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REPORT OF THE SEVENTEENTH SESSION OF THE COORDINATING WORKING PARTY ON FISHERY STATISTICS

Hobart, Tasmania, 3-7 March 1997

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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PREPARATION OF THIS REPORT

This document is the Report of the Seventeenth Session of the Coordinating Working Party on Fishery Statistics (CWP), held in Hobart, Tasmania, 3-7 March 1997.

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ABSTRACT

The Report of the Seventeenth Session of the Coordinating Working Party on Fishery Statistics (CWP), Hobart, Tasmania, 3-7 March 1997, is presented. Major topics discussed were: improvement of the reliability of catch statistics; reporting of national fishery statistics on electronic media; exchange and dissemination of statistics; STATLANT issues; harmonization among agency databases; nationality of catch; major fishing area boundary modifications; catch, bycatch and discard issues; requirements for fishing fleet statistics; aquaculture statistics; conversion factors; handbook of fishery statistics; and landing value statistics. Further consideration was given to the implications for fishery statistics resulting from international initiatives of relevance to the CWP, i.e., the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, the FAO Compliance Agreement, the Code of Conduct for Responsible Fisheries and the Kyoto Declaration and Plan of Action. The South Pacific Commission and the International Whaling Commission were admitted as participating organizations of the CWP.

Distribution:

FAO Fisheries Department
FAO Regional Fishery Officers
FAO Member Countries
CWP Members
Participants

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OPENING OF THE SESSION AND ADOPTION OF AGENDA
(Agenda item 1)

1. The Seventeenth Session of the Coordinating Working Party on Fishery Statistics (CWP) was held at the Headquarters of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Hobart, Tasmania, from 3 to 7 March 1997. Twenty- four experts representing the following member or observer organisations participated:

- Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR);
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT);
- Comisión Permanente del Pacífico Sur (CPPS)
- Food and Agriculture Organization of the United Nations (FAO);
- International Commission for the Conservation of Atlantic Tunas (ICCAT);
- International Council for the Exploration of the Sea (ICES);
- International Whaling Commission (IWC)
- Northwest Atlantic Fisheries Organization (NAFO);
- Organisation for Economic Co-operation and Development (OECD);
- South Pacific Commission (SPC);
- Statistical Office of the European Communities (Eurostat)

The list of Participants is in Appendix 1.

2. The Chairman of the Sixteenth Session, Dr P. Miyake of ICCAT, opened the Seventeenth Session and invited Dr E. de Salas, Executive Secretary of CCAMLR, to address the meeting. Dr de Salas welcomed participants to Hobart and said that CCAMLR was very pleased to host this Session, particularly as it was the first time CWP had met since its reconstitution in 1995. The Chairman noted that its was very appropriate that, following the extension of its remit to areas beyond the Atlantic, CWP should meet for the first time in the southern hemisphere.

3. The Agenda as adopted is shown in Appendix 2. The documents provided to the Session are listed in Appendix 3 and the acronyms used in the report are listed in Appendix 4.

APPOINTMENT OF CHAIRMAN
(Agenda item 2)

4. Following nomination for Chairman by CCAMLR and seconded by NAFO, Dr Peter Miyake was reelected as Chairman for the Seventeenth Session of CWP. Various participants acted as rapporteurs for different agenda items.

CHANGES IN MEMBERSHIP OF THE CWP
(Agenda item 3; Document CWP-17/3)

5. SPC and IWC had applied to become participating organisations of CWP. Copies of their applications and supporting background information were sent to CWP participating organisations for their review in July 1996 and, following consultation, it was decided to defer decisions on admission until the Seventeenth Session. Both applications received the requisite approval from at least two-thirds of participating organisations (i.e. six or more votes). The Chairman welcomed SPC and IWC as new participating organisations of CWP.

REVIEW OF RECOMMENDATIONS FROM CWP-16
(Agenda item 4; Document CWP-17/4)

6. The new Statutes as accepted by NAFO and ICES in 1994 were recommended by the Sixteenth Session of CWP for adoption by other CWP organisations. All CWP organisations subsequently

subscribed to the new Statutes and CWP was consequently reconstituted in 1995. (See FAO Fisheries Circular No.903, The Coordinating Working Party on Fishery Statistics: Its Origin, Role and Structure).

7. Due to changing priorities and limited resources, FAO has suspended plans to develop a database for catch data which would distinguish catches taken within EEZs from those taken on the high seas. Likewise, the proposal to develop a world fishery data inventory is not being pursued, although a proposal to develop a world inventory of fisheries is under consideration.

8. The intended purpose of requesting regional fishery organisations to provide lists of vessels operating on the high seas was to validate the records of vessels authorised to fish on the high seas as provided for in the Compliance Agreement. As this Agreement has not yet come into effect, no request for such lists of vessels has so far been made.

9. The Code of Conduct for Responsible Fisheries was adopted by the FAO Conference in October 1995. The Code contains several references to the need for reliable data and Section 7.4 specifically deals with data gathering and management advice. Draft management guidelines on Fisheries Management and Aquaculture also stress the importance of having reliable data.

10. FAO has abandoned plans to further develop the data inputting software (CATCHINP) and will instead concentrate on encouraging countries to report data in the electronic format used by Eurostat (or a variant of this) or in any electronic format provided it is well defined by the reporting office.

11. Agencies have yet to review the species lists included in the STATLANT questionnaires and establish appropriate hierarchical group categories.

12. No countries have been officially approached about the usefulness of continuing the STATLANT 47 inquiries. It would be helpful to make available the historical data set so that the countries can properly evaluate the full set of data. STATLANT 47A and 47B data up to 1988 are available in computer files derived from the ICSEAF database, but these need to be entered into a database so that trends can be examined. It would be desirable to do this and update the database with more recent data and make the full set available to the coastal States in the former-ICSEAF area for evaluation.

13. Annual exchanges of data take place between FAO and ICCAT, but a comprehensive check for discrepancies have not been undertaken by any agencies during the inter-sessional period.

14. Eurostat has obtained methodological reports from most of its statistics providers.

15. ICES prepared a paper for the Seventeenth Session of CWP on the effect of misreporting on the perception of the state of stocks and the use of survey data in the assessment procedure where catch data are unreliable. ICCAT has estimated the magnitude of misreporting for the major species using trade data in order to minimise the degradation of stock assessments as well as to enforce management regulations. A paper on this was prepared for the CWP.

16. NAFO revised its Pilot Observer Program in 1996, requiring 100% coverage of vessels fishing in the Regulatory Area. In addition to their inspection activity, these observers were asked to carry out such scientific work based on the advice of the Scientific Council. The observers check the catch composition with the recorded catch in the logbook.

