

**COMMISSION FOR THE CONSERVATION OF
ANTARCTIC MARINE LIVING RESOURCES**

**REPORT OF THE SIXTH MEETING
OF THE COMMISSION**

Hobart, Australia
26 October - 6 November, 1987

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Abstract

This document presents the adopted record of the Sixth Meeting of the Commission for the Conservation of Antarctic Marine Living Resources held in Hobart, Australia, 1987. Major topics discussed at this meeting include: financial administration, assessment and avoidance of incidental mortality to Antarctic marine living resources, review of the report of the Scientific Committee, review of existing Conservation measures and adoption of three new Conservation measures, submission of fine-scale data to CCAMLR, establishment of a system of observation and inspection of fishing and research activities in the Convention Area, compliance with Conservation Measures in force, development of a conservation strategy for Antarctic marine living resources, and co-operation with other international organisations. The report of the Standing Committee on Administration and Finance is appended.

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REPORT OF THE SIXTH MEETING OF THE COMMISSION

OPENING OF THE MEETING

1. The Sixth Annual Meeting of the Commission for the Conservation of Antarctic Marine Living Resources was held in Hobart, Tasmania, Australia from 26 October to 6 November 1987.
2. All Members of the Commission were represented: Argentina, Australia, Belgium, Brazil, Chile, European Economic Community, France, German Democratic Republic, Federal Republic of Germany, India, Japan, Republic of Korea, New Zealand, Norway, Poland, South Africa, Spain, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, and United States of America.
3. Following established practice, acceding states were invited to attend as observers and Greece, Sweden and Uruguay attended in this capacity. Peru also participated as an observer by invitation of the Commission.
4. The Intergovernmental Oceanographic Commission (IOC), the International Union for Conservation of Nature and Natural Resources (IUCN), the Scientific Committee on Antarctic Research (SCAR) and the Scientific Committee on Oceanic Research (SCOR) were represented as observers at the Meeting. A list of participants is at Annex A.
5. The Commission noted that since its last Meeting, the Government of Spain had notified the depositary government on August 1987, in accordance with Article VII 2 (d) of the Convention, of the basis on which it sought to become a member of the Commission. The Commission further noted that no Member of the Commission had requested a special meeting to consider the notification, and the Commission therefore warmly welcomed Spain into membership of the Commission with effect from 21 October 1987.
6. The Sixth Annual Meeting of the Commission was opened by Senator Graham Richardson, Minister for the Environment and the Arts in the Australian Government.
7. In his opening address Senator Richardson emphasised the importance of adopting a conservation strategy for Antarctic marine living resources which encompassed the rational and sustainable exploitation of marine stocks. He noted that some progress had been made on this matter since last meeting and hoped that significant further progress would be made during this meeting.

8. Senator Richardson said a familiar problem in the management of marine living resources was that research often lagged behind the need for rational management measures. He stressed the importance of devoting more attention to research on krill and commended the Commission for its initiative in establishing the CCAMLR Ecosystem Monitoring Program.

9. The Provisional Agenda was adopted by the Meeting without comment. A copy of the agenda is at Annex B.

10. The Chairman, Mr Edmond De Wilde of Belgium, welcomed Spain as a new Member of the Commission and those attending the Meeting as observers. He informed the Commission that there had been no objections to the Conservation Measures adopted at the last meeting and that they had consequently entered into force in accordance with the Convention.

11. The Commission had been invited to send an observer to the XIVth Antarctic Treaty Consultative Meeting held in Brazil in October 1987 and following the Commission's decision of last meeting, the Chairman had nominated a representative to attend. The Chairman informed the Commission that a report of the attendance had been distributed as CCAMLR-VI/BG/6.

12. Finally, the Chairman drew attention to the increasing workload for the Commission's meeting and called upon delegates to participate effectively in the Working Groups of the Commission and to use the time out of session to attempt to resolve different issues so as to shorten the discussion of items in the Plenary Session.

FINANCIAL ADMINISTRATION

13. The following items of the Commission's Agenda were referred to the Standing Committee on Administration and Finance (SCAF) for consideration:

- Examination of Audited Financial Statements for 1986
- Secretariat Staffing
- Review of Budget for 1987
- Draft Budget for 1988 and Forecast Budget for 1989
- Consideration of a New Formula for Calculating Members' Contributions in Accordance with Article XIX.3
- Procedures for Appointment of Executive Secretary

14. The Commission received the Executive Secretary's Report of the Meeting of the Standing Committee on Administration and Finance (Annex D).

Examination of the Audited Financial Statements for 1986

15. The Commission signified its acceptance of the Financial Statements for 1986.

Secretariat Staffing

16. The Executive Secretary submitted a proposal (CCAMLR-VI/7) for an additional secretarial position on a part-time basis. It was agreed that staff in the General Services category could be employed, subject to budgetary control, on a contract basis for up to four years with the possibility of a further term. Such a contract would include the terms and conditions applicable to staff in the General Services category and would be calculated pro-rata in accordance with the hours worked.

Review of the Budget for 1987

17. The Commission noted the forecast results of income and expenditure for 1987.

18. Several delegations expressed concern that Members' budget contributions were not reaching the Secretariat by the 31 May deadline each year. The consequence was a loss of interest on cash deposits to the disadvantage of all Commission Members and principally those who met their financial obligations at the proper time. It was accepted that Members should make every effort to make these payments by the due date. The Executive Secretary was asked to include with the review of the Budget each year a statement on the financial consequences of late payments.

Budget for 1988 and Forecast Budget for 1989

19. The Commission noted that the 'Budget for 1988 and Forecast Budget for 1989' was presented in the format agreed last year to distinguish recurrent from non-recurrent expenditures.

20. Members' attention was drawn to the item in the Scientific Committee's Budget on the Steering Group for the Workshop on the Feeding Ecology of Southern Baleen Whales. The

Standing Committee on Administration and Finance had agreed with the inclusion of this item on the condition that the Executive Secretary make every effort to ensure that expenditure on this item be kept down. It was suggested that this might be achieved by ensuring that the organisation of the meeting be done in a manner which takes advantage of travel by scientists for other purposes.

21. The USSR delegation raised a number of points for examination with a view to achieving reduction in expenditure in the future. One involved the reduction in the number or duration of Working Group meetings, another the suggestion that meetings of the Commission and Scientific Committee be held in countries other than Australia. While not disagreeing with the merit of studying these ideas, some cautionary views were put forward and it was agreed that a report on a study of the suggestions would be submitted to the next meeting by the Executive Secretary.

22. Some delegations expressed concern with the forecast expenditures for 1989 in the Scientific Committee Budget. Members noted that expenditure in this item was estimated to increase from \$84 800 in 1988 to A\$145 100 in 1989. These are net figures after deducting the contributions for the Norwegian Special Fund. It was explained that the Working Group for the CCAMLR Ecosystem Monitoring Program would not meet in 1988 but was expected to meet in 1989, that the newly created Ad Hoc Working Group on Krill would work by correspondence in 1988 and would involve no costs until 1989 and that there were new items of expenditure forecast for 1989 including the publication of an instruction manual for the completion of fine scale data forms and funds to allow the Convener of the Working Group on Fish Stock Assessment to participate in the 1989 meeting of the SCAR Fish Ecology Working Party.

23. It was noted that the forecast expenditures for 1989 were not submitted for approval by the Commission but were required under the Financial Regulations as an indication of potential commitments at the time the Commission was approving the Budget estimates, in this case expenditures for 1988. The Commission noted that it would have the opportunity to review the Scientific Committee estimates for 1989 when considering the proposed Budget next year.

24. Members drew attention to the fact that some items in the draft of the Forecast Scientific Committee Budget for 1989 that had been examined by SCAF had been subsequently changed by the Scientific Committee when adopting its report. The total figure in the draft considered was A\$123 700 compared to the final figure of A\$170 500. The Commission agreed it was highly desirable that the Budget examination by SCAF should be undertaken on final estimates.

25. The Commission approved the Budget for 1988. A copy of the Budget including the Forecast Budget for 1989 is attached as Annex E.

26. The Commission noted that with regard to the 1988 Budget the total of Members' contributions after deducting estimated credits will be A\$877 999. The contributions, considering the agreed formula specified in paragraph 28 are estimated as follows:

USSR	A\$ 64 880
Japan A\$	44 973
Other Existing Members	A\$ 42 281
Spain (New Member Oct. 87)	A\$ 49 379

Consideration of a New Formula for Calculating Members' Contributions in Accordance with Article XIX.3

27 At its 1986 Meeting the Commission commenced consideration of a new formula for calculating Members' contributions in accordance with Article XIX.3 of the Convention principles were agreed and an interim formula was adopted to enable Article XIX.3 to be implemented as required. The Commission agreed that further work would be co-ordinated by the Executive Secretary and the Chairman of SCAF in the intersessional period with a view to concluding the matter at this meeting.

28. Several Members submitted suggestions which were examined in detail in SCAF. The Commission agreed on the following formula :

- (i) those countries engaged in harvesting in the Convention Area will, in respect of the amount harvested, contribute at the rate of 1.5% of total Members' contributions per 100 000 tonnes of finfish and 0.75% of total Members' contributions per 100 000 tonnes of krill;
- (ii) the amount harvested shall be calculated as the average catch over a 3-year reporting period, ending at least 12 months prior to the Commission meeting at which the budget in question is approved;
- (iii) the balance of total contributions will be equally shared amongst all Members of the Commission;
- (iv) the first 9 000 tonnes or 5% of the catch of individual harvesting countries, whichever is the greater, will not be taken into account for the purpose of calculating their

contributions to the budget. The application of this exemption is to be calculated on the basis of the proportion of fish and krill in the total catch of each country;

- (v) The maximum percentage of total contributions to be paid in respect of the amount harvested shall be fixed at 50%.
- (vi) the maximum percentage of total contributions to be met by any individual harvesting country is fixed at 25%;
- (vii) this formula for calculating Member's contributions will be reviewed after 3 years;
- (viii) such a review will in particular examine the finfish/krill coefficient in the light of additional scientific evidence regarding the relative yield of finfish and krill.

