

## FISHERIES MANAGEMENT AND CONSERVATION UNDER CONDITIONS OF UNCERTAINTY

Catches of *Dissostichus* spp.

5.1 The Commission noted the Scientific Committee's discussion on information pertaining to fishing on *Dissostichus* spp. inside and outside the Convention Area (SC-CAMLR-XXVII, paragraphs 4.30 to 4.32 and Annex 5, Table 4). Catches of *D. eleginoides* outside the Convention Area originated mostly from Areas 41 and 87 (paragraph 4.35).

5.2 The Commission also noted the Scientific Committee's discussion on information pertaining to IUU fishing in the Convention Area (SC-CAMLR-XXVII, paragraphs 7.1 to 7.5). This matter was discussed in section 10.

### Fishery Management Plans

5.3 The Commission noted that the ad hoc group on the development of Fishery Management Plans had advised the Scientific Committee that the group had not developed the fisheries management checklist any further during the 2008/09 intersessional period because of the realisation that the Performance Review Panel would be considering similar, and in many cases identical, issues (SC-CAMLR-XXVII, paragraph 7.18). The group therefore decided to await consideration of the Review Panel Report along with any associated prioritisation of its recommendations by the Commission before continuing its work. The Commission endorsed this approach.

### Bottom fishing in CCAMLR high-seas areas

5.4 The Commission noted the extensive work of the Scientific Committee and its working groups on developing approaches to avoid and mitigate significant adverse impacts on VMEs (SC-CAMLR-XXVII, paragraphs 4.207 to 4.284).

5.5 With respect to the development of guidelines on identifying VMEs and on actions to be taken by fishing vessels encountering VMEs (SC-CAMLR-XXVII, paragraph 4.274), the Commission:

- (i) noted:
  - (a) that a suitable test of the guidelines would be whether significant adverse impacts on VMEs would be avoided while the scientific advice and management approaches were developed and refined;
  - (b) that although fishing gears are likely to be poor sampling devices of VME taxa, the presence of VME taxa or indicators of VMEs in catches from any of these methods would be evidence that VMEs could be present. Conversely, the absence of VME taxa or indicators of VMEs in the catches

did not necessarily represent an absence of VMEs. The degree to which this could be concluded would be dependent on the selectivity and sampling efficiencies of the gears;

- (c) the lack of empirical evidence of the vulnerability of benthic taxa to the different bottom fishing gears used in exploratory fisheries;
- (ii) endorsed:
  - (a) an expert Workshop on VMEs with respect to CCAMLR Conservation Measures 22-06 and 22-07 (paragraph 4.72) to provide guidance on the questions necessary to reduce uncertainty on the potential for bottom fisheries for causing significant adverse impacts on VMEs.

5.6 The Commission thanked the USA for its offer to host a Workshop on VMEs, to be held in 2009 (SC-CAMLR-XXVII, paragraph 14.4).

5.7 The Commission agreed that the general distribution of VMEs in the Southern Ocean will need to be inferred using habitat models (SC-CAMLR-XXVII, paragraphs 4.213 to 4.220). These models can then be used to develop risk-assessment maps for predicting the level of risk attached to impacting VMEs in different fishing locations. In the first instance, the risk-assessment maps will therefore need to rely on expert opinion concerning the vulnerability and possible impacts of fishing gears on different habitat types and VMEs.

5.8 With respect to advice on Members' submissions of preliminary VME assessments and proposed mitigation measures (SC-CAMLR-XXVII, paragraph 4.276), the Commission noted:

- (i) that of the 11 Members who submitted notifications for exploratory longline fisheries in 2008/09, only five Members had submitted preliminary assessments of the known and anticipated impacts of its bottom fishing activities on VMEs (Conservation Measure 22-06, paragraph 7(i));
- (ii) that insufficient data were available in the CCAMLR database to assess and review the potential impacts on VMEs or possible mitigation requirements for exploratory fishery notifications that were not accompanied by preliminary assessments;
- (iii) the large variation in substance of the preliminary assessments and that a common approach is needed for providing these assessments, similar to the requirements for notifying exploratory fisheries.