17. FAO has modified the instructions for completion for all relevant FISHSTAT NS and STATLANT questionnaires to request the inclusion of recreational and subsistence catches. Historical

recreational data have been requested from countries and available data have been included in the database (e.g. for tunas and salmon, and European inland waters).

18. The fishery fleet statistics programme of FAO has been seriously disrupted following the abolition of the post responsible for this work. Some of the work has been assumed by another post but the data screening and updating has been seriously delayed and fleet statistics for years since 1992 have not been disseminated. Nor has it been possible to review the vessel classification system.

19. Considerable progress has been made by FAO on extending the time series of aquaculture production back to 1950, and it is planned to completely disaggregate the total fishery production statistics into capture fishery and aquaculture production components during the next year. At the time of the Sixteenth Session of CWP, extended time series of total fishery production statistics for 1950-1969 had been developed for fish, crustaceans, molluscs and some miscellaneous aquatic animals. Since then, three additional groups of species have been added, namely (1) aquatic plants, (2) pearls, corals and sponges, and (3) aquatic mammals. The only species for which extended time series are not yet available are the crocodiles and alligators.

20. Loss of the post concerned with maintaining the database on conversion factors has meant a suspension of all work in FAO on conversion factors. However, it is intended to publish the review of conversion factors for processing on board vessels and on shore, which was undertaken by a consultant, and funds have been allocated for this in 1997. EU/Eurostat has undertaken a major review of conversion factors used in EU countries which has assembled many factors not previously reported.

21. Additional staff resources within Eurostat have permitted a revision of the existing Handbook chapters and the drafting of additional chapters. Significant advances have been made and the drafts have been circulated to CWP participants for review and comment.

22. FAO plans to have the economic data needs for fisheries management considered at several meetings (e.g. the APFIC Joint Working Party on Fishery Statistics and Economics which will meet in August 1997, and the GFCM Working Party on Fisheries Economics and Statistics which will meet in September 1997).

23. FAO is planning to start collating value data for capture fishery production, probably with the request for 1997 statistics. Such data are already collated for aquaculture production. Once a database for capture fishery production in terms of quantity has been established, a component for production in terms of values will be added.

MODIFICATIONS TO AGENCY PROGRAMMES IN FISHERY STATISTICS
(Agenda item 5; Documents CWP-17/5A - H)

CCAMLR

24. At the 15th meeting of the CCAMLR , a significant increase in the number of new fisheries was proposed by CCAMLR Members. Traditionally, the majority of fishing has taken place in areas 48 and 58, concentrating in subareas 48.1, 48.3 and 58.5. Five notifications of intent to initiate new fisheries in 1996/97 have been proposed by the following CCAMLR Members, Australia, New Zealand, Norway, Republic of Korea/United Kingdom and South Africa.

25. CCAMLR-XV (1996) introduced a number of conservation measures in association with the proposed new fisheries. These include controls on fishing gear, by-catch limits, the requirement for 100% observer coverage on all new fisheries and regular recording and reporting of catch and effort data.

26. Importantly, for the new fisheries, fishing should take place over as large an area as possible to obtain the information necessary to determine fisheries potential and to avoid concentration of catch and effort. This includes the requirement that fishing is controlled by limiting the catch that can be taken to a 'fine-scale' grid area, defined as 0.5° latitude x 1° longitude.

27. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), since its inception in 1982, has kept the status of seabird and marine mammal by-catch under periodic review. In order to evaluate the potential impact of fisheries on seabird populations, in 1984 the Commission asked its Members to maintain records and report the number, species, and where appropriate the age, size, sex and reproductive status of all birds taken incidentally during fishing operations. As a next stage of this development, the requirement to report seabird and marine mammal by-catch was introduced to all fisheries in the Convention Area. The programs of Scientific Observers on board commercial fishing vessels also includes observations on seabird and marine mammal by-catch.

28. As part of its continuing efforts to minimise seabird mortality in longline fisheries, CCAMLR has recently published an educational book for fishermen, "Fish the Sea Not the Sky", which explains how to avoid by-catch of seabirds when fishing with bottom longlines. The book is a colour publication with many photographs and illustrations. The message of the book is simple and succinct; if you do not try to avoid catching birds, your fishery will not only be less cost-effective, but it may be put under threat of closure if no solution to this problem is found.

29. The book describes techniques recommended by CCAMLR on the reduction of seabird by-catch, but is not limited by them. Some of the ideas and innovations described in this book still need to be extensively trialed at sea. A single universal method which prevents all birds from feeding on longline baits had not yet been invented. However, by using the available techniques in combination with each other the number of birds killed can be greatly reduced.

30. As the greater proportion of incidental mortality of seabirds breeding within the CCAMLR Convention Area is caused by fisheries operating outside the Convention Area, there is an urgent need for international cooperation. CCAMLR has directed its Secretariat to contact the appropriate fisheries management authorities and fisheries organisations, covering waters adjacent to the CCAMLR Convention Area, as well as the FAO and UN, to exchange information on the status of Antarctic seabird populations affected by longline fisheries, including incidental catches of seabirds, CCAMLR's experience with mitigation techniques and the formulation of conservation measures. As part of the information exchange, CCAMLR is especially interested in information on the steps taken by other organisations in addressing the topic of incidental mortality of seabirds associated with fisheries, especially longline fisheries (see also paragraph 136).

CCSBT

31. The representative from the Commission for the Conservation of Southern Bluefin Tuna advised that the Convention for the Conservation of Southern Bluefin Tuna came into force in May 1994 with the Commission's Secretariat being established in May 1996. Prior to the establishment of the Commission, the Commission's current members, Australia, Japan and New Zealand cooperated in research in and management of the southern bluefin tuna fishery. To date Commission members have been responsible for the collection of fishery data for the fishing activities and landings within their national jurisdictions. Data are exchanged between members for the purpose of undertaking stock assessments and developing management recommendations. There is no central data base at this stage and the Scientific Committee of the Commission is assessing the longer term data collection and management needs of the Commission for consideration at the next meeting of the Commission in September 1997.

CPPS

32. The CPPS, founded by the Santiago Declaration on 18 August 1952, was established for the management of the 200 mile coastal zones. The CPPS was initially established with Chile, Ecuador and Peru as member countries, and Colombia became a member in 1979.

33. The objectives of the Commission are (i) the coordination of maritime policy at regional level, (ii) the management of marine resources, (iii) conservation of the marine environment, (iv) the promotion of scientific investigation and marine technology, and (v) the enhancement of cooperation in the commercial sector.

34. The 10th Meeting of the CPPS (Peru, December 1968) adopted the following Resolution No. 13: "that Chile, Ecuador and Peru develop their basic fishery statistics in common conformity, with a view to preparing fishery statistical summaries for all three countries".