Procedures for the Appointment of Executive Secretary to CCAMLIR

29. The Commission had requested that the Executive Secretary prepare draft procedures to be followed should the position of Executive Secretary become vacant. A document, CCAMLIR-VI/8, was submitted for the Commission's consideration and the Commission agreed on the following procedures:

- (i) Should the post of Executive Secretary fall vacant, the most senior member of the professional staff of the Secretariat shall be designated Acting Executive Secretary pending the appointment of a new incumbent.
- (ii) Any person designated Acting Executive Secretary shall enjoy the salary, allowances and other privileges appropriate to the post of Executive Secretary for such time as the person occupies the post.
- (iii) Advertisements shall be placed, or other recommended actions taken, in each member country with the purpose of attracting applications for the post of Executive Secretary. Any advertisements placed shall be identical in form detailing the selection criteria and shall be a charge to the Commission Member in whose country they are placed.
- (iv) Each Member of the Commission may nominate up to two candidates for the vacant post. Persons other than those so nominated shall be entitled to enter an application on their own behalf.

- (v) Only nationals of Commission Members may apply for the post of Executive Secretary.
- (vi) The Chairman of the Commission shall, in consideration of the time available, determine the deadline for applications and other processes leading to the shortlisting of candidates.
- (vii) After the deadline set for applications all curricula vitae, references and other documents submitted by applicants shall be circulated to Members of the Commission.
- (viii) Each Member of the Commission shall rank the ten candidates they most favour in order of preference, and submit this list to the Chairman of the Commission.
- (ix) Upon receipt of all the Commission Members' preferences the Chairman shall aggregate individual applicants' rankings awarding 10 points for a first preference, 9 points for a second preference, etc.
- (x) The candidates with the five highest aggregate scores shall be shortlisted for selection. Should the application of any candidate be withdrawn the next ranking candidate shall be substituted.
- (xi) The candidates selected will be notified to Members of the Commission, and shall be invited to the next meeting of the Commission where the Chairman of the Commission shall make such arrangements for the final selection process as agreed after consultation with Heads of all Delegations in accordance with Article XII, paragraph 1 of the Convention.
- (xii) The travel expenses and per diem incurred by candidates invited for final selection shall be reimbursed by the Commission except where a candidate is a nominee of a Member of the Commission.
- (xiii) The chosen candidate shall be notified at the earliest opportunity and not later than the close of the Commission Meeting.

Selection Criteria for the Appointment of the Executive Secretary to CCAMLR

30. The Committee agreed that the Commission be guided by the following criteria:

- (i) familiarity with Antarctic affairs;
- (ii) experience or detailed knowledge of the operations of international, intergovernmental organisations;
- (iii) demonstration of a high level of managerial experience and proven competence, in such areas as:
 - (a) the selection and supervision of administrative, technical and scientific staff;
 - (b) the preparation of financial budgets and the management of expenditures;
 - (c) the organisation of meetings and provision of secretariat support for high level committees;
- (iv) tertiary qualifications;
- (v) language qualifications.

31. Some Members thought that a method to clearly indicate whether or not an applicant was a nominee of his or her government should be included in the process. Others had problems with this and it was finally agreed that those Members who wished to have this information clearly shown would ask the Acting Executive Secretary to advise Members at the time of distribution of the applications to all Members.

32. In concluding consideration of this item it was agreed that the Executive Secretary would prepare a draft advertisement for consideration at the next meeting of the Commission.

ASSESSMENT AND AVOIDANCE OF INCIDENTAL MORTALITY OF ANTARCTIC MARINE LIVING RESOURCES

33. In considering this item, the Commission had reports from six Members describing the results of surveys undertaken to detect marine debris and entanglement-related problems. It also had before it the drafts of an information bulletin (brochure) and placard prepared by the Secretariat to inform operators in the Convention Area of the marine debris problem and the proper handling of different types of refuse. The Commission also had a paper from the United States that described international regulation of vessel-source pollution under Annex V of the International Convention for

the Prevention of Pollution from Ships at Sea 1973 (known informally as MARPOL) as modified by the Protocol of 1978.

Members' Reports on the Assessment and Avoidance of Incidental Mortality

34. In the Commission's report last year, Members agreed to request their nationals working in the Convention Area to report any observations of lost or discarded fishing gear and to survey periodically beaches and seal and penguin colonies in the vicinity of their coastal stations. Reports were received from Argentina, Australia, Japan, Republic of Korea, United Kingdom and the United States.

35. While several Members observed no marine debris or entanglement problems, others reported sightings of derelict debris consisting of fishing buoys, gas bottles, plastic containers, trawl net fragments and plastic packing bands. In addition, two fur seals were seen entangled in derelict fishing nets and a third was observed entangled in the dropper of a longline. Members agreed that these reports provided useful information about the loss of Antarctic marine life from entanglement in marine debris.

36. To ensure that the loss or disposal of nets, net fragments, and other potentially hazardous debris does not contravene efforts to achieve the objectives set forth in Article II of the Convention, it was agreed that Members would continue to take those steps outlined in the Commission's report last year under this agenda item (CCAMLR-V, paragraphs 40–43). Such steps include maintaining a complete record of lost fishing gear, collecting where feasible derelict marine debris, periodically surveying beaches and seal and penguin colonies near coastal stations, requesting nationals to report observations of derelict debris, determining practical methods for marking fishing gear, and maintaining an inventory of the types and quantities of netting used in the Convention Area.

Information Brochure and Placard

37. In response to the Commission's decision at the Fifth Meeting, (CCAMLR-V, 40 b) the Executive Secretary submitted a document CCAMLR-VI/9 containing drafts of an information brochure 'to advise fishermen, researchers, and others working in the Convention Area of the sources, fates and effects of potentially hazardous marine debris' and a draft placard 'that could be displayed in appropriate places aboard ships operating in the Convention Area, describing "do's and don'ts" with respect to handling, storing, and discarding different types of refuse.' The drafts were agreed with some amendments, and the Executive Secretary was asked to proceed with the

publication of the brochure and production of the placard. It was agreed that a graphical presentation should be used to add emphasis to the message. The text of the brochure and placard is given in Annex F.

38. Members were urged to distribute the brochure widely among their people working in Antarctica and to ensure that all vessel operators were provided with the placard. Members were asked to advise the Executive Secretary of the numbers of copies of brochures and placards they would require.

Regulation of Vessel Source Pollution under Annex V of the MARPOL Convention

39. The MARPOL Convention is designed to control pollution generated by ships, including the accidental disposal of wastes incidental to normal vessel operations. Annex V of the Convention prohibits the disposal of 'all plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags', and requires commercial fishing fleets to take 'reasonable precautions' to prevent the accidental loss of synthetic material incidental to the repair of synthetic fishing nets. In addition, the Annex places certain restrictions on dumping of other types of garbage from vessels at sea.

40. Annex V of the MARPOL Convention will only become binding a year after at least 15 nations representing more than 50% of the gross tonnage of the world's merchant shipping fleet choose to ratify it. To date, 28 countries, (including several CCAMLR Members), have ratified the Annex but they only represent approximately 48% of the world merchant shipping fleet. As a result, the Annex has not entered into force. However, the United States, which represents 4.9% of the world's shipping tonnage, indicated that it expects to ratify the Annex by the end of this year. As a result, the Annex will likely come into force by the end of 1988.

41. Because the MARPOL Convention applies to vessels operating in Antarctic waters it was agreed that those Members who have not done so would consider and take such steps as may be appropriate to accept or ratify optional Annex V of the MARPOL Convention. In addition, the Commission drew attention to the desirability of Members operating in the Convention Area observing the measures outlined in the Annex.

Future Work

42. It was agreed that this item should be included on the agenda of subsequent annual meetings of the Commission and that, prior to such meetings, Members would advise the Executive Secretary of steps that have been or are being taken to implement the measures agreed to in paragraphs 40–43 of CCAMLR-V.

REPORT OF THE SCIENTIFIC COMMITTEE

43. The Commission received the Report of the Sixth Meeting of the Scientific Committee including its proposals for the 1988 Budget. The Report is published separately (SC-CAMLR-VI).

44. With regard to the Scientific Committee's deliberations on krill resources, the Commission noted the reported activity of the fishery in the past season. It also noted the research activities being undertaken on the biology of krill and on estimating its abundance using acoustic methods. The Commission strongly supported the Scientific Committee's decision to establish an Ad Hoc Working Group on Krill to review and evaluate research on krill biology and ecology relevant to the work of the Scientific Committee and to advise the Scientific Committee on the potential application of the research to stock assessment and ecosystem monitoring.

45. The Commission noted that the submission of catch data had improved in the past year and that Chile, Spain and the USSR had reported fine-scale catch and effort data in accordance with last year's decision of the Commission (CCAMLR-V, paragraph 71). The Japanese delegate informed the Commission that Japan had also sent fine-scale data to the Secretariat in response to that decision but it had not yet arrived at the Secretariat.

46. The Commission supported the Scientific Committee's emphasis on the requirement for Members to report past and future catch and effort data by STATLANT subareas and divisions in accordance with decisions of the Commission at past meetings and endorsed the Committee's requirement for fine-scale krill catch and effort data in support of the Ecosystem Monitoring Program and the Krill Simulation Study.

47. In relation to fish resources, some delegations expressed concern at the level of catches of *Champsocephalus gunnari* around South Georgia reported for the 1986/87 season, especially in view of the undertaking by the fishing Members last year to limit catches to 1985/86 levels (CCAMLR-V, paragraph 51). Catches have increased five-fold from 1985/86 to 1986/87. It was explained that estimates of abundance provided to the last meeting had differed significantly and

there was no agreement on which was correct. The fleets had found large quantities of the species and a far greater quantity could have been landed if restrictions had not been placed on the fleets in line with last year's undertaking.

48. It was noted that a large number of vessels were reported to have been fishing on the shelf area of South Georgia in August and September of this year and that a considerable catch might already have been taken. This would have implications for measures adopted at the meeting in accordance with Conservation Measure 7/V. It was agreed that data on this fishing activity would be provided to the Commission as soon as possible.

49. The Commission endorsed the Scientific Committee's decision to establish a standing Working Group on Fish Stock Assessment and noted its terms of reference. The establishment of two new divisions of statistical Subarea 58.5 was recommended by the Scientific Committee to distinguish catches taken in the Kerguelen region from those taken around Heard and Macdonald Islands. The Commission endorsed this recommendation.

50. The Commission took note of the Scientific Committee's discussions on squid resources in the Convention Area. Catches are very low and are for research purposes only. No Member of CCAMLR has reported any intention to fish commercially for squid in the near future. The Commission joined the Scientific Committee in encouraging further research on squid, noting their important ecological role as predators of krill and as food for large vertebrates.

51. The Commission endorsed the recommendations embodied in the Scientific Committee's Report concerning the implementation of an Ecosystem Monitoring Program (SC-CAMLR-VI, paragraph 7.49) and the requirement to undertake detailed research directed towards the evaluation of additional parameters for monitoring (SC-CAMLR-VI, paragraph 7.50).

