

CONSIDERATION OF CONSERVATION MEASURES

Review of Existing Measures

56. The Commission noted that there had been little fishing in Statistical Areas 48 and 58 other than in Subareas 48.3 and 58.5. The Commission concluded that on the basis of advice from the Scientific Committee there was, in particular, a need for additional measures relating to Statistical Subarea 48.3 (see below). The Commission was of the opinion that for other areas the existing measures and/or regulations should remain in force.

Scientific Research Exemption Provision

57. At the last meeting of the Commission the Secretariat was asked to compile a Register of Permanent Research Vessels operated by Parties that may engage in fishing for research purposes in the Convention Area. The Commission specified information that would be supplied by Members (CCAMLR-V, Paragraph 60). A Register was submitted to the meeting in CCAMLR-VI/BG/1.

58. The UK delegation commented that a number of the vessels listed had commercial capacity and considered that it might, therefore be necessary to review and revise sub-paragraph (c) of paragraph 60 of the Report of the last Meeting.

Consideration of Additional Requirements

59. The Commission noted the request of the Scientific Committee for advice on management strategies. It reaffirmed that important aspects of management policy are achieved by controlling the amount of fishing mortality and/or the age or size at which fish are first captured.

60. The most direct ways to control the amount of fishing mortality (F) are to limit the amount of fishing effort or to establish a total allowable catch (TAC).

61. The Commission concluded that an appropriate management strategy would be to establish measures to limit fishing mortality to a low level of F, preferably $F_{0.1}$.

62. In order to control the amount of fishing mortality by limiting fishing effort, rather detailed information about fishing vessels and vessel operations is required, but is not generally available.

63. In order to control the amount of fishing mortality by TAC, estimates of current biomass and the strength of incoming recruitment are needed (paragraph 5.43 of the Report of the Sixth Meeting of the Scientific Committee (SC-CAMLR-VI)).

64. Controls aimed at protecting small fish in order to achieve a target age or size of first capture are likely to be particularly useful when there are practical problems in implementing controls on the amount of fishing (SC-CAMLR-VI, paragraph 5.42).

65. Three general approaches to protecting small fish are: (i) establishing a minimum mesh size that will allow small fish to escape capture, (ii) prohibiting fishing in certain areas where small fish are most likely to be caught or (iii) prohibiting fishing during certain periods of time when small fish are most likely to be caught.

66. In order to protect small fish by establishing a minimum mesh size the relationship between mesh size and age at first capture, and survival of fish that pass through the mesh, must be known, but the relationship for Antarctic fish species is not yet clear (e.g. *C. gunnari*, SC-CAMLR-VI, paragraph 5.51).

67. The Scientific Committee did not provide advice on the area(s) or period(s) in which small fish of each species of concern to the Commission are most likely to be caught, although such advice would be most useful.

68. In respect of the fishery on *C. gunnari* in Subarea 48.3 the Commission noted the advice of the Scientific Committee that it would be beneficial to reduce the level of fishing mortality and to protect small fish. It agreed on a management strategy containing three elements, (i) a limitation on catches, (ii) an appropriate reporting schedule for these catches, and (iii) a period of time when the fishery would be closed.

69. Given the present uncertainties over stock biomass and recruitment levels, it was agreed that the most appropriate Total Allowable Catch (TAC) for 1987/88 would be 35 000 tonnes (Conservation Measure 8/VI).

70. This TAC would apply immediately (retrospectively to 1 July 1987). Members should report their aggregate catch to date to the Commission as soon as possible and not later than 1 December 1987.

71. In order that the TAC should have the appropriate management effect it is essential to avoid any by-catch of this species in the course of other fishing in the area.

72. Conservation Measure 8/VI therefore also prohibits fishing on specified finfish species in Subarea 48.3 once the TAC for *C. gunnari* has been reached.
73. The practical effect of this will be to stop finfishing throughout the continental shelf around South Georgia in Subarea 48.3 once the *C. gunnari* TAC has been reached.
74. To implement the effective operation of this TAC measure an appropriate reporting system was devised (Conservation Measure 9/VI).
75. Basing this system on a 10-day reporting period provided exact complementarity with the system already adopted for reporting fine-scale data.
76. To provide additional protection for young fish the Commission agreed to close the *C. gunnari* fishery in Subarea 48.3 from 1 April to 1 October 1988 (Conservation Measure 10/VI).
77. The practical effect of this will be to stop all finfishing throughout the continental shelf around South Georgia in Subarea 48.3 throughout this period.
78. All these new Conservation Measures should be reviewed at the next meeting of the Commission, on the basis of the latest scientific advice available.
79. The Commission noted the Scientific Committee view that the abundance of the other major species in Area 48 appears to be low, and would be likely to provide relatively small yields in the next few seasons.
80. There is not good information on the by-catch in directed fisheries, but the Commission noted that better information could lead to improvement in management measures.
81. Attempting to set TACs for all species individually would require more data and information than are currently available.
82. Overall area catch limits could be set at the estimated total replacement yield, and in combination with measures to protect young fish, would reduce the by-catch, and would prevent overfishing of the stocks as a whole.
83. The Commission believes a multi-faceted approach to regulate fish stocks is necessary.