35. In 1969 CPPS published "Estadísticas Pesqueras Basicas de 1967", containing data for Ecuador, Peru and Chile. The publication "Resumen de las Estadísticas Pesqueras de 1968" was issued in 1970, and contained marine fishery statistics for Ecuador, Peru and Chile for the period 1953-1968. Other documents published in 1969 and 1970 include data on (i) monthly and annual catches; (ii) annual production; (iii) annual exports; and (iv) export values.

36. A CPPS/FAO Workshop for the Standardisation of Fishery Statistics in the Southeast Pacific . This workshop established the technical criteria for the contents of a regional fishery statistical bulletin, including the standardisation of the fishery statistics to be published therein.

37. In 1991 a Workshop on the Standardisation of Fishery Statistics and Fishery Statistical Evaluation Methods was held in Ecuador, at which the following were agreed: (i) the creation of a Coordinating Working Party on Southeast Pacific Fishery Statistics; (ii) the criteria for statistical validation methods; and (iii) improvements in the statistical bulletin.

38. In 1996 the Bulletin No.6 was published, containing statistics for 1993.

Eurostat

39. The Eurostat representative reported that all of its requirements for catch, landing and aquaculture production statistics are now covered by EU legislation which apply to EU Member States, Iceland and Norway. Fishing fleet statistics are compiled using extracts from the European Commission's administrative file of fishing vessels. The completion of the FAME data-base and an increase in the staff resources allocated has permitted a resumption of the publication programme and of other projects that had been suspended (for example, the work on the detection of discrepancies between international data-bases). Collaboration with other CWP agencies has remained central to Eurostat's programme of fishery statistics and has been reinforced by, for example, the holding of sessions of its Working Group "Fishery Statistics" with those of the ICES Statistics Committee.

FAO

40. No major changes were reported for the FAO fishery statistical programme of world catches, aquaculture, and fishery commodities. The databases were expanded and improved in various ways, e.g. revising catch statistics of ISSCAAP group 38, migrating the fishery commodities to a new UNIX environment, and extending the aquaculture production statistics before 1984. Work on food balance sheets for fishery products was reinstated and the work on the prototype database for the high seas fishing vessels records completed. Work on methodological aspects of aquaculture production statistics was in progress and guidelines were developed for holding aquaculture censuses in countries were the sector is important and expanding. Based on the 1993 revised UN System of National

Accounts, work started on guidelines for national statistical offices on establishing a system of economic and social accounts for fisheries and aquaculture. Other statistical work, notably that related to fishing fleets lagged behind due to resource constraints.

41. Progress was achieved in the electronically supported dissemination of data, with main statistical series now available as packages with software for retrieval and analysis. A software system for processing and storing sample-based data for artisanal fisheries was prepared and tested in several developing countries.

42. CWP noted that food balance sheets statistics calculated by FAO are lacking in many aspects. It would be desirable that the concepts utilised for the calculations should be appropriately explained in the introduction, and that nutritional data should be presented without decimal figures. Norway noted that its fishery supply calculated from food balance sheets are grossly biased in view of the lack of information on stocks and in the uncertainty of conversion factors applied to export data for the calculation of the live weight equivalent. It informed CWP that work has been in progress for one year to estimate accurately fish consumption on the basis of households surveys.

43. In acknowledging the above problems, and the necessity to improve its data and make more transparent the basis of the calculations, FAO noted that its work on food balances is mandatory as it is the basis for much of the assessment work on food security.

ICCAT

44. In 1996, the ICCAT started the collection of shark by-catch data from tuna fisheries in the Atlantic Convention area (see CWP-17/14.D). The major problems associated with tuna statistics are the unreported catches made by the fishing vessels of non-Contracting Parties. The ICCAT has started estimating the catches of these unreported catches through trade data. For bluefin tuna trade, the ICCAT has implemented the ICCAT Bluefin Tuna Statistical Document Program since 1993, the details of which are reported in CWP17/7.E.

45. In 1996, ICCAT created a new software package, TUNASTAT, which contains nominal annual catches of tuna and tuna-like species, by country, gear, species, and region (i.e. ICCAT Task I data). The base for TUNASTAT is updated frequently (5 times in 1996) and it is now planned to post it on WWW in the near future. Also during 1996, ICCAT developed CATDIS, a user friendly software with a data base of catch by species, quarter, country, gear (longline, purse seine, baitboat and other gears), and by 5° x 5° grid area. In this base, the detailed catch data, which are only partial, were extrapolated to the total catch and hence the data base covers the entire Atlantic (and Mediterranean) catches of major tuna and tuna-like species. The data covers the period from 1950 to 1994. The data base is updated only once a year and the ICCAT is also planning to make it available through Internet.

46. Efforts to minimise the discrepancies in statistics between the ICCAT and FAO catch data bases for tunas are continuing although CWP noted that the program to compare the two databases has not been applied in last few years. Some countries have updated the historical data in one database but not in the other, thus introducing discrepancies. It would be desireable for ICCAT to run the comparison program once every two years to minimise such discrepancies.

ICES

47. ICES maintains a database containing the STATLANT 27A data back to 1973. In collaboration with EUROSTAT, ICES also provides a forum for consultation between the national statistical offices which provide the data and the scientific community which uses the data for stock assessment.

48. Some improvement in the timeliness of reporting noted in 1995 was not maintained in 1996. In spite of this, all but two countries had reported their 1995 STATLANT 27A data by the end of 1996. In addition, outstanding data for the years 1989-1992 were provided by Spain. After a gap of several years, work was therefore resumed on the publication of further issues of "ICES Fisheries Statistics". A continuing concern has been the occurrence of underreporting and misreporting in a number of fisheries. To avoid duplication of effort between CWP agencies, it had been decided to discontinue the compilation of aquaculture statistics.

49. Although there are uncertainties about the reliability of the official catch statistics for some fisheries, it was pointed out that there is a need for data agreed by the appropriate national authorities for fishery management purposes (e.g. quota allocation). Discrepancies between official and revised data, moreover, are not universal and in general the official data are considered to be sufficiently precise for scientific purposes. ICES therefore compiles the official data as a service to its member countries and the Regional Fisheries Commissions and for use by the scientific community.

50. ICES carries out a check on the validity of the STATLANT 27A data, for example by identifying errors resulting from incorrect area or species allocation. In addition, the Working Groups carrying out stock assessments often make their own revisions to the data based upon additional information. While recognising the importance of reliable catch data, CWP considered that validation is a particularly difficult process and stressed the need to provide as much information as possible on the basis for data revisions. Only with the provision of such information can the national reporting offices improve the reliability of the data they provide.