52. The Commission noted particularly that the program should commence with the monitoring of predator parameters approved by the Scientific Committee, principally of penguins (Adelie, chinstrap and macaroni) and fur seals. This should take place in the integrated study areas (South Georgia region, Antarctic Peninsula region and Prydz Bay region) and associated network sites as set out in SC-CAMLR-VI, Annex 4, Table 2. It was further noted that these monitoring studies should be conducted as specified in the Standard Method Sheets, which would be circulated to all Members shortly.

53. The Commission noted the topics for directed research set out in SC-CAMLR-VI Annex 4, Tables 4 and 8. It agreed that because these parameters of selected predators may prove useful for

monitoring (and in some cases equally or more suitable than those already recommended) directed research on these parameters should be undertaken.

54. The Scientific Committee reported on the activities that would be undertaken in the intersessional period and that no meeting of the Working Group for the CCAMLR Ecosystem Monitoring Program would be convened in 1988. Work on this program would be continued by the Secretariat, and by members of the Group by correspondence. Funds were allocated in the 1988 Budget for some specialist assistance to the Secretariat.

55. The Commission noted that work would be undertaken to develop management plans for the land-based monitoring sites identified in Tables 1 and 4 of Annex 4 of the Scientific Committee's Report, and would be submitted for consideration at the next meeting of the Commission. The Commission agreed that in developing these plans the term 'human interference' would not be interpreted to include fishing.

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 CCAMLRL.

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.

IMPLEMENTATION OF ARTICLE XX OF THE CONVENTION

91. Pursuant to Article XX of the Convention, the Commission adopted the refinements to the forms and instructions for reporting fine-scale catch and fishing effort data endorsed by the Scientific Committee (SC-CAMLR-VI, paragraph 9.4). It was agreed that the changes should be incorporated into the forms to be used for the 1987/88 fishing season.

92. On the basis of the Scientific Committee's recommendation (SC-CAMLR-VI, paragraph 9.5), the Commission agreed that fine-scale catch and fishing effort data should be collected and reported on an annual basis for krill taken from the three integrated study areas designated for the CCAMLR Ecosystem Monitoring Program (SC-CAMLR-V, Annex 6, paragraphs 48, 60 and 70).

93. Members were reminded of the importance to the Commission's work of submitting data in the agreed formats and in keeping with the agreed deadlines.

ESTABLISHMENT OF A SYSTEM OF OBSERVATION AND INSPECTION, ARTICLE XXIV OF THE CONVENTION

94. This item was considered in a Working Group convened by the United States. The Working Group elaborated the following provisions with respect to Article XXIV of the Convention:

- A. Each Member of the Commission may designate inspectors and observers referred to in Article XXIV of the Convention:
 - (i) Designated inspectors and observers shall be familiar with the fishing and/or scientific research activities to be observed and/or inspected and the provisions of the Convention and measures adopted under it.
 - (ii) Members shall certify the qualifications of each inspector and/or observer they designate.
- B. The Commission shall maintain a register of certified inspectors and observers designated by Members.
- C. In order to verify compliance with measures adopted under the Convention, inspectors and observers designated by Members shall be entitled to carry out inspection and

observation activities on board vessels engaged in scientific research or harvesting of marine living resources in the area to which the Convention applies.

- D. Inspectors and observers on board vessels shall have the authority to observe catch, nets and other equipment and shall have access to records of catch, research or other fishing activities insofar as necessary to carry out their functions.
- E. Inspectors and observers shall be able to communicate in the language of the flag state of the vessels on which they carry out their activities and shall carry out such activities so as not to interfere unduly with vessel operations. They shall be accorded the status of ship's officer while onboard such vessels.
- F. Inspectors and observers, while carrying out inspection and observation activities, shall be solely subject to jurisdiction of the Contracting Party of which they are nationals.
- G. Inspectors and observers shall prepare detailed reports on their observation and inspection activities. These reports shall be provided to the designating Member which shall in turn report to the Commission.
- H. Such reports shall be provided to the flag state and the flag state shall be afforded the opportunity to comment on reports referred to in paragraph G prior to the consideration by the Commission.
- I. If, as a result of inspection and observation activities carried out in accordance with these provisions, there is evidence of violation of measures adopted under the Convention, the flag state shall take steps to prosecute and, if necessary, impose sanctions. The flag state shall report any such prosecutions and sanctions to the Commission.
- J. There shall be established a Standing Committee on Observation and Inspection to advise the Commission on these paragraphs. The Committee shall, inter alia:
 - (i) provide advice on procedures in accordance with Article XXIV 2(a) and terms and conditions in accordance with Article XXIV 2(b) in relation to observation and inspection activities;

- (ii) provide advice on the nature of the authority and access referred to in paragraph D and the reporting formats and procedures referred to in paragraphs G and H;
- (iii) provide advice on inspection and observation priorities and, if necessary, coordination of inspection and observation activities to ensure representative coverage in the Convention Area of:
 - (a) harvesting and research activities aimed at each of the primary target species and any species being caught in significant quantities incidental to fishing operations;
 - (b) harvesting and research activities in each of the CCAMLR statistical areas particularly those in which fisheries and research activities are concentrated;
- (iv) review inspection and observation reports, as well as steps taken by Members to enforce compliance with measures adopted under the Convention, and, as appropriate, advise the Commission.

K. These provisions shall be implemented in accordance with Article XXIV of the Convention and paragraphs 4 and 5 of the May 19, 1980 statement of the Chairman of the Conference on the Conservation of Antarctic Marine Living Resources included in the Final Act of the Conference.

95. In the Commission's consideration of the provisions elaborated by the Working Group, Members agreed that these provisions would be without prejudice to Article IV of the Convention including their positions on the nature of inspection and observation and enforcement rights applicable in the Convention Area.

96. It is understood for present working purposes that the term 'measures' used in the above provisions on inspection and observation would include not only conservation measures adopted under Article IX of the Convention, but also other measures adopted under the Convention.

97. The delegation of France stated that in accordance with paragraph K of the provisions on observation and inspection, those provisions would not apply in the waters adjacent to Kerguelen and Crozet.

98. The Working Group noted that the terms ‘inspector’ and ‘observer’ are used interchangeably in Article XXIV of the Convention. It recommended that in future discussion of the issue the distinction, if any, between these terms should be clarified.

99. The Commission decided that the Standing Committee on Observation and Inspection referred to in paragraph J of provisions elaborated by the Working Group, with the terms of reference also included in paragraph J, should be established at the next meeting of the Commission. The Commission also agreed that the Standing Committee should, in carrying out the tasks identified in its terms of reference, proceed on the basis of paragraphs 94 – 98 above.

100. In the Working Group there was considerable discussion of the question of the costs of carrying out the inspection and observation activities. The view was expressed that decisions on this issue were not required at this stage.

101. Nevertheless, there was discussion of whether, in the longer term, the Commission should provide funding for the system of observation and inspection and, if so, on what basis. Several Members referred to existing international practice and proposed that, on the basis of such practice, the Member of the Commission designating an inspector and/or observer should cover the costs of carrying out the resulting inspection and observation activities. Other Members felt that, since all Members of the Commission shared an interest in an effective system of observation and inspection, funding arrangements should be developed to provide for costs to be met by contributions from the designating Member, the state of the vessel being inspected and from the Commission. It was noted that elaboration of such arrangements would raise a number of technical questions, as well as issues relating to the size of the Commission’s budget.

102. One delegation suggested that it would be fruitful to look at the actual categories of costs which would be incurred in conducting inspections foreseen in the CCAMLR system of observation and inspection. These included costs of transportation to and from the Convention Area, support costs (per diem and food/lodging) in the Convention Area and support costs (per diem and food/lodging) while actually on board vessels engaged in research or harvesting of Antarctic marine living resources. Designating Members (with respect to the first category), the Commission (with respect to the second), and the flag state of the vessel (with respect to the third), might all play a role in meeting inspection costs.

103. The Commission recognised that at least in the initial period, costs of such activities could be dealt with on an ad hoc basis. The Commission further noted that the question of costs required further discussion and that such discussion could be continued in the Standing Committee on Observation and Inspection.

COMPLIANCE WITH CONSERVATION MEASURES IN FORCE

104. The Working Group established to consider Agenda Item 10 was also charged with considering Agenda Item 11. It discussed procedure to be followed in the event that a Contracting Party in the course of its activities in the Convention Area becomes aware of any activity in the Convention Area, which in its view, raises matters covered by Article X of the Convention. It recommended that in such circumstances the Contracting Party transmit the relevant information to the Chairman of the Commission who would in turn transmit such information to the other state involved for comment. The Chairman of the Commission would circulate the information and any comment thereon to all Commission Members prior to the next meeting of the Commission.

105. The Commission agreed with this recommendation. It was also noted that the procedures and formats for inspection and observation reports to be considered by the Standing Committee on Observation and Inspection could be useful in relation to the procedure outlined in paragraph 104. However, it was agreed that the matter required further attention by the Commission at its next meeting.

DEVELOPMENT OF A CONSERVATION STRATEGY FOR ANTARCTIC MARINE LIVING RESOURCES

106. The Commission considered this item through the Working Group established at its Fifth Meeting in 1986 in order 'to carry forward the development of possible conservation approaches for achieving the objectives of the Convention, as set out in Article II, by the application of the conservation measures specified in Article IX'. The Working Group met three times. The Convener (Australia) reported orally to the Commission on progress made by the Group.

107. As the basis for its initial work the Working Group adopted the following terms of reference:
1. To develop a common understanding as to the management implications of Article II of the Convention.
 2. To develop possible conservation approaches for achieving the objectives of Article II by means contained in Article IX.
 3. To select and apply performance criteria for assessing each approach.

4. To identify, for preferred approaches, specific short and long term goals consistent with the objectives of the Convention.
5. To formulate the framework of a strategy for managing activities in order to achieve these goals.
6. To report to the Commission recommending appropriate action.

These are working terms of reference and may be altered as the Group progresses.

108. The Working Group had before it submissions on possible conservation strategies from Argentina, Australia, Chile, the EEC, Japan, South Africa, the USSR, the United Kingdom and the United States. In accordance with Rule 34(a) of the Rules of Procedure, the Commission also received a submission from IUCN and a supplementary paper to the UK submission.