5.9 The Commission endorsed the pro forma (SC-CAMLR-XXVII, Annex 5, Table 20) for Members submitting preliminary assessments of the potential for their proposed bottom fishing activities to have significant adverse impacts on VMEs.

5.10 The Commission confirmed that all Members notifying bottom fisheries covered by Conservation Measure 22-06 must submit preliminary assessments of the potential for their proposed bottom fishing activities to exert significant adverse impacts on VMEs.

5.11 The Commission reiterated that uncertainty on the impact of bottom fishing on VMEs did not, in any way, alleviate its responsibility to protect VMEs. However, the Commission recognised that its work on VMEs will require some time to complete, and interim measures (such as Conservation Measure 22-07; see paragraphs 13.23 to 13.26) are required during this transition period.

5.12 With respect to the Scientific Committee's advice on procedures and standards for assessing potential effects of proposals and possible mitigation measures for VMEs (SC-CAMLR-XXVII, paragraph 4.277), the Commission:

- (i) noted:
  - (a) discussion and analyses of the magnitude of the existing footprint of bottom fisheries covered by Conservation Measure 22-06 and the possible impacts that such a footprint may have had on VMEs;
  - (b) discussions on assessing risks of past and future bottom fishing activities contributing to significant adverse impacts on VMEs;
  - (c) discussions on the development of mitigation measures not related to advice on practices when evidence of VMEs is encountered;
- (ii) endorsed:
  - (a) the development of a risk-assessment framework and risk-assessment maps for indicating the risks of significant adverse impacts from bottom fisheries in the CAMLR Convention Area covered by Conservation Measure 22-06, where the spatial resolution of such maps would be at a scale commensurate with the expected extent of VMEs rather than at the level of management areas.

5.13 The Commission noted that the spatial scale under consideration in risk assessments was smaller than the fine-scale rectangles used by the Scientific Committee to depict fishing footprints. Further, Australia noted that very small amounts of localised fishing had elsewhere resulted in extensive damage to VMEs, as demonstrated in some fishing operations targeting seamounts in areas outside the CAMLR Convention Area.

5.14 The Commission agreed that a prohibition on bottom fishing in depths shallower than 550 m, as is currently applied in Divisions 58.4.1 and 58.4.2, should be generally applied to bottom fisheries covered by Conservation Measure 22-06. It noted that specific provision will need to be given to the proposed new fishery (paragraphs 12.37 to 12.39 and 13.61) for crabs in Subarea 48.2 south of 60°S which will fish in depths shallower than 550 m.

5.15 The Commission requested that the Scientific Committee provide further advice on the magnitude of the existing footprint of bottom fisheries covered by Conservation Measure 22-06.

5.16 With respect to advice on the occurrence of VMEs (SC-CAMLR-XXVII, paragraph 4.278), the Commission noted that the requirements for protecting VMEs may change as more information becomes available, including data on the spatial extent of VMEs,

and their vulnerability to fishing. The Commission endorsed the Scientific Committee's recommendation that Members submit notifications of VMEs to WG-EMM for review, prior to consideration by the Scientific Committee.

5.17 The Commission agreed that the areas notified in SC-CAMLR-XXVII/13 in Division 58.4.1 are VMEs with clear evidence of biodiversity-rich benthic communities.

5.18 With respect to advice on known and anticipated impacts of bottom fishing on VMEs (SC-CAMLR-XXVII, paragraph 4.279), the Commission requested that the Scientific Committee:

- (i) conduct further work on assessing known and anticipated impacts of bottom fishing activities covered by Conservation Measure 22-06;
- (ii) develop a report akin to the Fishery Reports on 'Bottom Fisheries and Vulnerable Marine Ecosystems' which contained the available knowledge on VMEs, the potential for significant adverse impacts, risk assessments and potential for impacts arising from bottom fisheries.

5.19 The Commission agreed that the Scientific Committee should continue developing a precautionary strategy that will avoid significant adverse impacts on VMEs until impact assessments are completed and long-term mitigation strategies are developed. The Commission endorsed the Scientific Committee's advice on issues which would need to be considered in formulating such a strategy (SC-CAMLR-XXVII, paragraph 4.280).