IPTP/IOTC

51. Fourteen parties have now acceded to IOTC which had its first meeting at FAO headquarters in Rome in December 1996. In that meeting, it was decided to host the headquarters in Seychelles. Issues which remain to be decided include budget, scale of contributions, the modality of appointment of the Secretary and some elements of the internal regulations. These elements will be decided at a special meeting in March 1997. IPTP has been extended until the end of 1997 and will continue the task of collation and diffusion of tuna data for the Indian Ocean. It is hoped that IOTC will be operational by that time.

IWC

52. The Schedule to the 1946 Whaling Convention provides measures to govern whaling throughout the world and includes catch limits for all the large baleen whales and sperm whales. The Schedule requires the following details of catches of these species be submitted to the IWC: numbers taken, species, length, sex and position as well as boat details and effort data.

53. A recommendation from the Whaling Committee of ICES was adopted by the Council in 1929 requesting the Norwegian Government to organise a central institution to collect statistics from the whaling industry throughout the world. This led to the establishment of the Bureau of International Whaling Statistics, which from 1930 to 1984 collected the data published in 94 volumes of the International Whaling Statistics (IWS). The compilation and publication of the whaling statistics were thereafter transferred to the Secretariat of the International Whaling Commission.

54. The IWC published volumes 95 and 96 of IWS in 1988 to complete the records up to the introduction of the zero catch limits for commercial whaling in 1986. Statistics from the aboriginal subsistence hunts, catches under special permit for scientific research, and under objection to the ban on commercial whaling continue to be collected for future publication in the same format.

55. The IWC Secretariat is undertaking a major project to create a database containing as many records of individual catches as possible taken during the past century. The information includes species, sex, length, date and position of capture and almost two million records have been entered so far. The data for the period since 1945 are virtually complete although a major problem concerns reports by scientists from the former USSR that much of the old Soviet data was extensively falsified. Any revisions which are made to data in the database are always annotated within the database. The data are held primarily for use by IWC scientists, in particular for use in stock assessments and in connection with development and support of the new and revised management procedures for regulating commercial whaling, but they are open to any interested parties. Data on catches taken in the previous year are published in annually in the Report of the International Whaling Commission.

56. The IWC is currently developing a Revised Management Procedure and Scheme for setting commercial catch limits which involve measures for setting quotas by small areas and improving the observer scheme and methods of reporting catch statistics.

57. In addition the IWC attempts to collect as much data from directed and incidental takes of small cetaceans as it can obtain from its Contracting Governments and the members of its Scientific Committee. The data are often subject to revision and to overcome this problem the IWC now annually publishes tables of catches for the past three years in the Report of the International Whaling Commission. The tables contains details of both known and estimated, target and by-catches of small cetaceans. The tables are very incomplete for several reasons: the unreported catches made by fishing vessels of non-Contracting parties; the lack of recording of by-catches and the refusal of some nations to report statistics to the IWC as they consider it has no jurisdiction over small cetacean matters.

58. The IWC is also compiling databases of records from dedicated sightings surveys for stock assessment purposes, and of whale marking tag and recapture data, and maintains a register of whaling vessels.

59. The distinction between small and large whales was questioned and whether some species might not fall into either category. The IWC confirmed that all species were included. A second question referred to the problems caused in computer software by the fact that cetaceans and crocodiles are alone in being reported in the FAO statistics by number rather than by weight. The IWC said records of oil and other products for commercial catches of large whales were reported in the IWS and could be supplied to the FAO. No such figures exist for small cetaceans and values could only be approximated using an average weight for each species.

NAFO

60. The NAFO statistical database had been stored in Dbase III Plus format. During summer 1996 the data were transferred into WINDOWS 95 - ACCESS format. This will permit NAFO to supply data to the users in a wide variety of formats.

61. NAFO is pleased to announce the special issue of the NAFO Journal of Northwest Atlantic Fishery Science (Volume 20 of September 1996) titled 'North Atlantic Fishery Management Systems: A Comparison of Management Methods and Resource Trends' by R. G. Halliday and A. T. Pinhorn. This issue contains an excellent synthesis of historic and current information that CWP members would find quite valuable. This and other publications are listed in the NAFO Working Paper.

62. The NAFO Pilot Observer Program was revised, with its adoption by the Fisheries Commission for 1996, requiring 100% coverage of vessels fishing in the Regulatory Area. These observers in addition to the inspection activity were asked to carry out such scientific work based on the advice of Scientific Council.

63. The Pilot Project for Satellite Tracking was only partially implemented in that, while many Contracting Parties have installed appropriate equipment on their vessels, the Secretariat was not currently tasked to process and transmit those data to Contracting Parties with patrol vessels in the Regulatory Area. A Working Group on the Pilot Satellite Project called to deal specifically with the development of appropriate infrastructure. Each Contracting Party whose vessels fish or plan to fish a minimum of 300 days per year in the Regulatory Area shall require 35% of its vessels fishing in the Regulatory Area to be equipped with an autonomous system above to transmit automatically satellite signals to a land based receiving station permitting a continuous tracking of the position of the vessel by the Contracting Party of the vessel

64. The Scientific Council noted that access to STATLANT data on the INTERNET via the WWW was an important topic and the Scientific Council agreed that it would be preferable for the NAFO Secretariat to create and maintain an independent WWW site rather than participate in a collaborative effort with other agencies, and, recommended that the NAFO Secretariat prepare a report on technical and financial considerations in creating and maintaining a WWW site for statistical data, for consideration at the June 1997 Meeting of the Scientific Council.

65. In general it was agreed that for the Northwest Atlantic area, the NAFO STATLANT 21B data represented the most up-to-date and the most finalised data. However, FAO publications are usually produced well before the NAFO 21B data are finalised at NAFO. These problems and other discrepancy difficulties noted during the 1993 reconciliation need to be reviewed. NAFO proposes that such a review exercise between NAFO and FAO, should be undertaken soon.

SPC

66. The SPC Oceanic Fisheries Programme and Coastal Fisheries Programme are concerned with research and statistics on tuna fisheries in the western and central tropical Pacific and the coastal fisheries of SPC members, respectively. Standardised catch and effort logsheets for longline, pole-and-line and purse-seine tuna fisheries were developed with the South Pacific Forum Fisheries Agency (FFA) in December 1995, and subsequently introduced to the Pacific island SPC/FFA members. Procedures for releasing aggregated catch and effort data to external scientists were streamlined. New port sampling programmes have been established in Papua New Guinea and Tonga, while programmes in New Caledonia and Palau have been strengthened with additional samplers. The observer component of the South Pacific Regional Tuna Resource Assessment and Monitoring project (SPRTRAMP), funded by the European Commission and implemented by SPC, continued to progress. The Oceanic Fisheries Programme (OFP) Technical Report No. 34, "Bycatch and discards in the western tropical Pacific tuna fisheries: a review of SPC data holdings and literature," was published. The formats of the quarterly SPC Tuna Bulletin and the SPC Tuna Fishery Yearbook were substantially revised. New tuna fisheries database systems were developed for French Polynesia and Western Samoa.