109. Submissions to the Working Group showed a common interest in providing for the harvesting of Antarctic marine living resources on a sustainable basis. It was also recognised that the maintenance of ecological relationships required under the Convention calls for consideration of alternative scientific approaches to fisheries conservation.

110. The Working Group decided to focus initially on performance criteria for assessing different conservation approaches.

111. The specification of performance criteria will require specialist technical advice to the Working Group. In order to formulate this advice a sub-group of technical and scientific specialists will meet just prior to the next Commission meeting in Hobart. This sub-group will report to the Working Group which will meet at the beginning of the Commission meeting. A particularly important part of the specialist sub-group's work will be to present its findings in a way which clearly explains the concepts to the wider range of disciplines in the Working Group.

112. Australia, as convener of the Working Group, will prepare a discussion paper on the sub-group's work program, inviting comments from Members. This paper will be distributed early in 1988. An integration of the responses will be prepared by the Convener and circulated as the basis for the agenda for the meeting of the sub-group.

113. The Working Group agreed that it would be useful to reach a common understanding for working purposes of the term 'rational use' as it is employed in Article II of the Convention. It was

agreed that this term would require progressive refinement as knowledge and understanding of the Antarctic marine ecosystem developed.

114. The Group noted that, under Article II, the term 'conservation' includes rational use. Harvesting and associated activities are to be conducted in accordance with the following principles of conservation:

- (i) maintenance of ecological relationships
- (ii) maintenance of populations at levels close to those which ensure the greatest net annual increment
- (iii) restoration of depleted populations
- (iv) minimisation of the risk of irreversible change in the marine ecosystem.

115. With these principles in mind the Working Group felt that rational use involved inter alia the following elements:

- (i) that the harvesting of resources is on a sustainable basis
- (ii) that harvesting on a sustainable basis means that harvesting activities are so conducted as to ensure that the highest possible long-term yield can be taken from a resource, subject to the general principles of conservation above
- (iii) that the cost-effectiveness of harvesting activities and their management is given due weight.

116. The Group underlined the importance of considering the quality and quantity of information required in order to achieve rational use, as well as the above principles of conservation.

117. The Commission considered that the Working Group had made a useful start in its work. In receiving the Group's report the Commission affirmed the importance it placed on the Working Group's report the Commission affirmed the importance it placed on the Working Group's role in defining a strategy to achieve the Convention's objectives as set out in Article II. It reaffirmed that any harvesting and related activities within the Convention Area must be carried out in accordance with the provisions of the Convention. It re-emphasised the need to ensure that no irreversible

damage is done to the Antarctic marine ecosystem while comprehensive conservation measures are being further developed.

CO-OPERATION WITH OTHER INTERNATIONAL ORGANISATIONS

118. The Chairman reported that the Commission had been represented by Belgium at the XIVth Antarctic Treaty Consultative Meeting held in Brazil in October 1987. A report of the observer had been distributed as CCAMLR-VI/BG/6.

119. The French delegate reported on the work of the XVII Session of FAO Fisheries Committee (Rome 17–22 May, 1987) in which he participated as CCAMLR observer. He briefly outlined the items which had been discussed: Review of the situation regarding worldwide fisheries, outcome of the 1984 'World Conference on Fisheries', issues related to trade in fishing products, and marking and identification of fishing vessels. As regards the protection of marine animals against entanglement in fishing nets and other debris, the observer pointed out the steps already taken by CCAMLR concerning this matter. The Committee had acknowledged the efforts made by CCAMLR and thought it valuable to pursue the campaign of awareness which should be conducted through international co-operation through the participation of several organisations including United Nations Environment Program (UNEP) and International Union for the Conservation of Nature and Natural Resources (IUCN). The FAO Secretariat had also informed the Committee on the state of international co-operation between its own institution and certain organisations outside FAO. Mention was made by the Secretariat of the close co-operation which had been established with CCAMLR.

120. The Executive Secretary informed the Commission that he had attended, with the Chairman's agreement, the 1987 Meeting of the International Whaling Commission as the CCAMLR observer. The meeting was held in the United Kingdom in June 1987 and at that time the Executive Secretary was in Europe attending meetings related to the Scientific Committee. In his report, distributed as CCAMLR-VI/12, the Executive Secretary drew attention to two items of particular interest to CCAMLR, the proposal for a jointly sponsored Workshop on the Feeding Ecology of Southern Baleen Whales, a matter currently before the CCAMLR Scientific Committee, and the issue of special permits to take whales for scientific research. A similar matter was considered by the CCAMLR Commission at its last meeting. The Executive Secretary stressed the value in periodically being able to attend meetings of other international bodies. It provides a special opportunity to compare methods and procedures and to look for possible improvements in the services provided by the CCAMLR Secretariat. He informed the Commission that it was sometimes difficult to arrange for representation of the Commission at meetings, and asked the

Commission during its meeting to nominate its observer to meetings which it was invited to attend in the following year. He advised the Commission that the 1988 Meeting of the International Whaling Commission would be held in Auckland, New Zealand.

121. The Commission took note of the Executive Secretary's comments and agreed that as far as practicable, arrangements should be made to have a member of a participating delegation act as its representative at meetings of other organisations. New Zealand agreed to the Commission's request to be the CCAMLR observer at the 1988 Meeting of the International Whaling Commission.

122. The Observer of the Scientific Committee on Antarctic Research (SCAR) emphasised the particularly close and privileged relationships which bind SCAR to CCAMLR and especially to its Scientific Committee. Numerous studies carried out by the Working Groups and the SCAR Groups of Specialists have been used by the Scientific Committee of CCAMLR since its establishment, for example the review of Antarctic fish stock (BIOMASS Scientific Series No. 6) and the review (in press) on krill. SCAR has always responded favourably to the requests it has received from the Scientific Committee and wishes to continue to maintain a close scientific relationship with the Commission. A document has been submitted concerning data collected on early life stages of fish (SC-CAMLR-VI/BG/25).

123. The Observer of the Scientific Committee on Oceanic Research (SCOR) pointed out that the BIOMASS program (the FIBEX and SIBEX cruise results of which are often mentioned in the work and discussions of the Scientific Committee) was set up by a group of specialists belonging to both SCAR and SCOR. This group has since been disbanded but another Group of Specialists on the Ecology of the Southern Ocean was set up in 1986 and has similarly been placed under the co-sponsorship of SCOR. SCOR has submitted a report on its XVIII General Assembly (SC-CAMLR-VI/BG/37).

124. The Observer of the Intergovernmental Oceanographic Commission (IOC) conveyed to the Commission that the IOC wishes to continue being associated with the work of CCAMLR and recalled that an IOC/CCAMLR Scientific Seminar on the Variability of the Southern Ocean and its Influence on Marine living Resources, Particularly Krill, was held in Paris in June 1987 at UNESCO. Dr Sahrhage, the Convener of the Seminar and former Chairman of the CCAMLR Scientific Committee, submitted a report (SC-CAMLR-VI/BG/3) to CCAMLR. The IOC Regional Committee for the Southern Ocean met in Paris from 9 to 12 June 1987 and Dr Sahrhage, as Chairman, submitted a report to CCAMLR (SC-CAMLR-VI/BG/7).

125. The Commission concluded the discussion by agreeing that the Food and Agriculture Organisation (FAO), the International Union for Conservation of Nature and Natural Resources

(IUCN), the International Whaling Commission (IWC), the Scientific Committee on Antarctic Research (SCAR) and the Scientific Committee on Oceanic Research (SCOR) be invited to participate as observers in the 1988 Meeting of the Commission.

126. The Chairman reminded the Commission that following consideration at the last meeting of the application for observer status by the Antarctic and Southern Ocean Coalition (ASOC), consultations had been held among Members but consensus had not been reached.

127. Several delegations expressed regret that it had not been possible to come to an agreement to invite ASOC to attend the Meeting as an observer, following the lengthy discussion on this matter at the last meeting. They indicated their belief that the participation of an appropriate umbrella organisation representing non-governmental conservation groups could assist in the work of the Commission. They also indicated that if ASOC indicated its intention to apply for observer status, they would seek to have an item included on the agenda for the next meeting. The Chairman was reminded of the possibility of intersessional action under Rule 31.

128. The Commission noted that it was the right of any Member to put forward items for inclusion on the agenda of a Commission meeting.

ELECTION OF VICE-CHAIRMAN

129. New Zealand notified the Commission that it wished to resign from the position of Vice-Chairman and the Commission accepted its resignation. The Republic of Korea was nominated to succeed New Zealand and was elected to occupy the post from the end of the 1987 Meeting until the end of the 1989 Meeting.

130. The Commission agreed that when a Vice-Chairman is to be elected, the Chairman of the Commission shall be responsible for consulting with all delegations, on the basis of the principles and rules of this Commission, with the view of nominating a candidate to be elected by the Commission.

NEXT MEETING

131. It was agreed that the next meeting of the Commission and the Scientific Committee will be held in Hobart in the period 24 October to 4 November, 1988. Several preparatory meetings will be held on Sunday 23 October, 1988.

132. In discussing the timing of annual meetings the EEC delegation was of the opinion that the period during which the meetings of the Commission and the Scientific Committee are held is not the most suitable with regard to achieving a reasonable degree of work effectiveness. Certain difficulties, which occurred during this session, have shown that the holding of the meeting nearly mid-way through the statistical year prevents the Scientific Committee from considering all data and does not allow for the application of adopted measures to take effect in the immediate season. The EEC delegation believes that it would be preferable to hold the meetings of the Scientific Committee and the Commission just after the austral summer and preferably in May.

133. Most delegations noted that the timing of the annual meetings had been discussed in detail at the Fourth Meeting of the Commission. They felt that the existing arrangement was in balance with the operational requirements of the Convention.

134. It was agreed that the Secretariat should make a tentative booking for 1989 for a similar period of two weeks from late October to early November 1989. It was suggested that the delegation of the EEC might submit their proposal for consideration at the next meeting of the Commission.

OTHER BUSINESS

135. The delegation of Poland expressed concern at the length of some meeting documents and hence the time required for their preparation and translation prior to distribution at the Meeting. In particular he referred to the Report of the Scientific Committee, and suggested that the volume of the report might be reduced by including only comments of the Committee on the results of the various working groups, and excluding extensive reproduction of their texts. If Working Group reports were translated and published, the Commission could be referred to these reports by the Scientific Committee. This would result in a considerable saving in time and cost involved in the translation and production of the Scientific Committee's annual report.

