

SCIENTIFIC COMMITTEE

4.1 The Chairman of the Scientific Committee, Dr D. Miller (South Africa) presented an overview of the Scientific Committee's report. The Commission agreed to note, in general, all recommendations, advice, research and data requirements of the Scientific Committee. The Commission also agreed to return to substantive matters and advice from the Scientific Committee pertinent to the Commission under the relevant agenda items.

Intersessional Activities

4.2 Three CCAMLR meetings were held during the intersessional period:

- (i) the Workshop on Area 48 was held in La Jolla, USA, in June 1998 and was convened by Dr R. Hewitt (USA);
- (ii) the meeting of WG-EMM was held in Kochi, India, in August 1998 and was convened by Dr I. Everson (UK); and
- (iii) the meeting of WG-FSA was held at the Secretariat Headquarters in Hobart, Australia, in October 1998 and was convened by Dr R. Holt (USA); ad hoc WG-IMALF met in conjunction with WG-FSA.

Fishery Status and Trends

4.3 The total reported catch of krill during the 1997/98 split-year (1 July 1997 to 30 June 1998) was 80 802 tonnes, and this was taken in Area 48 by Japan (63 233 tonnes), Poland (15 312 tonnes), Republic of Korea (1 623 tonnes) and the UK (634 tonnes). This was the lowest catch reported over the past 10 years (SC-CAMLR-XVII, Table 2). In comparison, the total reported catch was 82 508 tonnes and 101 707 tonnes in 1996/97 and 1995/96 respectively.

4.4 The Commission noted that the Scientific Committee encouraged Members to provide catch and effort data for krill fisheries in waters adjacent to the Convention Area (SC-CAMLR-XVII, paragraph 2.2), and fine-scale data and haul-by-haul data for fishing within the Convention Area (SC-CAMLR-XVII, paragraph 2.3). Past and current market information was also sought so as to provide further insight into the fishery, including gaining an appreciation of the economic factors affecting the fishery (SC-CAMLR-XVII, paragraph 2.6).

4.5 The Commission noted that Japan, Poland, the Republic of Korea and the UK planned to continue fishing in 1998/99 at levels similar to those in the 1997/98 season (SC-CAMLR-XVII, paragraph 2.4). In addition, Argentina, Germany, Ukraine, Uruguay and the USA had expressed interest in fishing in 1998/99. Ukraine advised that a joint venture with Canada was still under discussion.

4.6 The total catch of finfish reported from the Convention Area during the 1997/98 split-year was 11 419 tonnes (SC-CAMLR-XVII, paragraph 2.7), of which *D. eleginoides* accounted for 11 168 tonnes. This species was reported from Subarea 48.3 (3 258 tonnes by mostly Chile, South Africa and the UK), Divisions 58.5.1 (4 741 tonnes by France and Ukraine) and 58.5.2 (2 418 tonnes by Australia), and Subareas 58.6 (175 tonnes by France and South Africa within their respective EEZs) and 58.7 (576 tonnes by South Africa within its EEZ). *Dissostichus mawsoni* was taken in Subarea 88.1 (41 tonnes by New Zealand), and *C. gunnari* was reported from Subarea 48.3 (6 tonnes by Chile) and Division 58.5.2

(68 tonnes by Australia). In comparison, the total reported catch of finfish was 10 562 tonnes in 1996/97.

4.7 The total reported catch of *D. eleginoides* from CCAMLR waters and EEZs outside the CCAMLR Convention Area was 27 908 tonnes in the 1997/98 split-year. However, the estimated unreported catch of *D. eleginoides* was 22 415 tonnes, yielding a global annual catch of 50 323 tonnes for this species (SC-CAMLR-XVII, paragraph 2.8).

4.8 The Scientific Committee noted that about 90% of *D. eleginoides* was exported to Japan and the USA, and that at least 60 518 tonnes of *D. eleginoides* were traded in the 1997/98 split-year. Less than 50% of this trade could be attributed to reported catches from CCAMLR waters and EEZs outside the Convention Area.

4.9 The Commission noted with great concern the continued high level of illegal, unregulated and unreported fishing for *D. eleginoides*, in particular in the Indian Ocean sector (Area 58), and that these activities had serious implications for estimating yield both over the short and long term (SC-CAMLR-XVII, paragraphs 2.10 and 2.11). These matters were discussed in detail under Agenda Item 5.

CCAMLR Scheme of International Scientific Observation

4.10 An ad hoc task group had been formed to consider comments from scientific observers about the data recording forms and procedures currently in use for observations on board longline vessels. The group worked intersessionally to collate comments and suggestions received from scientific observers (SC-CAMLR-XVII, paragraph 3.4). Further changes had been proposed during WG-FSA. These included the formalisation of procedures to be followed by observers in calculating conversion factors in the field (SC-CAMLR-XVII, paragraph 3.6).

4.11 The Scientific Committee considered other issues under this topic, many of which are discussed further by the Commission under Agenda Item 8.