Selected national reports:

Australia

67. Information was presented on the Australian Fisheries Statistics Working Group (FSWG). Australian Fisheries Statistics (AFS) are published annually by the Australian Bureau of Agricultural and Resource Economics (ABARE). Exchanges of data between the contributing agencies and the Bureau are guided by the FSWG which comprises State and Commonwealth data managers. The FSWG has devised guidelines for the collection of fisheries statistics, minimum data requirements for national statistics for recreational fisheries and aquaculture; and protocols for data exchange. It is currently working to improve the AFS by addressing completeness (inclusion of all industry sectors in estimates of total production), data duplication, timing and collation processes; and standardising price

estimating procedures among the States. The FSWG is also addressing some of the less technical, but no less important, issues associated with fisheries information such as confidentiality of data e.g. the legal issues associated with the acquisition of data by non-research agencies such as the Taxation Department; and the effects that the perception of lack of confidentiality might have on data quality.

Canada

68. Information was presented on the fisheries statistics collection scheme for the east coast of Canada. The Department of Fisheries and Oceans (DFO) is the collecting authority and there are a number of regional offices. Reporting of statistics to DFO is accomplished through submission of landing vouchers and vessel logbooks. Landing vouchers must be submitted by fish processing plants which purchase fish from independent harvesters or which harvest for themselves. In addition, under condition of license, vessels greater than 35 feet are required to complete and submit a logbook . Verification of the logbook data is possible through an observer program which requires catch information to be recorded on an individual tow basis for both directed and by-catch species. Certain fisheries have had 100% observer coverage of fleets since 1987 but coverage in general has been very intense of all fisheries. In addition, as a management regulation, a dockside monitoring program operated by an independent contractor was implemented to verify landings of fishing companies.

INTERNATIONAL INITIATIVES OF RELEVANCE TO THE CWP
(Agenda item 6; Document CWP-17/6)

69. The number of international initiatives concerning fisheries management and the high level at which they have been made, indicates increased concern for the state of world fisheries and the need to improve current fisheries management approaches. Of particular relevance to statistics, is the incorporation of the precautionary approach in the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Code of Conduct for Responsible Fisheries, which should lead to greater incentives to collect reliable fishery data.

UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks

70. At its Sixteenth Session, CWP reviewed the Draft Agreement at that time under consideration of the UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, in particular Annex 1, Minimum Standards for Collection and Sharing of Data. CWP stressed the importance of having minimum standards specified in the Agreement in a document which was issued to the Fifth Session of the Conference (New York, 27 March - 12 April 1995) on 27 March as United Nations General Assembly Document A/CONF.164/INF/13 in all UN official languages. CWP noted with satisfaction that its submission had helped to have Annex 1 retained as an integral and binding part of the Agreement.

71. Thirty instruments of ratification or accession are required for the Agreement to come into force, and so far there are nine. Once in force, implementation of the Agreement will be subject to periodic review with inputs provided by States, FAO, regional fishery organisations, IGOs and NGOs (UN General Assembly Resolution A/RES/51/35). CWP may have a role in coordinating the reviews by fishery agencies of implementation of those provisions of the Agreement relating to fishery statistics and data.

FAO Compliance Agreement

72. Twenty five acceptances are required for the Agreement to come into force. So far ten acceptances have been received.

73. Article VI of the Agreement requires Parties to exchange information on vessels authorised by them to fish on the high seas, and obliges FAO to facilitate this information exchange. FAO has developed a prototype database, the High Seas Vessels Authorisation Record (HSVAR) for this purpose, and this prototype was demonstrated to CWP at the Sixteenth Session. In October 1995, a Circular State Letter (G/FI-24/PR) was sent to all States which had accepted the Agreement informing them that FAO had developed a prototype database and requesting those States to provide data on vessel authorisations to facilitate testing. FAO could grant access to the prototype database to countries providing data so that feedback can be obtained from potential users. So far two States (Canada and the USA) have provided such authorisation data and over 600 vessel records are in the database.

Code of Conduct for Responsible Fisheries

74. In the Report of its Sixteenth Session (paragraph 79), CWP noted with satisfaction that the draft Code of Conduct for Responsible Fisheries then being developed, placed emphasis on the need for reliable data as a basis for effective fisheries management and policy making, and recommended that this need be fully recognised in the final Code and in the associated Guidelines. The Code of Conduct for Responsible Fisheries was subsequently adopted on 31 October 1995 by the FAO Conference at its Twenty-eighth Session and reflected partly these concerns.

75. Paragraph 4.2 of the Code states that FAO will monitor the application and implementation of the Code and its effects on fisheries and that all States and relevant international organisations, whether governmental or non-governmental should actively cooperate with FAO in this. CWP may have a role in coordinating the reviews by fishery agencies of implementation of those provisions of the Code relating to fishery statistics and data.

Kyoto Declaration and Plan of Action

76. At the International Conference on the Sustainable Contribution of Fisheries to Food Security (4-9 December 1995, Kyoto, Japan), 95 States adopted a Declaration and Plan of Action which emphasised the need for regional cooperation and to increase efforts to estimate the quantities of incidental catches.

IMPROVEMENT OF RELIABILITY OF CATCH STATISTICS

(Agenda item 7; Documents CWP-17/7A - G)

77. Catch statistics are a fundamental requirement for fishery management and fish stock assessment. There are many reasons leading to unreliability in these statistics which were discussed in the Sixteenth Session of CWP. A major contributor to problems in catch statistics in recent years has been the increasing restrictions placed on fisheries, which leads to distortions in reported landings in order to circumvent regulations. CWP discussed ways in which these problems may be alleviated.

Observer Programmes

78. Most records of landings or catch are obtained at the point of landing. This is the simplest and cheapest way of acquiring the data. However, at the point of landing, the recorder relies on the vessel to accurately report details of catch and effort. This may not always be forthcoming. A means of overcoming this problem may be to send observers on fishing vessels so that information can be recorded directly by the observer during fishing operations. This can facilitate the accurate recording of vessel position, catch and effort. It may also enable the recording of other data, such as details of discards and unwanted by-catch which would not normally be available at the point of landing.