136. The delegation of the UK shared this concern and asked the Chairman of the Scientific Committee to comment. The Chairman of the Scientific Committee pointed out that a major portion of the Scientific Committee Report consists of original material reflecting its discussions rather than of simple reproduction of sections of Working Group reports. He indicated his intention to discuss the problem further with the Conveners of the Working Groups and the Secretariat during the intersessional period.

137. The delegation of Chile, recognising the increase in the workload of the Commission, suggested that Members should be encouraged to make better use of the intersessional periods for discussing the Commission's activities through direct bilateral contact between Members or through the Executive Secretary. The proposal was widely supported.

138. The Executive Secretary was invited to report on staffing within the Secretariat in view of the increasing workload. The Executive Secretary reminded the Commission that the permanent full-time staff of the Secretariat was the same as it was when the Commission was established five years ago. Since that time, the role of the Commission had developed and expanded to become fully operational. This expansion has been accompanied by an increased demand on the Secretariat services. To meet this demand, additional casual staff have been employed, particularly during the annual meetings. Some of the tasks being undertaken however, are of a long-term nature and need trained staff familiar with the Secretariat equipment and procedures. These tasks have been undertaken by casual employees that have been working for the Commission for some considerable time. There was definite value in retaining these employees and some arrangement may have to be reached to provide them with longer term job security. The problem has been partially addressed by the Commission's decision to allow a four year contract of employment in the General Services category and agreement to provide a contract this year for one of these employees.

139. In connection with Members' Contributions to the 1988 budget, the delegation of Japan asked that a calculation of specific amounts of contributions by countries or by groups of countries be included in the Report of the Commission. In reply the Executive Secretary explained that specific values may be calculated only after the end of the current financial year. In the meantime, nominal values could be presented. It was found helpful to do so.

140. The United States referred the Commission to its paper on 'The Potential Effects of Ozone Depletion over Antarctica' (CCAMLR-VI/BG/13) and noted that the Scientific Committee had addressed one aspect of this problem in paragraph 16.4 of its report as well as in documents SC-CAMLR-VI/BG/17 and SC-CAMLR-VI/BG/21. The U.S. informed Members of the recent adoption of the Montreal Protocol on Substances that Deplete the Ozone Layer to the 1985 Vienna Convention For The Protection Of The Ozone Layer. That agreement established specific mechanisms to control emissions of ozone-depleting substances. The Commission noted the importance of this issue to Antarctic marine living resources, but the delegation of France expressed the opinion that this matter seemed to be more appropriate to the concerns of the Antarctic Treaty Consultative Parties.

141. The Observer from Peru informed the Commission that the first Antarctic Expedition of Peru was planned for January – March 1988. The expedition aims to achieve a better understanding of

the Antarctic marine ecosystem in the area of the Antarctic Peninsula and Bransfield Strait. The Chairman on behalf of the Commission warmly welcomed this news and thanked the Observer from Peru.

ADOPTION OF THE REPORT AND CLOSE OF MEETING

142. The Commission adopted the Report of its Sixth Meeting and the Chairman closed the Meeting.

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LIST OF PARTICIPANTS

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SENIOR SECRETARY	Miss Lisa LARK
SECRETARY	Mrs Genevieve NAYLOR
SECRETARY	Ms Judy GLOCK

AGENDA FOR THE SIXTH MEETING OF THE COMMISSION

AGENDA FOR THE SIXTH MEETING OF THE COMMISSION

1. Opening of the Meeting.
2. Adoption of the Agenda.
3. Organisation of the Meeting.
4. Report by the Chairman.
5. Financial Administration.
 - (i) Examination of Audited Financial Statements for 1986.
 - (ii) Secretariat Staffing.
 - (iii) Review of Budget for 1987.
 - (iv) Draft Budget for 1988 and Forecast Budget for 1989.
 - (v) Consideration of a New Formula for Calculating Members' Contributions in Accordance with Article XIX.3.
 - (vi) Procedures for Appointment of Executive Secretary.
6. Assessment and Avoidance of Incidental Mortality.
7. Report of the Scientific Committee.
8. Consideration of Conservation Measures.
 - (i) Review of Existing Measures.
 - (ii) Scientific Research Exemption Provision – Review of Registry of Permanent Research Vessels.
 - (iii) Consideration of Additional Requirements.
9. Implementation of Article XX of the Convention.
10. Establishment of a System of Observation and Inspection, Article XXIV of the Convention.
11. Compliance With Conservation Measures in Force.

12. Development of a Conservation Strategy for Antarctic Marine Living Resources.
13. Cooperation With Other International Organisations.
14. Consideration of Draft Rules of Procedure for the Election of Vice-Chairman.
15. Next Meeting.
16. Other Business.
17. Report of the Sixth Meeting of the Commission.
18. Close of the Meeting.

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CCAMLR-VI/BG/5: STATEMENT FOR THE 1987 MEETING OF THE
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A. Kiss (IUCN)

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- CCAMLR-VI/MA/1: REPORT OF MEMBER'S ACTIVITIES IN THE CONVENTION
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SCIENTIFIC COMMITTEE DOCUMENTS

SC-CAMLR-VI/1: PROVISIONAL AGENDA FOR THE SIXTH MEETING OF THE
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SC-CAMLR-VI/2: ANNOTATION TO THE PROVISIONAL AGENDA OF THE
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SC-CAMLR-VI/3: REPORT OF THE AD HOC WORKING GROUP ON FISH
STOCK ASSESSMENT – HOBART 19–23 OCTOBER, 1987

SC-CAMLR-VI/4: REPORT OF THE WORKING GROUP FOR THE CCAMLR
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SC-CAMLR-VI/5: CCAMLR/IWC JOINTLY SPONSORED WORKSHOP ON THE
FEEDING ECOLOGY OF SOUTHERN BALEEN WHALES
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SC-CAMLR-VI/6: DRAFT OUTLINE OF CCAMLR STATISTICAL BULLETIN
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- SC-CAMLR-VI/7: REPORT OF THE SIXTH MEETING OF THE SCIENTIFIC COMMITTEE
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- SC-CAMLR-VI/BG/1: SUMMARY OF KRILL LANDINGS
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- SC-CAMLR-VI/BG/2: CALENDAR OF FORTHCOMING MEETINGS
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- SC-CAMLR-VI/BG/3: REPORT OF THE SCIENTIFIC SEMINAR ON ANTARCTIC OCEAN VARIABILITY AND ITS INFLUENCE ON MARINE LIVING RESOURCES, PARTICULARLY KRILL
D. Sahrhage (Federal Republic of Germany)
- SC-CAMLR-VI/BG/4: KRILL CPUE SIMULATION STUDY REPORTS OF ACTIVITIES
J. Beddington (UK)
- SC-CAMLR-VI/BG/5: SUMMARY OF FISHERIES DATA
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- SC-CAMLR-VI/BG/6: VACANT
- SC-CAMLR-VI/BG/7: IOC REGIONAL COMMITTEE FOR THE SOUTHERN OCEAN
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D. Sahrhage (Federal Republic of Germany)
- SC-CAMLR-VI/BG/8: PREY MONITORING SURVEYS
I. Everson (UK)

- SC-CAMLR-VI/BG/9: KRILL TARGET STRENGTH, CURRENT STATUS
I. Everson (UK)
- SC-CAMLR-VI/BG/10: SQUID RESOURCES
I. Everson (UK)
- SC-CAMLR-VI/BG/11: CEPHALOPOD RESEARCH IN THE ANTARCTIC
P. Rodhouse (UK)
- SC-CAMLR-VI/BG/12: RESULTS OF FISH STOCK ASSESSMENT SURVEY, SOUTH
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W. Gabriel (USA)
- SC-CAMLR-VI/BG/12
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- SC-CAMLR-VI/BG/13: CAN WE SATISFACTORILY ESTIMATE VARIATION IN
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I. Everson (UK)
- SC-CAMLR-VI/BG/14: LONG TERM TRENDS IN THE FORAGING PATTERNS OF
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J.L. Bengtson (USA)
- SC-CAMLR-VI/BG/15: VARIATION IN REPRODUCTIVE PERFORMANCE OF
SEABIRDS AND SEALS AT SOUTH GEORGIA, 1976–1986
AND ITS IMPLICATIONS FOR SOUTHERN OCEAN
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J.P. Croxall et al. (UnitedKingdom)
- SC-CAMLR-VI/BG/16: BRIEF REPORT OF THE JOINT SOVIET-AUSTRALIAN
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- SC-CAMLR-VI/BG/17: U.S. ANTARCTIC MARINE LIVING RESOURCES PROGRAM
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- SC-CAMLR-VI/BG/18: SURVEY OF ANTARCTIC FUR SEALS *ARCTOCEPHALUS*
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J.L. Bengtson et al. (USA, Sweden)
- SC-CAMLR-VI/BG/19: SURVEYS OF BREEDING PENGUINS AND OTHER SEABIRDS
IN THE SOUTH SHETLAND ISLANDS, ANTARCTICA,
JANUARY – FEBRUARY 1987
W.D. Shuford and L.B. Spear (USA)
- SC-CAMLR-VI/BG/20: THE ANTARCTIC SCALLOP, *ADAMUSSIUM COLBECKI* I.
MARK-AND-RECAPTURE EXPERIMENTS AND THE
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P.A. Berkman (USA)
- SC-CAMLR-VI/BG/21: PHYTOPLANKTON DATA FROM THE BRANSFIELD STRAIT
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OCEAN (R/V PROFESSOR SIEDLECKI CRUISE,
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- SC-CAMLR-VI/BG/22: SIMULATION OF SOUTHERN OCEAN KRILL FISHERIES
M. Mangel (USA)
- SC-CAMLR-VI/BG/23: A RATIONALE FOR CONSERVATION AREAS WITHIN
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R.G. Chittleborough (Australia)
- SC-CAMLR-VI/BG/24: AGE AND GROWTH OF ANTARCTIC *EUPHAUSIACEA*
(*CRUSTACEA*) UNDER NATURAL CONDITIONS
V. Siegel (Federal Republic of Germany)

