

MANAGEMENT UNDER CONDITIONS OF UNCERTAINTY ABOUT STOCK SIZE AND SUSTAINABLE YIELD

7.1 The Scientific Committee noted the deliberations of WG-FSA on the apparent decline of catches of *Dissostichus* spp. outside the CCAMLR Convention Area in 2003/04 (Annex 5, paragraphs 3.18 and 3.19).

7.2 The Scientific Committee noted WG-FSA's discussions with respect to IUU fishing (Annex 5, paragraphs 8.1 to 8.13).

7.3 Prof. Moreno reported, with respect to Area 87, that the catch of *D. eleginoides* has declined in recent years, and particularly last year. One of the causes for this decline could be attributed to the fact that *D. eleginoides* under the age of 5 or 6 years is not found off the Chilean coast. These fish probably originate from spawning grounds near Cape Horn, although the migration pattern of juvenile *D. eleginoides* is known to follow a complex pattern and is still poorly understood. Another cause for the decline is likely to be overfishing.

7.4 Dr Barrera-Oro added that *D. eleginoides* has also declined on the Argentinean part of the Patagonian shelf and slope (Area 41). Current annual catches have declined to about 2 000 tonnes/year.

7.5 Dr H. Nion (Uruguay) reported that the Uruguayan fishery takes juvenile *D. eleginoides* over the deeper shelf/slope areas 36–37°S while adults are taken at depths down to 3 000 m.

7.6 Mr L. López Abellán (Spain) noted that *D. eleginoides* taken in fisheries outside the Convention Area (Areas 47, 51) originate from inside the CCAMLR Convention Area.

7.7 The Scientific Committee thanked Spain for providing the data from catches taken in Areas 47 and 51, for which very little information exists in the CCAMLR database.

7.8 Dr Constable suggested that:

- (i) IUU and other information from outside the CCAMLR Convention Area needs to be provided to WG-FSA well in advance of its meeting to allow an in-depth assessment of these data;
- (ii) with respect to paragraph 8.8 of Annex 5, the Scientific Committee might be in a position to respond to the question as to what extent stocks outside the CCAMLR Convention Area have been depleted. He underlined the importance of learning how stocks inside the Convention Area and those occurring outside are linked, and that this question needs to be addressed as a matter of urgency;
- (iii) all data on *D. eleginoides* collected by CCAMLR Members outside the CCAMLR Convention Area be submitted to the CCAMLR Secretariat. Trends in catch rates could assist in revealing to what extent these stocks are affected by fishing and how they may interact with fish inside the Convention Area;

- (iv) harmonisation of management of the fisheries on *D. eleginoides* inside and outside the CCAMLR Convention Area may assist in the conservation of the stocks.

7.9 Mr López Abellán questioned whether and to what extent fishing on *D. eleginoides* outside the CCAMLR Convention Area could affect stocks inside the Convention Area. The situation outside CCAMLR areas generally reflects events inside the CCAMLR Convention Area.

7.10 The Scientific Committee requested that the Commission consider how estimates of the most recent IUU fishing could be considered and confirmed in time for use by WG-FSA in its assessment work.

7.11 The Scientific Committee recalled its conclusion last year that the current levels of IUU catches are unsustainable (SC-CAMLR-XXII, paragraph 7.13). Noting the view of WG-FSA that the catch rates in Areas 51 and 57 provided by Spain are much lower than the CDS records for this area would suggest (Annex 5, paragraph 8.12), the Scientific Committee reiterated its concern that catch rates in these areas are likely to be unsustainable.

7.12 On the basis of the report of WG-FSA, the Scientific Committee noted that the CDS-reported catches from outside the Convention Area, in particular in Areas 47, 51 and 57, declined this year and that this decline could be due to three reasons (Annex 5, paragraph 8.8):

- stocks may have become depleted;
- fewer CDS reports were being received because vessels are re-flagging to States which do not participate in the CDS;
- CCAMLR monitoring and compliance measures are causing a reduction in IUU fishing.

7.13 The Scientific Committee requested that the Commission consider whether the latter two reasons might have caused the decline in CDS-reported catches. With respect to the first reason, it noted that more data will be needed to assess whether that reason is plausible but this possibility could be explored by WG-FSA on the basis of trends in catch rates.

7.14 The Scientific Committee also recalled the discussion under Item 7 last year and noted the comments this year by Members regarding the likelihood of links between stocks inside and outside the Convention Area in the Indian Ocean. It agreed that data on the nature of stocks outside the Convention Area in Areas 51 and 57 would help WG-FSA determine whether those links might significantly affect the status of stocks inside the Convention Area either through fish moving between the areas or larvae or young fish moving from areas outside to areas inside the Convention Area.

7.15 At present, the information on stocks in Areas 51 and 57 is sparse and is not routinely provided to the CCAMLR Secretariat. As such, the Scientific Committee requested the Commission to consider acquiring data for these areas. In the absence of research data, fisheries-based data on locality, catch and effort, and size of fish in the catch would be useful for WG-FSA to analyse. Such data would be most useful in fine spatial resolution, such as haul-by-haul data, in order to assess the trends in catch rates. Submission of data could

follow the format of data reporting already described in conservation measures and be subject to the usual rules for data access. It would be useful for such data to be provided to CCAMLR in time for use at the next meeting of WG-FSA.

7.16 Dr Shin noted that the linkages between stocks inside and outside the CCAMLR Convention Area, particularly in the Atlantic Ocean sector, have not been demonstrated, and that this discussion is proceeding without any scientific material provided to facilitate it. Therefore, he does not consider such a request justifiable.

7.17 Dr Shust noted that stocks of *D. eleginoides* from north of the Polar Front are separate from those living further south (Annex 5, paragraphs 5.106 and 5.107). He described that specimens of *D. mawsoni* from various parts of the Ross Sea are similar in genetic terms and are likely to form a single population. He emphasised that further tagging and genetic studies are needed to elucidate questions of the status of *D. mawsoni* stocks in various areas of the Southern Ocean.

7.18 Prof. Fernholm emphasised that tagging studies are urgently needed outside the CCAMLR Convention Area.

7.19 Dr Constable reported on the extensive tagging Australia is conducting on *D. eleginoides* at Macquarie Island.

7.20 Mr López Abellán suggested that CCAMLR contact fisheries organisations north of the CCAMLR Convention Area in order to harmonise research and data collection with respect to *D. eleginoides*.

7.21 Many Members requested that the Commission consider obtaining catch data for Areas 51 and 57, given that a number of Members have participated in fisheries and the absence of an RFMO with competency to manage bottom fish/*D. eleginoides*.

7.22 No new information was provided to the Scientific Committee by WG-EMM with respect to IUU fishing.

Management advice

7.23 The Scientific Committee requested that the Commission consider how estimates of the most recent IUU fishing could be considered and confirmed in time for use by WG-FSA in its assessment work (paragraph 7.10).