79. A number of agencies reported observer programmes which have been implemented in their areas. NAFO has a 100% coverage of vessels fishing in its Regulatory Area. This programme is intended principally for the purposes of inspection and regulation. However, the programme also facilitates the collection of scientific data and general principles are laid down for the activity of observers.

80. CCAMLR has a system of scientific observers established under Article XXIV of its Convention. The purpose of this observation system is to gather or validate scientific data required for assessments. The scheme is not intended to verify compliance which is achieved under the System of Inspection.

81. A number of other participants also reported observer schemes. These included SPC, ICCAT and the Australian national authorities. Often these observers are required by coastal States as a condition for foreign flagged vessels to operate in their waters. As with some of the schemes mentioned above, these observers are usually present for the purposes of ensuring compliance, but they often serve as means of collecting scientific data. In the case of ICCAT for example, these observers may obtain essential data on juvenile tunas which would not normally become available. IATTC manages an observer programme with complete coverage of the eastern Pacific tuna fishery.

82. CWP recognises the great value observer programmes can bring to the collection of good quality data, particularly for those parts of the catch not normally landed, and recommends that wherever appropriate, observer programmes should be implemented. Observers can also be utilised for additional purposes such as the collection of biological data. It has to be recognised, however, that such programmes are costly and that they do not preclude the requirement for adequate catch statistics programmes based on recording landings.

Vessel Monitoring Systems (VMS)

83. Hitherto, the monitoring of fishing vessels has relied on the use of surface ships and aircraft by enforcement agencies. This is a very expensive means of monitoring and generally leads to a very low level of control. Recent developments in satellite and information technology has provided an opportunity to monitor vessels more or less continuously at comparatively low cost. There are potentially very large gains to be made in enforcement and the collection of data useful for stock assessment. Both NAFO and the EU reported satellite surveillance programmes. It was noted that FFA is currently testing VMS systems for eventual implementation in the tuna fisheries of its member countries.

84. The EU has run trials of vessel monitoring systems using different technologies. The main problems had been due to system failure and poor transmission of data between member States. However the trials were regarded as successful and all EU vessels over 24m length overall will be required in principle to implement a VMS by the year 2000. In the NAFO area a VMS has been introduced which at present is required for 35% of vessels of Contracting Parties which plan to spend more than 300 vessel days per year fishing in the Regulatory Area.

85. The implementation of satellite vessel monitoring systems is still at an early stage and it is not yet clear how successful they will be. It seems very likely, however, that data on fishing position will be greatly improved, though it is less clear the catch data will necessarily be enhanced. CWP believes that these systems are likely to improve the reliability of data and should be encouraged. CWP also considers that it is desirable to establish at an early stage standards for the transmission of data. CWP recommends that existing codes and standards be used where these apply, such as the 3-alpha codes for species.

86. CWP was informed that a working group established by NEAFC was developing standards on information and codes (in Edifact-like format) to be used by fishing vessels reporting at sea.

Sample Surveys

87. Artisanal fisheries present particularly difficult problems in the collection of catch and effort statistics as the number of vessels involved are usually large and the landing sites numerous and inaccessible. There are standard techniques for dealing with these fisheries basically relying on survey methods. FAO reported the development of a number of software packages based on these standard techniques which can be applied to artisanal fishery statistics programmes. The software is flexible and should be applicable to a wide range of examples. One potential advantage of the packages is that they are supported centrally by FAO and therefore offer a means of long term support and maintenance, a feature often lacking in bespoke systems developed under short term aid projects.

88. CWP supports the development of the FAO statistics-gathering software which, when complete, should offer a powerful suite of programmes for the maintenance of a fishery statistics system. It is important to note, however, that there is no substitute for careful consideration of the data requirements and purpose of the data collection system before implementing the software package.

Fishery-Independent Data

89. Catch data collected from a fishery may be subject to a variety of biases. These may be a feature of the fishery itself (such as difficulties in recording discards) or the result of deliberate distortions due to misreporting etc. In stock assessment it is recognised that it is essential to supplement fishery dependent data with fishery independent data. This helps to complement and correct some of the difficulties in commercial catch data.

90. In September 1996, the NAFO Scientific Council hosted a Workshop on Assessment of Groundfish Stocks Based on Bottom Trawl Survey Results. The Council noted the increased importance of abundance estimates from research survey data for fish stock assessment. A NAFO Studies publication (available from the NAFO Secretariat) contains a meeting overview and a complete workbook describing assessment methodology.

91. ICES reported a method to overcome problems of severe catch misreporting using research vessel survey data. The method uses age-disaggregated data from the survey to obtain an index of the catch each year. Assessments using this method gave substantially different interpretations of the state of some stocks. However, it was clear that the survey data were imprecise and it was difficult to determine whether the unbiased survey-based assessments were superior to the biased but more precise conventional assessments.

92. The estimation of missing components of the reported catch can sometimes be overcome by the examination of trade statistics. ICCAT reported a successful scheme to obtain estimates of bluefin tuna catches from vessels of non-contracting parties. This scheme requires that all tuna imported into ICCAT member countries (e.g. Japan as the principal market) are validated by a statistical document which provides the details of capture.

93. The ICCAT scheme is successful because the main country concerned is prepared to participate in the programme and the fish concerned are of high value and are easy to monitor. Trade statistics may not always prove so successful since they are frequently not designed to be used in the context of fishery control.

94. There may be other ways of detecting problems with catch data. Both SPC and Norway/EU reported investigations which examined discrepancies in data sets. The Norway/EU study was

successful in reconciling most differences between control data and official statistics, by examining the records for individual vessels. SPC's investigation of discrepancies revealed errors in recording and statistical procedures which could be corrected.

95. CWP recognises the importance of fishery-independent data and recommends that methods to utilise such data should be investigated when substantial biases in catch data are known to occur.

Non-Compliance of Fishing Vessels

96. Vessels flagged by countries which are not contracting parties to a regional fishery agreement may not comply with the conditions of the agreement, and as a consequence the reporting of data may be adversely affected. Where possible it is desirable to try to reach agreement with non-contracting parties to comply with the agreement. ICCAT reported problems with vessels flying flags of convenience (e.g. Belize, Honduras and Panama) which did not comply with the ICCAT convention. The parties of ICCAT have agreed to implement non-discriminatory trade measures against countries which fail to comply with the convention.

REPORTING OF NATIONAL FISHERY STATISTICS ON ELECTRONIC MEDIA
(Agenda item 8; Documents CWP-17/8A - B)

97. Eurostat reported that the EU legislation established formats for the submission of catch (equivalent to STATLANT A and B formats) and landing statistics by national authorities. Most of the Member States used these formats for the submission of data on diskette or as ASCII file attachments to e-mail messages. FAO said that it believed that the Eurostat STATLANT A format, with the possible addition of two extra fields to cover the unit and value for submissions of value data, was to be recommended to national administrations for the submission of their data.