5.20 With respect to advice on practices when evidence of VMEs is encountered (SC-CAMLR-XXVII, paragraph 4.281), the Commission:

- (i) noted:
  - (a) the conundrum between protecting VMEs from significant adverse impacts and obtaining the information on whether those impacts are arising, or have arisen, and that continuing to fish in areas for which by-catch evidence indicates a possibility of interactions with a VME is contradictory to trying to protect VMEs from significant adverse impacts and may be contrary to Conservation Measure 22-06, paragraph 8;
  - (b) the value of conducting simulations of different management approaches to evaluate which avoidance/research approaches may be most useful in avoiding significant adverse impacts to VMEs when there is no information on which to judge a suitable approach;
  - (c) management and mitigation approaches agreed in other fora could be considered (European Community, NAFO);
- (ii) endorsed:
  - (a) the collection of benthos by-catch data by scientific observers to facilitate analyses on VMEs and the effects of bottom fishing next year, and

requested the Secretariat to develop appropriate methods to be applied in the forthcoming season, to facilitate analyses on VMEs and the effects of bottom fishing (SC-CAMLR-XXVII, paragraphs 4.261 and 4.272);

- (b) the definitions for VME-indicator-units, VME-evidence and Risk Areas for use in determining what actions fishing vessels might take when evidence of a possible encounter with a VME occurs.

5.21 The Commission endorsed the Scientific Committee's recommendations that Members submit simulations of different management approaches to WG-SAM for review and then to WG-FSA for consideration of the results.

5.22 The Commission requested that the Scientific Committee review the scientific observer data and vessel data at its next meeting and provide further advice on mitigation measures and practices when evidence of VMEs is encountered, taking account of the results of the workshop.

5.23 The Commission agreed:

- (i) that a vessel (Flag State) will be responsible for recording and reporting benthos by-catch, monitoring for VME indicators recovered and for notifying CCAMLR of VME indicators, in accordance with Conservation Measure 22-07 (paragraphs 13.23 to 13.26);
- (ii) to the method by which VME indicators would be monitored using segments of lines as monitoring units and that all segments should be monitored for benthos by-catch.

5.24 The Commission agreed that the operational steps in when VME indicators were encountered needed to be simple and easily implemented by vessels (paragraphs 13.23 to 13.26).

5.25 The Commission adopted Conservation Measure 22-07 to apply when VME indicators are collected in 2008/09 and agreed to review it in 2009 (paragraphs 13.23 to 13.26).

5.26 The Commission noted that the designation of Risk Areas according to accumulating VME indicators in a single line segment may not alone provide sufficient protection to VMEs. The Commission further considered the size of the buffer zone, noting the Scientific Committee's advice on a 1 n mile buffer, and the existing requirement in existing by-catch move-on rules (e.g. Conservation Measure 33-03) and standards agreed in other fora (e.g. European Community Regulation).

5.27 With respect to advice on fishery research and data collection plans (SC-CAMLR-XXVII, paragraph 4.283), the Commission requested that vessels and scientific observers collect as much benthos by-catch data as possible in 2008/09 for analysis next year.

5.28 The Commission also urged Members to provide educational material to the crews of vessels participating in exploratory bottom fisheries to help:

- (i) increase awareness of the value of VMEs, in terms of their marine biodiversity and as habitat to fish assemblages, and the importance of developing mitigation measures to avoid impacts on them;
- (ii) develop methods to reduce the frequency of gear loss that could impact on VMEs.

5.29 The Commission also revised Conservation Measure 22-05 on bottom trawling and Conservation Measure 22-06 on bottom fishing, and the new notification procedures in section 13.

5.30 It commended the Scientific Committee on providing such extensive and detailed guidance, and advice, on approaches to avoid and mitigate significant adverse impacts on VMEs. The work of the Scientific Committee and its working groups in 2008 had enabled the Commission to make significant progress on this issue. The Commission noted with appreciation Dr Constable's efforts in developing and rapporteuring the discussions on VMEs by the Scientific Committee and its working groups.