- SC-CAMLR-VI/BG/25 INVENTORY OF EXISTING INFORMATION ABOUT EARLY STAGES OF ANTARCTIC FISH
H.-C. Hureau (SCAR)
- SC-CAMLR-VI/BG/26: CCAMLR ANTARCTIC FISH OTOLITHS/SCALES/BONES EXCHANGE SYSTEM – PROGRESS REPORT
K.-H. Kock (Federal Republic of Germany)
- SC-CAMLR-VI/BG/27: CCAMLR/BIOMASS WORKSHOP ON KRILL ABUNDANCE STATUS REPORT
I. Everson (UK)
- SC-CAMLR-VI/BG/28: SOUTHERN ELEPHANT SEALS AND CCAMLR
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- SC-CAMLR-VI/BG/29: REPORT OF THE CCAMLR OBSERVER TO THE MEETING OF THE SCIENTIFIC COMMITTEE OF THE INTERNATIONAL WHALING COMMISSION
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- SC-CAMLR-VI/BG/30: VACANT
- SC-CAMLR-VI/BG/31: AREAS OF SEABED WITHIN SELECTED DEPTH RANGES IN THE SOUTH-WEST ATLANTIC AND ANTARCTIC PENINSULA REGIONS OF THE SOUTHERN OCEAN
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- SC-CAMLR-VI/BG/32: CEPHALOPOD INTERNATIONAL ADVISORY COUNCIL
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- SC-CAMLR-VI/BG/33: AN ASSESSMENT OF THE MERITS OF LENGTH AND WEIGHT MEASUREMENTS OF ANTARCTIC KRILL
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- SC-CAMLR-VI/BG/34: FORMAT SPECIFICATIONS FOR KRILL CATCH AND FISHING EFFORT DATA VERSION 1.9
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- SC-CAMLR-VI/BG/35: OBSERVATION OF FISHING OPERATION AND DISTRIBUTIONAL BEHAVIOUR OF KRILL ON A KRILL TRAWLER OFF WILKES LAND DURING THE 1985/86 SEASON
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- SC-CAMLR-VI/BG/36: OBSERVATION ON HAUL OUT PATTERNS AND TRENDS OF THE BREEDING POPULATIONS OF SOUTHERN ELEPHANT SEAL AT PENINSULA VALDES (PATAGONIA) AND STRANGER POINT (25 DE MAYO – KING GEORGE I.)
D.F. Vergani et al. Argentina
- SC-CAMLR-VI/BG/37: REPORT OF THE EIGHTEENTH GENERAL MEETING OF THE SCIENTIFIC COMMITTEE ON OCEANIC RESEARCH
K. Kerry (Australia)
- SC-CAMLR-VI/BG/38: A SIMULATION STUDY OF KRILL FISHING BY AN INDIVIDUAL JAPANESE TRAWLER
D.S. Butterworth (UK)
- SC-CAMLR-VI/BG/39: THE ERROR OF THE BIOMASS ESTIMATE AS A FUNCTION OF SURVEY PARAMETERS AND THE STATISTICS OF A DENSITY FIELD OF KRILL AGGREGATIONS
Z.I. Kizner (USSR)
- SC-CAMLR-VI/BG/40: ANALYSIS OF CHANGES IN BIOMASS OF FISH STOCKS IN THE SOUTH GEORGIA AREA IN 1976/77 – 1986/87
M. Mucha and W. Slosarczyk (Poland)
- SC-CAMLR-VI/BG/41: FISHING EFFORTS AND CPUE OF KRILL FISHING BOATS INTERIM SUMMARY
Y. Shimadzu (Japan)
- SC-CAMLR-VI/BG/42: OBSERVATIONS ON THE TREND OF THE POPULATION OF *ARCTOCEPHALUS GAZELLA* AT LAURIE ISLAND – SOUTH ORKNEY
D.F. Vergani and N.R. Coria (Argentina)

- SC-CAMLR-VI/BG/43: AGE DETERMINATION OF THE ANTARCTIC FISHES
CHAMPSOCEPHALUS GUNNARI AND *NOTOTHENIA ROSSII*
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R. Radtke (USA)
- SC-CAMLR-VI/BG/44: KRILL STOCK IDENTIFICATION USING DNA ANALYSES
R.W. Chapman (USA)
- SC-CAMLR-VI/BG/45: KRILL COMMUNITY STUDIES USING NET AND
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J.R. Green et al. (USA)
- SC-CAMLR-VI/BG/46: BIOMASS ESTIMATES OF KRILL IN THE BRANSFIELD
STRAIT – ELEPHANT ISLAND ECOSYSTEM MONITORING
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M.C. Macaulay (USA)
- SC-CAMLR-VI/BG/47: MOLT PRODUCTION METHOD OF BIOMASS ESTIMATION
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R. Lasker and S. Butler (USA)
- SC-CAMLR-VI/BG/48: AGE DETERMINATION OF ANTARCTIC KRILL USING SIZE,
FLUORESCENCE, AND IMAGE ANALYSIS TECHNIQUES
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- SC-CAMLR-VI/BG/49: ICES ANNUAL MEETING 1987 AND SPECIAL SYMPOSIUM
ON ARCTIC AND SUBARCTIC SYSTEMS
K. Sherman (USA)
- SC-CAMLR-VI/BG/50: INFORMATION ON RECENT USSR PUBLICATIONS ON
RESEARCHES IN ANTARCTIC MARINE LIVING RESOURCES
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- SC-CAMLR-VI/BG/51: COMPARISON OF THREE OPTIONS FOR PURCHASE OF
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**THE EXECUTIVE SECRETARY'S REPORT OF THE
MEETING OF THE STANDING COMMITTEE ON
ADMINISTRATION AND FINANCE (SCAF)**

**THE EXECUTIVE SECRETARY'S REPORT OF THE
MEETING OF THE STANDING COMMITTEE ON
ADMINISTRATION AND FINANCE**

The Committee met on 26, 27, 28, 30 October and 2 November 1987 under the Chairmanship of Mr. C.M. Bhandari (India) and considered the following items:

1. Examination of Audited Financial Statements for 1986
2. Secretariat Staffing
3. Review of Budget for 1987
4. Draft Budget for 1988 and Forecast Budget for 1989
5. Consideration of a new Formula for Calculating Members' Contributions in Accordance with Article XIX.3
6. Procedures for Appointment of Executive Secretary
7. Other Administrative and Financial Matters

EXAMINATION OF AUDITED FINANCIAL STATEMENTS FOR 1986

2. The Committee had before it Document CCAMLR-VI/4 'Examination of the Audited Financial Statements'.

3. The Auditor had reported that:

'The Statements are based on proper accounts and records; the income, expenditure and investment of moneys and the acquisition and disposal of assets by the Commission during the year ending 31 December 1986 have been in accordance with the Regulations'.

The Auditor also reported that the Statements accorded with International Accounting Standards.

4. The Committee agreed that in accordance with Financial Regulation 12.1, the Commission should signify its acceptance of the financial statements.

SECRETARIAT STAFFING

5. The Secretariat submitted document CCAMLR-VI/7, seeking the Commission's approval for an extra position in the General Services category. The document also proposed that the position be filled on a part-time basis. The document contained a suggested amendment to the Staff Regulations to allow the Executive Secretary flexibility in setting hours of work for positions in the General Services Category.

6. A person had been employed on a casual basis to assist with secretarial duties since late 1983. The Committee agreed that in view of this long period of employment the need for the additional position on a part-time basis had been demonstrated. The Committee also agreed with the Executive Secretary's assessment of the efficiency and competence of the staff member in question. The Committee noted that the type of work normally carried out by the staff member was of a continuous and regular nature and concluded that the Commission would benefit by retaining these services. To achieve this and also to provide greater security to the employee, it was necessary to provide some form of longer term employment.

7. There was some concern, however, that a decision to employ permanent part-time staff and to amend the Staff Regulations as proposed in CCAMLR-VI/7 might be seen as introducing a new category of staff.

8. It was suggested that the necessary flexibility in working hours and the longer term security might be provided by a contract of employment entered into by the Executive Secretary and the employee in accordance with Staff Regulation 11. It was agreed that casual staff could be employed, subject to budgetary control, on a contract basis for up to four years with the possibility of a further term. Such a contract would include the terms and conditions applicable to Staff in the General Services Category and would be on a pro rata basis in accordance with the hours worked.

9. As a general comment on the consideration of proposals for new positions in the Secretariat several delegations stressed the importance of clearly identifying the need for the position in relation to the overall structure of the Secretariat.

REVIEW OF BUDGET FOR 1987

10. The Executive Secretary introduced document CCAMLR-VI/5 and explained the likely outcome of the 1987 budget. It was noted that no expenditures were expected to exceed the approved appropriations and that it was likely there would be savings in some items.

11. The United Kingdom Delegation expressed concern that Members' budget contributions were not reaching the Secretariat by the 31 May deadline each year. The consequence was a loss of interest on cash deposits to the disadvantage of all Commission Members and principally those who met their financial obligations at the proper time. It was accepted that Members should make every effort to make these payments by the due date.

THE DRAFT BUDGET FOR 1988 AND THE FORECAST BUDGET FOR 1989

12. The Committee noted that the budget paper was presented in the previously agreed format which distinguishes recurrent from non-recurrent expenditures.

13. Questions were raised concerning the amount estimated for Contract Labour in the 'Data Management' item. A detailed breakdown of the costs is shown in CCAMLR-VI/5, paragraph 16 (iii). The Data Manager provided further explanation.

14. The proposal to purchase new computing facilities (CCAMLR-VI/11, submitted by the Secretariat) had been examined by the Fish Stock Assessment Working Group which: 'confirmed the requirement for efficient, timely support for its work and that appropriate computing, printing and graphics capabilities were essential in providing such support.' The Scientific Committee established a panel of experts to advise on the proposal and in its Report to the Commission has stated:

'16.1 It was agreed that CSIRONET should not be used for data management because of the reasons described in CCAMLR-VI/11, paragraph 11. The Scientific Committee recommended that the Commission make alternative arrangements for handling fine-scale catch, fishing effort and biological data.

16.2 Three options for the purchase of computer equipment described in a background paper (SC-CAMLR-VI/BG/51) were reviewed by a working group and it was agreed that each of the options would meet the basic needs of the Commission. It was recommended that further deliberations on the subject of new computer equipment be based on the options described in the background paper.

16.3 It was emphasised that the new computing system should include facilities for reading and writing magnetic tapes.'

15. The Committee discussed the three options and agreed that Option 2 involving the shared use of the computing facilities of the Australian Antarctic Division offered all of the features of

Option 1 (favoured by the Secretariat) at a lower initial cost. It also provided a further period in which to gain experience of the data management requirement. It was agreed that Option 2 should be supported, recognising that it was a temporary arrangement and that it might commit the Commission to Option 1 at a future time.

16. The Committee was grateful to the Australian Delegation for coming forward with the generous offer of the continued use of Australian computing facilities.