98. CWP agrees that submission of national data on electronic media should be strongly recommended but that, with the exception of STATLANT data submitted to more than one agency, the development of harmonised formats was less important. CWP agencies are generally prepared to modify their processing procedures to accommodate variations in national submissions.

99. It was also recognised that national administrations should not be constrained by rigid coding instructions. The administrations should be encouraged to submit data in as disaggregated a form as possible, even when it results in data items that do not correspond with existing groupings in international data-bases. CWP agencies should also hold national data in their data-bases in a form as near as possible to the level in which they were submitted, even though they might normally be aggregated in the agencies' publications.

EXCHANGE AND DISSEMINATION INFORMATION AND STATISTICS BY AGENCIES
(Agenda item 9; Document CWP-17/9A - D)

100. Eurostat reported that budget cut-backs have resulted in a requirement that the volume of hard-copy publications be substantially reduced and that a maximum effort be made to obtain income from the supply of data. This had prompted a study of the policies of CWP agencies on the dissemination of catch data in traditional formats (hard-copy, computer diskettes and tapes). It revealed a general agreement, both from the agencies and from the national sources of the data, that STATLANT data are to be considered in the public domain. Furthermore, although data were invariably supplied free of charge by the agencies to the national authorities of contracting parties and to the requesters of small volumes of data, agencies reserved the right to recover the cost of processing requests for large volumes of data. Some agencies required information on the use to be made of the data supplied and an assurance that the source of the data would be cited. The advent of the WWW has necessitated a review by the agencies of their policies with regard to the dissemination of data.

101. FAO reported that its publication budget has also been severely reduced and that there is a requirement for statistical yearbooks to contain more summarised data than previously. Summary fisheries data were available through the WAICENT WWW site. Up to 500 data items can be extracted at a time free-of-charge. There is no limit on extractions if an annual subscription of US$ 1200 is paid. However, the FAO Fisheries Department has an ftp site from which fisheries software packages, with their corresponding data-bases, may at present be downloaded free-of-charge.

102. NAFO reported that its Scientific Council had requested the Secretariat to investigate the establishing of a WWW site for the dissemination of fisheries data. The site would be opened within the next few months.

103. ICES stated that it already had a presence on the WWW but that the fisheries data content has yet to be developed. The policy towards the dissemination of data through the WWW has still to be formulated, though ICES believed that it has a responsibility to provide a data dissemination service to the fisheries community.

104. ICCAT disseminates its tuna statistics free of charge in a software package, TUNASTAT, developed in collaboration with FAO, as well as CATDIS which includes more detailed data. Within the next few months it would also open a WWW site which would make available for consultation a wide range of tuna catch and effort data. There was no intention of charging for access to this service.

105. CCAMLR and IWC reported that they were both investigating the possibility of opening WWW sites, at least for the dissemination of summary data. SPC will be developing a WWW site during 1997, either on an internal server or at an external site. SPC will commence disseminating annual catch statistics on CD-ROM in June 1997.

106. Eurostat said that its plans for the dissemination of data on the WWW were closely associated with the MARSOURCE project. This project, agreed by the 1995 G7 summit in Halifax and led by the European Commission (DG XIV), proposed to make available a wide range of fisheries information and data on the WWW. At present Eurostat's contribution would be limited to approximately that contained in its Yearbook of Fishery Statistics. However, at a later stage, this might be extended to cover the contents of Eurostat's FAME data-base on fishery statistics. ICES said that it had agreed to collaborate in the MARSOURCE project and that this collaboration would probably take the form of links between the MARSOURCE (http://www.marben.be/marsource) and ICES WWW sites.

107. CWP notes that the WWW offers greatly enhanced possibilities for the dissemination of fisheries data, confirms its belief that STATLANT catch data should be in the public domain and

considers that they should be made available at as low a cost as possible. CWP believes that the regional agencies should be responsible for the dissemination of their data, both to ensure that the user is made aware of the constraints associated with the data and that the data disseminated should be the most recent available.

STATLANT ISSUES
(Agenda item 10; Documents CWP-17/10A - C)

108. NAFO reported that the STATLANT 21B questionnaire is being modified to include a code for a new twin trawl that was being utilised in the Div. 3M shrimp fishery. Also the current NAFO definition of fishing effort for gillnets (fixed) in STATLANT 21B forms will be changed to reflect soak time and, accordingly, the definition of the fishing effort measures for gillnets (fixed) will be changed to read 'length of net expressed in 100 metre units multiplied by the number of soak days per haul'. In addition, there is a need to review definitions of fishing effort for several other passive gear types. CWP requests NAFO to report to the next CWP Session on the outcome of the review in order that CWP can continue to seek harmonisation of effort definitions amongst agencies.

109. EUROSTAT reported that there were two instances where confidentiality of STATLANT data became an issue. In these instances the individual fishing companies were identifiable from the data. EUROSTAT suggested that in instances such as these specific ones, the data could be accepted, for example by the catches and species but not reporting the country.

110. FAO, recognising that CWP coordinates the STATLANT A (annual catch) and B (monthly catch and effort) data for many fishing area, and observing that the A data are essential while the B data in some regional organisations are not utilised, undertook a review of the usefulness of B data for areas 34, 37 and 47. A consultant's study focusing on 34B was presented. It was noted that despite extensive gaps in coverage by certain countries and some inconsistencies and other shortcomings, the scheme provides data which are potentially useful for stock assessments. FAO invited CWP to review this study and consider the usefulness of undertaking similar reviews of other STATLANT-type schemes for other areas.

111. CWP received comments from the regional organisations as follows:

- ICES which had discontinued the compilation of 27B data for practical reasons of completeness and timeliness, re-affirmed the importance of disaggregated catch and associated effort data and continues to collect and use those data for assessment purposes.
- NAFO continues to recognise the importance of 21B data.
- CPPS collates and publishes statistics from the STATPAC 87A questionnaire which is just like a STATLANT A form. It does not use a B form, but effort data are available from other sources in countries of the region.
- SPC does not use STATLANT forms, but instead monthly total catch and effort figures are estimated from fishing logbook data.
- IPTP and the subsequent IOTC, as well as ICCAT, do not use STATLANT forms. Instead disaggregated catch and effort data have been collated by 5° x 5° or 1° x 1° grid areas.
- IWC also does not use the STATLANT system but collates effort data for commercial fisheries for large whales. Almost no data are available for small cetacean catches.
- CCAMLR utilises STATLANT B type data to a greater extent than the A data.