Dependent Species

4.12 The Workshop on Area 48 has contributed significantly to the work of the Scientific Committee and had provided fresh ideas to the activities of WG-EMM (SC-CAMLR-XVII, paragraphs 4.1 to 4.11).

4.13 In addition, the Scientific Committee had continued its work on quantifying, and reducing, the incidental mortality of seabirds during longline fishing operations (SC-CAMLR-XVII, paragraphs 4.35 to 4.73). Deliberations under this particular agenda item had contributed to the Committee's advice on new and exploratory fisheries (see Agenda Items 6 and 7).

Harvested Species

Krill Resources

4.14 Plans for the synoptic survey in Area 48, scheduled for January 2000, were well advanced (SC-CAMLR-XVII, paragraphs 5.4 to 5.14). A coordinating committee had been established and a planning workshop will be held in March 1999. Vessels from Japan, UK and

USA are likely to participate in the survey and the Scientific Committee requested that these Members confirm their ability to arrive at South Georgia in the first week of January 2000 to start the first calibration.

4.15 The CCAMLR Data Centre will be the depository of all core data. The Commission noted that the core datasets would be analysed at a workshop attended by all survey participants as soon as possible after the survey and in advance of the meeting of WG-EMM in 2000.

4.16 The Commission noted that the precautionary catch limit for krill in Area 48 would not be reassessed until after the analyses of survey data were completed. These analyses would contribute to an evaluation of a subdivision of the precautionary catch limit in that area (SC-CAMLR-XVII, paragraph 5.16). No new management measures for krill were proposed for 1998/99 (SC-CAMLR-XVII, paragraph 5.17).

Finfish Resources

4.17 The revised assessments of finfish had used all available catch and effort data from CCAMLR fisheries, estimates of removals in the illegal, unregulated and unreported fisheries targeting *Dissostichus* spp., and data from research surveys (SC-CAMLR-XVII, paragraphs 5.1 to 5.35). In addition, calculation of yields for new and exploratory fisheries had used revised estimates of seabed areas within fishable depth ranges (SC-CAMLR-XVII, paragraph 5.24).

4.18 As in previous years, the main tool used for assessing stocks had been the Generalised Yield Model (GYM). The GYM had been validated and a user-friendly interface had been developed during the intersessional period (SC-CAMLR-XVII, paragraph 5.36). These assessments were supported by analyses of catch per unit effort, and length frequency distributions.

4.19 Another important development of the assessment work, especially in relation to *Dissostichus* spp., had been the consideration of the spatial extent of management units within the Convention Area and adjacent waters. The Commission noted that the assessment of yields in new and exploratory fisheries notified for 1998/99 had used statistical subareas or divisions as the assessment units (SC-CAMLR-XVII, paragraph 5.38). This had been the same approach as used in 1997. However, WG-FSA had tentatively identified smaller management units based on the analyses of seabed areas within the fishing depth range of 500 to 1 800 m, and the possibility that stocks of *Dissostichus* spp. may occur over smaller geographic scales than those previously considered.

4.20 The Commission was asked to consider how such management units could be used for allocating fishing effort in new and exploratory fisheries, and in areas where longliners and trawlers may simultaneously target one species. The designation of management units may also be used to ascertain preferred fishing grounds in future notifications of new and exploratory fisheries (SC-CAMLR-XVII, paragraph 5.39). The Commission's advice is detailed under Agenda Item 7.

By-Catch Provisions

4.21 The Commission's attention was drawn to the Scientific Committee's discussion on, and suggestions for, general by-catch provisions for new and exploratory fisheries. Balanced consideration is required to ensure that the acquisition of information on the levels and distribution of by-catch in new and exploratory fisheries is not jeopardised by stringent by-catch provisions which may restrict the development of those fisheries (SC-CAMLR-XVII,

paragraphs 5.115 and 5.116). Deliberations are reported under Agenda Item 10.

Other Resources

4.22 There had been no fishing for crabs since CCAMLR-XV. There was no fishing for squid in the 1997/98 season.

Timing of the CCAMLR Fishing Year

4.23 The Commission adopted the proposed change to the timing of the CCAMLR fishing year in order to ensure sufficient time for the implementation of related licensing and legislation procedures, and an appropriate time interval over which assessments may be conducted (SC-CAMLR-XVII, paragraphs 5.150 to 5.152). The Commission's decision on this matter is set out in paragraphs 9.1 and 9.2.

Ecosystem Monitoring and Management

4.24 The Commission noted the formal establishment of two CEMP environmental indices, Indices F2 and F5 (SC-CAMLR-XVII, paragraphs 6.1 to 6.3), and the further development of Composite Standardised Indices (CSIs) as part of WG-EMM's ongoing analysis of the Antarctic marine ecosystem (SC-CAMLR-XVII, paragraphs 6.4 to 6.6). Other developments had included a revision of the krill–fishery–predator interactions (SC-CAMLR-XVII, paragraphs 6.11 and 6.12) and assessments of the status of the ecosystem (SC-CAMLR-XVII, paragraphs 6.14 to 6.18).