84. Therefore the Commission requests the Scientific Committee to provide advice, for *C. gunnari* and other species on (i) the appropriate minimum mesh size to protect young fish, (ii) closed areas and/or seasons to protect young fish and reduce by-catch, (iii) TACs to achieve a low value of fishing mortality, preferably $F_{0.1}$, and (iv) an evaluation of the total finfish replacement yield on an area basis.

85. The Commission recognises that it will be necessary for the Scientific Committee to refine its advice as more information becomes available. In particular more detailed information on size distribution of fish by area and season will be needed, and mesh selectivity studies should be conducted and reported to the Commission as soon as possible.

86. The Commission also recognises that its General Management Policy (SC-CAMLR-VI, paragraph 5.35) requires further refinement. It is expected that the report of the Commission's Working Group on the Development of a Conservation Strategy will provide a basis for this refinement.

87. The Commission recognised that the question of conservation measures is a vital part of its agenda. Recognising that its deliberations on such measures had become increasingly complex, it agreed that more time than had been available for their discussion to date at its meetings was necessary. It noted with concern that there had been insufficient time this year to discuss conservation measures in statistical subareas other than 48.3. The Commission, therefore, decided that at future meetings the Ad Hoc Working Group dealing with conservation measures should begin its work as early as possible on the basis of the work of the Scientific Committee. The Commission invites the Scientific Committee to bear these considerations in mind carrying out its work.

CONSERVATION MEASURE 8/VI

Limitation of the Total Catch of *Champscephalus gunnari* in Statistical Subarea 48.3

88. The Commission in accordance with Conservation Measure 7/V, hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

The total catch of *Champscephalus gunnari* in the 1987/88 season shall not exceed 35 000 tonnes in Statistical Subarea 48.3. After such time as that total catch has been reached *C. gunnari*, *Notothenia rossii*, *Notothenia gibberifrons*, *Chaenocephalus*

aceratus and *Pseudochaenichthys georgianus* shall not be taken in Subarea 48.3, except for scientific research purposes.

CONSERVATION MEASURE 9/VI

Catch Reporting System for *Champscephalus gunnari* in Statistical Subarea 48.3

89. The Commission, in accordance with Conservation Measure 7/V, hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

Catch Reporting System for *Champscephalus gunnari* in Statistical Subarea 48.3

1. For the purposes of this catch reporting system the calendar month shall be divided into three reporting periods, viz: day 1 to day 10, day 11 to day 20, and day 21 to the last day of the month. These reporting periods are hereinafter referred to as periods A, B and C.
2. At the end of each reporting period, each Contracting Party shall obtain from each of its vessels its total catch for that period and shall, by cable or telex, transmit the aggregated catch for its vessels so as to reach the Executive Secretary not later than the end of the next reporting period.
3. Such reports shall specify the month and reporting period (A, B or C) to which each report refers.
4. Immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties of the total catch taken during the reporting period, the total aggregate catch for the season to that date, together with an estimate of the date upon which the total allowable catch is likely to be reached for that season. Each estimate shall be based on a projection forward of the average daily catch rate (calculated as the total catch by all contracting parties divided by the number of days in the period) for the most recent period based on the reports received for the period in question, to the point at which the total allowable catch will have been taken.
5. When the Executive Secretary has received reports which show that 90% of the total allowable catch has been taken, the Executive Secretary shall make a final estimate of

the date upon which the total allowable catch will be reached. The fishery shall close at the end of the last day of the reporting period within which that date falls.

6. The catch reporting system shall continue in operation until revised or withdrawn as a consequence of review at the next meeting of CCAMLR.

CONSERVATION MEASURE 10/VI

Prohibition of Directed Fishery on *Champscephalus gunnari*
in Statistical Subarea 48.3 from 1 April until 1 October 1988

90. The Commission hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

Directed fishing on *Champscephalus gunnari* in Statistical Subarea 48.3 from 1 April until 1 October 1988 is prohibited. During the protected period *Champscephalus gunnari*, *Notothenia rossii*, *Notothenia gibberifrons*, *Chaenocephalus aceratus* and *Pseudochaenichthys georgianus* shall not be taken in Statistical Subarea 48.3 except for scientific research purposes.