17. Several members of the Committee expressed concern over the high cost of the Commission and Scientific Committee meetings, particularly for interpretation services and the translation of documents. The Executive Secretary described the processes employed by the Secretariat to obtain these services and compared the costs and quality of the services available in Australia with those in Europe. It was agreed that because of the high cost of travel involved in bringing interpreters and translators to Hobart for the meetings, it would be necessary to continue to have the services provided from within Australia. The Executive Secretary was asked to continue to observe rigorous tendering procedures as well as actively investigating ways to reduce costs of the interpretation and translation services.

18. The policies and procedures for the preparation of meeting documents adopted by the Commission and Scientific Committee were described by the Executive Secretary. It was emphasised that these policies and procedures were designed to ensure that only essential documents were translated. These included Reports of Commission and Scientific Committee Meetings, Reports of Working Groups, Reports of Members' Activities and Working Papers. Background Papers are not translated. Members were reminded that guidelines for the preparation of documents had been prepared and distributed by the Secretariat and that guidelines for the preparation of Reports of Members' Activities approved by the Commission at its last meeting had also been distributed. Close attention to these guidelines would contribute to a reduction in translation and printing costs.

19. It was noted that a large increase in the number of meeting documents had occurred this year and that the increase was due to the large number of Background Papers submitted. Several members of the Committee felt that measures should be adopted to restrict the distribution of such documents to those which were directly relevant to agenda items.

20. Questions were also raised about the large cost of casual staff for meetings. The Executive Secretary explained that casual staff had to be hired not only for the two to three weeks of annual meetings themselves, but were essential in preparing for the meetings and subsequently for a few weeks to handle the follow-up work.

21. The Executive Secretary also explained the relatively large increases in the low expenditure items, 'Meetings Miscellaneous' and 'Library'. Members were referred to paragraphs 18 and 47 of CCAMLR-VI/5.

22. The USSR delegation expressed its serious concern in connection with what it saw as a trend of rising expenditure of several items of the Commission budget and the increasing financial burden on the Commission Members that this implies. It noted the difficulty of this problem and the necessity of its serious study in order to find ways and means to decrease Commission and Scientific Committee expenses without prejudice to the fulfilment of the provisions of the Convention.

23. The USSR delegation suggested that a decrease in the expenses may be achieved, in particular, by:

- (i) decreasing the number and volume of the copies of documents distributed by the Secretariat;
- (ii) the possible application by the Secretariat of Rule 34(b) of the Rules of Procedure to a wider category of documents submitted to the Commission and Scientific Committee;
- (iii) decreasing the number and duration of meetings of Working Groups;
- (iv) holding the Commission and Scientific Committee meetings in countries of Commission Members in accordance with Article XIII(3) of the Convention, as well as holding of those meetings once in two years in between the Antarctic Treaty Consultative Meetings;
- (v) employing translators from Member countries for which the official languages of the Commission are national languages. This also may improve the quality of translation of Commission and Scientific Committee documents.

24. The USSR delegation proposed that SCAF, the Scientific Committee and the Executive Secretary study this problem in an effort to make a practical contribution to its solution.

25. The Committee agreed with the need to study these matters and it was suggested that the Executive Secretary prepare a report for consideration at the next meeting of the Commission.

26. It was agreed, however, that certain decisions with regard to items (i) and (ii), on the distribution of documents, could be undertaken now so as to apply to the 1988 meetings. It was

suggested that delegates be asked to specify whether or not they wished to receive certain categories of documents and that certain documents have limited distribution. It was agreed the Secretariat should take action on these suggestions.

27. In relation to the possibility of decreasing the number and duration of Working Groups the point was made that while it was necessary to monitor the cost of such activities it was important to ensure there was sufficient time allowed to enable a group to work effectively and provide a useful report, especially in view of the travel costs involved in convening such groups.

28. On the possibility of holding Commission and Scientific Committee meetings every second year attention was drawn to Article XIII 2 of the Convention which would require amendment if there was sufficient agreement to depart from regular annual meetings. It was also noted that the Commission and Scientific Committee were gaining momentum in their work and that it would not be wise to introduce any changes which may impede progress with the implementation of the Convention.

29. While there was no opposition to the principle of holding meetings away from Hobart and to the suggestion to study the financial implications of the idea, Members were reminded of the practice of other international organisations where any additional costs involved in holding meetings away from the headquarters are borne by the hosting country.

30. The Scientific Committee presented its draft Budget for 1988 and forecast for 1989 for the Consideration of the Standing Committee on Administration and Finance. The Chairman of the Scientific Committee attended the meeting for discussion of the draft Budget.

31. Two items involving expenditure for translation into English, French and Spanish of reports of Soviet research were taken out of the Budget following a statement by the USSR delegation. Abstracts of reports of this kind are normally translated into English and the Soviet delegation undertook to provide translated abstracts of these reports.

32. In discussing the funding the CCAMLR participants in the Steering Group Meeting for the CCAMLR/IWC Workshop on the Feeding Ecology of Southern Baleen Whales, several possibilities for economies were raised. The Committee stressed the need to seek to reduce costs in all areas of the Budget. In this particular item it suggested that the Executive Secretary be directed to ensure that when arrangements for the Steering Group meeting are being concluded ways to save costs in fares and travelling allowances be thoroughly explored before funds are committed.

Budget Rate of Growth

33. The proposed 1988 budget expenditure of A\$1 150 800 represents a nominal increase of 10.8% over the approved 1987 budget. Recurrent expenditure is projected to increase 7.1%.

34. The rate of inflation for Australia in the year 1988 is expected to be around 7.3%. Therefore, the increase in recurrent expenditure represents negative real growth of 0.2%.

Members' Contributions

35. The revised draft budget for 1988 indicates that the total of Members' contributions, after deducting estimated credits, will be A\$873 999. The contribution, assuming twenty Members, will be A\$42 441 per Member after allowing for additional contributions of \$25 172 by harvesting nations.

CONSIDERATION OF A NEW FORMULA FOR CALCULATING MEMBERS' CONTRIBUTIONS IN ACCORDANCE WITH ARTICLE XIX.3

36. Document CCAMLR-VI/6 contains the background to this item including papers prepared and submitted by Members, in response to the Commission's invitation (CCAMLR-V, paragraph 34), proposing possible formulae for the implementation of Article XIX.3.

37. It was emphasised again this year that an acceptable formula needed not only to embody the principles of Article XIX.3 but also to be simple to apply and to allow an exemption for small catches in the calculation of the harvesting component of the Members' contributions. It was also accepted that a time would have to be specified after which the formula would be reviewed.

38. With these requirements in mind the Committee prepared the following text for the Commission's consideration:

'The Commission agreed on the following new formula for calculating Members' contributions to the CCAMLR Budget in accordance with Article XIX.3:

- those countries engaged in harvesting in the Convention Area will, in respect of the amount harvested, contribute at the rate of 1.5% of total Members' contributions per

100 000 tonnes of finfish and 0.75% of total Members' contributions per 100 000 tonnes of krill;

- the amount harvested shall be calculated as the average catch over a 3-year reporting period, ending at least 12 months prior to the Commission meeting at which the budget in question is approved;
- the balance of total contributions will be equally shared amongst all Members of the Commission;
- the first 9 000 tonnes or 5% of the catch of individual harvesting countries, whichever is the greater, will not be taken into account for the purpose of calculating their contributions to the budget. The application of this exemption is to be calculated on the basis of the proportion of fish and krill in the total catch of each country;
- the maximum percentage of total contributions to be paid in respect of the amount harvested shall be fixed at 50%;
- the maximum percentage of total contributions to be met by any individual harvesting country shall be fixed at 25%;
- the formula of calculating Members' contributions shall be reviewed after 3 years;
- such a review will in particular examine the finfish/krill coefficient in the light of additional scientific evidence regarding the relative yield of finfish and krill.'

PROCEDURES FOR THE APPOINTMENT OF EXECUTIVE SECRETARY TO CCAMLR

39. The Commission had requested that the Executive Secretary prepare draft procedures to be followed should the position of Executive Secretary become vacant. A document, CCAMLR-VI/8, was submitted for the Committee's consideration and the Committee agreed on the following procedures:

- (i) Should the post of Executive Secretary fall vacant, the most senior member of the professional staff of the Secretariat shall be designated Acting Executive Secretary pending the appointment of a new incumbent.

- (ii) Any person designated Acting Executive Secretary shall enjoy the salary, allowances and other privileges appropriate to the post of Executive Secretary for such time as the person occupies the post.
- (iii) Advertisements shall be placed, or other recommended actions taken, in each member country with the purpose of attracting applications for the post of Executive Secretary. Any advertisements placed shall be identical in form detailing the selection criteria and shall be a charge to the Commission Member in whose country they are placed.
- (iv) Each Member of the Commission may nominate up to two candidates for the vacant post. Persons other than those so nominated shall be entitled to enter an application on their own behalf.
- (v) Only nationals of the Commission Members may apply for the post of Executive Secretary.
- (vi) The Chairman of the Commission shall, in consideration of the time available, determine the deadline for applications and other processes leading to the shortlisting of candidates.
- (vii) After the deadline set for applications all curricula vitae, references and other documents submitted by applicants shall be circulated to Members of the Commission.
- (viii) Each Member of the Commission shall rank the ten candidates they most favour in order of preference, and submit this list to the Chairman of the Commission.
- (ix) Upon receipt of all the Commission Members' preferences the Chairman shall aggregate individual applicants' rankings awarding 10 points for a first preference, 9 points for a second preference, etc.
- (x) The candidates with the five highest aggregate scores shall be shortlisted for selection. Should the application of any candidate be withdrawn the next ranking candidate shall be substituted.
- (xi) The candidates selected will be notified to Members of the Commission, and shall be invited to the next meeting of the Commission where the Chairman of the Commission shall make such arrangements for the final selection process as agreed after

consultation with Heads of all Delegations in accordance with Article XII, paragraph 1 of the Convention.

- (xii) The travel expenses and per diem incurred by candidates invited for final selection shall be reimbursed by the Commission except where a candidate is a nominee of a Member of the Commission.
- (xiii) The chosen candidate shall be notified at the earliest opportunity and not later than the close of the Commission Meeting.

SELECTION CRITERIA FOR THE APPOINTMENT OF THE EXECUTIVE SECRETARY TO CCAMLR

40. The Committee agreed that the Commission be guided by the following criteria:

- (i) familiarity with Antarctic affairs;
- (ii) experience or detailed knowledge of the operations of international, intergovernmental organisations;
- (iii) demonstration of a high level of managerial experience and proven competence, in such areas as:
 - (a) the selection and supervision of administrative, technical and scientific staff;
 - (b) the preparation of financial budgets and the management of expenditures;
 - (c) the organisation of meetings and provision of secretariat support for high level committees;
- (iv) tertiary qualifications;
- (v) language qualifications.

