CCAMLR SCHEME OF INTERNATIONAL SCIENTIFIC OBSERVATION

3.1 In the 1999/2000 season, 44 fishing trips in the Convention Area were observed by CCAMLR-designated scientific observers, or national observers, from Argentina, Australia (national observers), Chile, France (national observers), South Africa, Ukraine, UK, Uruguay and the USA (SC-CAMLR-XIX/BG/18). The fisheries targeted *C. gunnari*, *Dissostichus* spp. or *E. superba*.

3.2 The Scientific Committee noted further substantial improvement in the quality and timing of the submission of the observer reports and logbooks. In addition, the Secretariat had completed all the tasks set last year to improve scientific observations (SC-CAMLR-XVIII, paragraphs 3.14, 3.17 and 3.18). The Scientific Committee thanked all scientific observers for their work during the 1999/2000 fishing season and for the quality and quantity of information collected.

3.3 The Scientific Committee noted the discussion of WG-EMM in relation to scientific observations on board vessels targeting *E. superba* (Annex 4, paragraphs 2.15 to 2.31), and in particular:

(i) the placement of a CCAMLR-designated scientific observer from the USA on board the *Chiyo Maru No. 5* from Japan which was fishing for krill in Subarea 48.1 at the time of the CCAMLR-2000 Survey (Annex 4, paragraph 2.16);

(ii) the placement of a national scientific observer on board a Ukrainian krill vessel operating in Subarea 48.2 during May–June 1999 (Annex 4, paragraph 2.30); and

(iii) the drafting and distribution by the Secretariat of a questionnaire seeking information on krill fishing strategies (Annex 4, paragraph 2.21).

3.4 The Scientific Committee noted that the captain of the *Chiyo Maru No. 5* had not allowed the CCAMLR observer on the fishing deck or in the factory area because of safety concerns. This restriction had resulted in problems observing catches of krill and by-catch, describing time budgets and collecting data on product weight to catch weight CFs (Annex 4, paragraphs 2.18 and 2.19). Dr Holt appreciated the concern, but confirmed that the CCAMLR observer did have extensive experience and training in conducting observations on board fishing vessels, and was accredited for work on deck and in the processing areas.

3.5 The Scientific Committee noted that the by-catch of juvenile fish recorded by the observers on the Japanese and Ukrainian krill trawlers did not appear to be large, although it was recalled that the observer on the Japanese vessel did not have direct access to the catches (Annex 4, paragraphs 2.29 to 2.31).

3.6 The Scientific Committee also noted that there had been no feedback or responses to the draft questionnaire seeking information on krill fishing strategies. The Scientific Committee recommended that the Secretariat reissue the draft questionnaire. Members were urged to provide comments on, and if possible complete, this questionnaire as this information is urgently needed by WG-EMM. The Scientific Committee reminded Members that the purpose of the questionnaire was to develop an understanding of the fishing operation, and possible ways to use data on CPUE. Proprietary/confidential information was not required.

3.7 Dr E. Goubanov (Ukraine) advised that the collection of biological data on krill required highly qualified scientific observers. A number of Ukrainian observers had such qualifications, as well as extensive experience in krill fisheries, and were available for deployment within the Convention Area.

3.8 The Scientific Committee noted the discussion of WG-FSA in relation to scientific observations on board vessels targeting finfish (Annex 5, paragraphs 3.35 to 3.54), and in particular:

(i) the quality of the reports has been good, with all logbooks presented in CCAMLR format, and 14 logbooks (35%) received were submitted using the CCAMLR electronic forms in Microsoft Excel format (Annex 5, paragraph 3.37);

(ii) there were no significant problems reported by observers on the use of the S*cientific Observers Manual* (Annex 5, paragraph 3.46); and

(iii) the revised waste disposal form used this year had improved the quality of data on the disposal of fishing gear, oil, organic and inorganic galley waste and plastic packaging bands (Annex 5, paragraph 3.40).