New and Exploratory Fisheries

4.25 Another major item on the Scientific Committee's agenda was 'New and Exploratory Fisheries' (SC-CAMLR-XVII, Section 9). The activities of new and exploratory fisheries in 1997/98 were reviewed (SC-CAMLR-XVII, paragraphs 9.1 to 9.10). Notifications for new and exploratory fisheries in 1998/99 were evaluated (SC-CAMLR-XVII, paragraphs 9.11 to 9.37). In this respect, the Commission's guidance was sought as to how to handle late notifications (SC-CAMLR-XVII, paragraph 9.18); see Agenda Item 7.

4.26 The Commission noted that the question of how mixed-gear fisheries (i.e. trawl and longline fisheries) should be treated for both assessment and management purposes had been highlighted as a matter of concern (SC-CAMLR-XVII, paragraphs 9.20 to 9.22). The Commission also noted that the application of the current 100-tonne catch limit for fine-scale rectangles to trawl fisheries had been referred to WG-FSA for further attention (SC-CAMLR-XVII, paragraphs 9.23 and 9.24).

4.27 Estimates of yield and precautionary catch limits for new and exploratory fisheries for *Dissostichus* spp. in 1998/99 are contained in Tables 7 and 8 and discussed in paragraph 9.44 of SC-CAMLR-XVII.

CCAMLR Data Management

4.28 The Commission noted the tasks allocated to the Secretariat's Data Management section by the Scientific Committee (SC-CAMLR-XVII, paragraph 10.8), in particular the attendance of the Data Manager at the 1999 meeting of the CWP (SC-CAMLR-XVII, paragraph 10.14), and the development of the CCAMLR website (SC-CAMLR-XVII, paragraph 10.22). The Scientific Committee had agreed that the development of the website must proceed as an important task within the other urgent data management priorities for the intersessional period.

Publications

4.29 The Commission noted the following 1998 publications:

- (i) *Schedule of Conservation Measures in Force, 1997/98*;
- (ii) annual reports;
- (iii) *CCAMLR Scientific Abstracts* covering papers presented in 1997;
- (iv) revised sections of *Scientific Observers Manual*;
- (v) *Statistical Bulletin*, Volume 10;
- (vi) *CCAMLR Science*, Volume 5;
- (vii) fliers and stickers for *Fish the Sea Not the Sky*; and
- (viii) educational poster on marine debris in the Antarctic.

4.30 The Commission also noted the pending publication of *Understanding CCAMLR's Approach to Management* (CCAMLR-XVI, paragraph 3.10; SC-CAMLR-XVII, paragraphs 12.7 to 12.14; this report, paragraph 3.10).

Activities of the Scientific Committee during the 1998/99 Intersessional Period

4.31 The Commission noted the major activities planned during the 1998/99 intersessional period including:

- (i) a meeting of WG-EMM in Tenerife, Spain, in late July 1999 (SC-CAMLR-XVII, paragraph 13.2);
- (ii) the Second Symposium on Krill Biology of which CCAMLR is a co-sponsor in the USA in late August 1999 (SC-CAMLR-XVII, paragraph 13.3); and
- (iii) a meeting of WG-FSA in Hobart, Australia, in mid-October 1999 (SC-CAMLR-XVII, paragraph 13.4).

Scientific Committee Budget

4.32 The Scientific Committee budgets for 1999 and 2000 indicated extremely modest increases. The Scientific Committee had discussed possible savings to be accrued as a result of changes in the current method of circulating reports (SC-CAMLR-XVII, paragraphs 14.3 and 14.4) and the Scientific Committee agreed that a reduced circulation of five free copies per Member of the annual report would be acceptable but that the matter should be reviewed next year (SC-CAMLR-XVII, paragraphs 13.7 to 13.12). The Commission discussed these issues under Agenda Item 3.

Election of Chairman

4.33 Dr D. Miller (South Africa) was elected for a second term as Chairman of the Scientific Committee until the end of the meeting in 2000.

Future Presentation of the Scientific Committee Report to the Commission

4.34 In concluding his presentation, Dr Miller sought advice from the Commission on how the work of the Scientific Committee should be presented at future meetings. The Commission congratulated Dr Miller on his excellent presentation and agreed that his general presentation of the report, together with a supporting list of key points and actions, had been very useful. The Commission also agreed that, at future meetings, an overview of the Scientific Committee's report should be given. Detailed consideration of the Scientific Committee's deliberations and advice should then be taken under the relevant Commission agenda items. This had been the intent during the current meeting, however, the breadth and quantity of issues the Commission had confronted had led to difficulties in this process.

4.35 Dr Miller thanked the Commission for its support, and hoped that he would be able to serve CCAMLR well during his second term as Chairman of the Scientific Committee.