41. In discussing procedures for the appointment of Executive Secretary, the Committee recalled paragraphs 31 and 32 of the Report of the Fifth Meeting, dealing with the review of classification and remuneration of professional Secretariat staff. The SCAF requested the Executive Secretary to

continue his consultations with comparable international organisations and the Australian Public Service and to report on the outcome of these consultations at the 1988 annual meeting of the Commission. This review should be inserted as an item on the agenda for the 1988 annual meeting of the Commission. The SCAF agreed that the review of the classification of the position of Executive Secretary should be completed before the appointment for the next Executive Secretary commenced.

**PROJECTED INCOME AND EXPENDITURE 1987,
BUDGET 1988 AND FORECAST BUDGET 1989**

**PROJECTED INCOME AND EXPENDITURE 1987, BUDGET 1988 AND FORECAST
BUDGET 1989 (Australian Dollars)**

1987 BUDGET			DRAFT BUDGET 1988 & FORECAST BUDGET 1989			
(1)	(2)	(3)	Item	Sub Item	(4)	(5)
Budget Adopted 1987	Estimates Projected to 31.12.87	Variance with Budget			1988	1989
INCOME						
666084	671445	5361		Members' Contributions	877999	1192500
0	0	0		Items from Previous Year		
40000	68177	28177		• Arrears of Contributions	48367	0
0	0	0		• Interest	60000	60000
112116	84282	-27834		• Members' Contributions	27834	0
93000	94960	1960		• New Members' Contributions	0	0
<u>127800</u>	<u>120136</u>	<u>-7664</u>		• Staff Assessment Levy	110100	116100
1039000	103900	0		• Surplus	<u>30500</u>	<u>0</u>
				Total Income	1154800	1368600

EXPENDITURE						
DATA MANAGEMENT						
0	0	0		Capital Equipment	26100	0
1200	1200	0		Consumables	2100	2200
31000	25000	6000		Contract Labour	48000	50800
3800	3800	0		Maintenance	10900	18300
<u>14000</u>	<u>9000</u>	<u>5000</u>		Time Share Usage	<u>3500</u>	<u>0</u>
50000	3900	11000	Total Data Management		90600	71300
MEETINGS						
<u>268000</u>	<u>268000</u>	<u>0</u>		Joint Meeting Commission, Scientific Committee	<u>288000</u>	<u>305000</u>
268000	268000	0	Total Meetings		288000	305000
PUBLICATIONS						
<u>84100</u>	<u>84100</u>	<u>0</u>	Total Publications		<u>92900</u>	<u>87000</u>
SCIENTIFIC COMMITTEE						
<u>63500</u>	<u>63500</u>	<u>0</u>	Total Scientific Committee		<u>84800*</u>	<u>145100</u>
SECRETARIAT COSTS						
13500	13500	0		Administration	13500	14300
78400	70000	8400		Allowances	84700	207600
4000	4000	0		Automobile	4000	4200
20500	20500	0		Communication	22000	23300
2000	2000	0		Incidentals	3000	3100
2200	2200	0		Library	3000	3100
17200	17200	0		Office Requisites	19400	20600
5900	5900	0		Premises	6300	6600
411100	400000	11100		Salaries	422600	456200
<u>18600</u>	<u>18600</u>	<u>0</u>		Travel	<u>20000</u>	<u>21200</u>
573400	553900	19500	Total Secretariat Costs		598500	760200
1039000	1008500	30500	Total Expenditure		1154800	1368600

* In addition to this amount a sum of \$A38,600 has been authorised to be drawn from the Norwegian Contribution Special Fund to meet the total Scientific Committee Program of \$A102,100.

**BROCHURE AND PLACARD ON THE AVOIDANCE OF INCIDENTAL MORTALITY
OF ANTARCTIC MARINE LIVING RESOURCE**

TEXT OF BROCHURE

MARINE DEBRIS - A POTENTIAL THREAT TO ANTARCTIC MARINE ANIMALS

Worldwide there is growing evidence that substantial numbers of birds, marine mammals, fish and other marine organisms are being caught and killed in lost and discarded fishing gear and other debris, and dying due to ingestion of plastic bags, and other types of foreign substances thrown into the sea.

2. Compared to other regions of the world, the level of fishing and other human activities in the Antarctic has been low and the problem of marine debris is relatively less critical. But it is known that lost and discarded fishing gear and other rubbish dumped overboard from ships have entangled Antarctic animals.

WHAT IS MARINE DEBRIS AND WHERE DOES IT COME FROM?

3. By definition, marine debris is any object of wood, metal, glass, rubber, cloth, paper, plastic, etc. that has been lost or discarded in the marine environment. Depending upon the kind of debris, it may float at the surface, be suspended at mid-depths or sink to the sea floor. Ocean currents eventually carry much of the floating debris ashore.

4. Almost all human activities contribute in some way to the marine debris problem, but because of the low level of other activities in Antarctica commercial fisheries are the principal sources. They contribute both fishery-generated and crew-generated debris. Fishery-generated debris refers to gear such as nets, pots, traps, setlines, etc. which is accidentally lost while fishing. Crew-generated debris includes worn or damaged fishing gear, such as pieces of net webbing, that is deliberately discarded at sea along with a variety of convenience items and packaging materials such as bottles, cans, bags, boxes, etc.

5. Once released into the ocean, floating debris tends to be accumulated by natural processes along lines of convergence between discrete water masses, at the core of major current gyres, or on beaches. Because the release of debris is associated with human activity, it tends to be most concentrated around important fishing grounds, along well-travelled shipping corridors, or near major ocean dumping sites. In many cases, these areas overlap particularly important habitats for large numbers of seals, seabirds and other marine animals.

6. Thus, it is important to note that debris is not distributed randomly at sea but is often concentrated in the very areas that are of particular importance to marine animals.

PLASTICS – A SPECIAL CASE

7. Plastics are perhaps as great an environmental threat to marine animals as all the other kinds of debris combined.

8. At least two factors affect the relative danger posed by synthetic debris – chemical composition and physical configuration. In the past thirty years, plastics and related synthetic material have been used increasingly in maritime industries to produce all types of everyday items. Some of the most desirable properties of synthetic materials – their low cost, light weight, durability, and great strength – also make the articles more likely to be discarded, less likely to sink, longer lasting once discarded or lost, harder for marine organisms to escape from once entangled, and less likely to be digested or eliminated once ingested.

9. A shift from the use of natural fibres to synthetic fibres for the construction of nets and other fishing gear has resulted in commercial fisheries becoming a large contributor to plastic pollution. The conversion from degradable natural fibres to virtually non-degradable synthetic fibres began in the 1940s and by 1970 was complete for most of the major fishing nations. Although the exact amount of fishing gear lost and discarded at sea each year is unknown some investigators estimate that it could exceed 100 000 tonnes.

THE MECHANISM OF IMPACT ON MARINE ANIMALS

10. Direct threats to marine life appear to be relatively uncomplicated and mechanical. Animals that become entangled may drown, have their ability to catch food or avoid predators impaired, incur wounds and infections from the abrasive or cutting action of the debris, or have their normal behaviour patterns altered in ways that place them at a survival disadvantage.

11. For marine mammals, lost and discarded gill nets, trawl nets, and packing bands probably pose the greatest threat due to their capacity for entangling and trapping animals in webbing or loops.

12. Lost or abandoned fishing nets also pose risks to fish. Entire driftnets and trawl nets are not uncommonly lost or abandoned at sea. These ‘ghost nets’ continue to ensnare fish for years after they are lost.

13. Seabirds can also become entangled in lost and discarded nets drifting at the sea surface, but the threat is thought to be small compared with losses due to entanglement in active gear. Probably a greater threat to seabirds is proposed by small plastic particles floating at the sea surface. This debris is ingested by seabirds and fish which may be unable to distinguish between normal prey items and small pieces of floating plastics. These items can cause blockage of the intestine or ulceration of the stomach lining.

WHAT CAN BE DONE IN ANTARCTICA TO AVOID THE PROBLEM?

14. Because marine debris is a global problem, it will ultimately require the efforts of all countries to solve it. The persistent nature of synthetic fishing gear and plastic convenience articles and the threat they pose to marine animals requires that special attention be given to their use and handling.

15. Following are some suggested ways to help combat the marine debris problem.

- Retain net fragments and all other potentially harmful debris for disposal at ports outside Antarctica.
- Take on board the minimum amount of nondegradable products for the crews. Where possible, make use of recycling stations. For ports without such facilities, encourage authorities to provide them.
- Supply vessels with bulk containers for drinks and other products to better control and manage their disposal.
- Make maximum use of available technology to relocate and retrieve nets and other fishing gear in order to minimise their loss. If possible, bring ashore for disposal at ports outside Antarctica any derelict fishing gear you find at sea. If derelict gear cannot be brought ashore, dispose of it in a responsible manner by rendering it incapable of catching or entrapping fish and other marine organisms.
- If plastics, including fishing gear, have to be discarded at sea to protect life or safety, render them where possible incapable of entangling marine life.

16. In the end, it will be the actions of individuals that will determine the success or failure of any program aimed at reducing marine debris. Every time someone throws overboard a piece of torn or worn-out webbing, fish line, six-pack yoke, styrofoam cup, or almost any other object, it adds to the

problem. Even the simple act of cutting a strapping band before discarding it will prevent it from ever becoming a 'choke collar' around the neck of a seal or some other unfortunate animal.

TEXT OF PLACARD

AVOIDANCE OF INCIDENTAL MORTALITY OF ANTARCTIC MARINE ANIMALS

[Country] is a Member of the Commission for the Conservation of Antarctic Marine Living Resources and together with the other Members has accepted responsibility for the conservation of the Antarctic marine ecosystem. In accordance with that responsibility you are required to conduct your activities in Antarctic waters in a manner which minimises the impact on the marine ecosystem.

Marine debris is harmful to marine animals. To reduce the incidental mortality of marine animals caused by debris:

**DO NOT DUMP PLASTIC ITEMS, INCLUDING FISHING GEAR
AND PACKAGING MATERIALS, INTO THE SEA.**

**RETAIN ALL NON-DEGRADABLE GARBAGE, ESPECIALLY
PLASTIC MATERIALS, FOR DISPOSAL AT PORTS OUTSIDE
ANTARCTICA.**