3.9 Prof. G. Duhamel (France) confirmed that two observers on board the French-flagged longliners operating in the exploratory fishery for *D. eleginoides* in Subarea 58.6 were of French nationality (see also Annex 5, paragraph 3.36). These vessels had operated for a short period of time in that fishery, and technical problems had prevented the deployment of CCAMLR-designated scientific observers. This problem would be resolved before conducting further fishing trips to those grounds.

3.10 Dr Goubanov made a number of recommendations for changes to the observer logbook forms, including removing the requirement to measure sea-surface temperature, recording the vertical opening of trawls and replacing the recorded bottom depths at the start and end of a tow with the maximum and minimum bottom depth during the tow. The Scientific Committee noted these recommendations.

3.11 The Scientific Committee also noted the limited number of sightings of fishing vessels reported by scientific observers (Annex 5, paragraph 3.52). A subgroup was formed to develop a form with the aim of improving the quality and frequency of this type of reporting (see paragraph 2.24).

3.12 The Scientific Committee noted that WG-FSA had revised the sampling requirements for exploratory fisheries (Annex 5, paragraph 3.49). The Scientific Committee agreed that while length-frequency and sex data should continue to be recorded for at least 100 individuals of *Dissostichus* spp., samples for biological studies (e.g. ageing) should be taken and gonad stages recorded for at least 30 fish.

Advice to the Commission

3.13 The Scientific Committee drew the Commission's attention to the continued, high quality of data collected by both CCAMLR-designated scientific observers and national scientific observers. These data had greatly contributed to the work of WG-EMM and WG-FSA.

3.14 The Scientific Committee advised that further wider deployment of scientific observers on board krill trawlers, and the reporting of their data to the Secretariat, should be encouraged. The Scientific Committee stressed the need to deploy scientific observers on board vessels entering a fishery, or participating in the development of a fishery, at times when quality data were essential for successful long-term management of the fishery. To improve the collection of this scientific information, the Scientific Committee recommended the placement of national and, or, international scientific observers, following the protocols outlined in the *Scientific Observers Manual*, in krill fisheries, consistent with other CCAMLR fisheries.

3.15 The Scientific Committee wished to bring to the attention of the Commission that some Members require specific reference to CCAMLR-designated scientific observers in conservation measures dealing with krill fisheries before this requirement can be passed in national legislation.

3.16 The Scientific Committee advised that national observers should follow the guidelines given in the *Scientific Observers Manual*. Proposals for improving the manual with specific reference to the krill fishery should also be solicited.

3.17 The Scientific Committee advised that factual information provided by scientific observers on the sighting of fishing vessels was useful in evaluating the level of fishing vessel activity in the Convention Area. A new data form and guidelines (Annex 6) were developed for inclusion in the *Scientific Observer Manual*. This form aims to improve the quality and frequency of this type of reporting.

3.18 The Scientific Committee advised that, particularly for vessels with only one scientific observer, the number of currently specified tasks is such that urgent attention is needed to the prioritisation of duties and to reassessment of sampling requirements (Annex 5, paragraph 3.51).

3.19 Finally, the Scientific Committee advised that, where possible:

(i) two scientific observers should be deployed on board each vessel operating in fisheries where requirements for observer data are high;

(ii) scientific observers should record and submit data using the CCAMLR electronic forms in Microsoft Excel format; and

(iii) scientific observers should record data on CFs on a fish-by-fish basis.

3.20 The Scientific Committee recalled the requirement for CCAMLR-designated scientific observers in the exploratory fishery for *M. hyadesi* in Subarea 48.3 (Conservation Measure 183/XVIII, paragraph 3). In that regard, it was noted that the joint notification by the UK and the Republic of Korea indicated that the Korean-flagged vessel which will participate in that fishery in 2000/01 will carry at least one CCAMLR scientific observer designated by the UK (CCAMLR-XIX/8).