24 The Scientific Committee noted that its ability to conduct its work was contingent on the efforts of observers in collecting data, and requested that Members ensure that this gratitude be conveyed to all observers by Members after the meeting.