112. In general CWP agrees that STATLANT B or other catch and effort data are useful and encourages the collection of such data. With respect to the reviews of B questionnaires being undertaken by FAO, CWP supports these and suggests that consideration should also be given to using simplified B type data. FAO will work through GFCM on 37B data and evaluate its usefulness. EUROSTAT and FAO arranged for the recovery of the ICSEAF STATLANT 47A and 47B data up to 1986. EUROSTAT offered to now update the database for the 47A data and will look at the possibility of updating the 47B data.

HARMONISATION AMONG AGENCY DATABASES
(Agenda item 11; Documents CWP-17/11A - B)

113. A number of explanations for discrepancies were identified and these include:

- Inconsistency between agencies as to whether aquaculture production statistics are included. A review of historical data series on aquaculture is currently being carried out under the auspices of FAO and FAO expects to be able to separate aquaculture and capture production in the near future.
- The different timing of publication related to the requirements of each agency. FAO, for example, publishes what are often preliminary estimates of catch within a few months of the end of each calendar year, whereas most of the regional agencies delay publication until the final data have been submitted. For this reason, some agencies prefer to use data from the regional agencies as they are likely to be the most accurate. Although FAO data for the most recent year are often preliminary, they are updated in subsequent issues of the Yearbook of Fishery Statistics.

114. The methods used for reconciling discrepancies differ to some extent between agencies, but in general this is done by discussion and agreement on a bilateral basis. Most differences can be resolved in this way but some outstanding problems often remain. Revisions made to databases are normally recorded on paper but it was recognised that this should now be done wherever possible within the computerised database together with an explanation of the basis for, and date of, the revision.

115. It was noted that FAO often has data that are not available to the regional agencies because they come from non-contracting parties of those agencies. The importance of maintaining two-way communication between agencies was therefore noted.

116. For those agencies, like FAO, that need to make estimates of catches for some countries, it was felt that it is generally safer to use the previous year's catches than to base them on elaborate models designed to detect trends.

117. Discrepancies between the data compiled and published by the different CWP agencies are a continuing cause for concern and CWP recommends that programmes to identify and correct discrepancies should be undertaken regularly.

118. CWP recommends that reconciliation exercises for the Northeast and Northwest Atlantic be undertaken as soon as possible. It was noted that ICCAT will shortly be able to supply ICES with revised tuna statistics to incorporate in the STATLANT 27A database. This will need some further discussion, however, as the ICCAT data are recorded on a 5° x 5° or 1° x 1° grid area basis and not by ICES statistical areas.

NATIONALITY OF CATCH
(Agenda item 12; Document CWP-17/12)

119. In spite of the clear statements made at previous CWP sessions, an increasing number of instances of ambiguous or incorrect recording of the nationality of catches have been identified and this problem appears to be becoming more serious. This is closely associated with the growing incidence of joint ventures both at the national and private company level.

120. The situation is further complicated by the insistence by some countries to record joint venture catches within their own EEZs under their national catches regardless of the flag of the vessels concerned, and by the requirement to record exchanges of quotas under the country providing the quota and not under the flag country of the vessels concerned. In the view of CWP this tends to distort the catch statistics and confuses requirements for statistical and management purposes.

121. In accordance with the provisions of the UN Agreement on Highly Migratory Stocks and Straddling Stocks, it was accepted that it is the flag State that has the responsibility of monitoring and reporting the activities of its vessels wherever they may operate. CWP accordingly reaffirmed its belief that the flag of the vessel catching the fish should be the overriding factor in deciding the nationality of the catch. Only in very clear circumstances, for example when a vessel is operating under documented charter by the country concerned, should the catch be recorded under the nationality of that country.

122. The basis for reporting of catches was set out in the Report of the Tenth Session of the CWP and is repeated below for convenience:

"The flag of the vessel performing the essential part of the operation catching the fish, should be considered the paramount indication of the nationality assigned to the catch data and this indication overridden only when one of the following arrangements between a foreign flag vessel and the host country exists:

a) the vessel is chartered by the host country to augment its fishing fleet; or

b) the vessel fishes for the country by joint venture contract or similar agreements (as opposed to the ad hoc practice of a vessel selling catches to a foreign vessel or landing catches at a foreign port) and the operation of such vessel is an integral part of the economy of the host country.

When governments negotiate joint ventures or other contracts in which vessels of one country land their catches at ports of another country or unload their catches to vessels of another country and the one of the above-mentioned criteria is applicable, the assignment of nationality to such catches and landings data should be specified in the agreement."

123. CWP now recognises that its definition of nationality of catch may give a false impression in that it suggests that reporting by States other than the flag State is always an acceptable alternative to reporting by the flag State. CWP therefore believes that it should be made quite clear that reporting by the flag State of the vessel concerned is always the preferred option. It was pointed out, however, that changing definitions will not in itself solve the problem. Nevertheless, it was agreed that it is important to remove all sources of ambiguity.

124. CWP therefore reaffirms that, in conformity with the UN Agreement on Highly Migratory Stocks and Straddling Stocks, responsibility for reporting catches lies with the flag nation. CWP recommends that the label (country) under which catches are reported may be designated by agreement between the two countries concerned, but that in the absence of such agreement, the flag country of the vessels making the catch should always take precedence. To facilitate reporting by the flag State, CWP strongly encourages the establishment of reporting arrangements between the countries whose vessels catch the fish and those in whose waters the catches are taken. It was recognised, however, that this presents severe problems for some countries where distant water catches may not be reported to the flag State of the vessels concerned. In such cases, the nations reporting the catches should report catches by vessels of different flag States separately in order to facilitate the detection of double counting or non-reporting.

MAJOR FISHING AREA BOUNDARY MODIFICATIONS
(Agenda item 13; Documents CWP-17/13A - C)

125. The text of the NAFO Convention, Annex III describing the scientific and statistical Subareas, Divisions and Subdivisions was changed to provide four headland names with accurate position coordinates. CWP notes these changes.

126. The 15th meeting of CCAMLR adopted changes to the boundaries between Division 58.5.1 and 58.5.2 in line with the 1982 Marine Delimitation Agreement between Australia and France. CWP notes these changes.

127. It was noted that FAO had in the 1980s proposed a revision of areas in the Pacific Ocean in order that the statistical areas more closely accord with intergovernmental agencies concerned with fishery statistics. In particular, it was proposed that a new Area 74 be introduced to accord with the area of interest of the South Pacific Commission and that Area 71 be revised to accord with the area of interest of SEAFDEC. The proposal has not yet been adopted due to concerns expressed by the Government of Japan. The meeting agreed that, as a general principle, FAO areas should accord with intergovernmental agencies concerned with fishery statistics. It was suggested that revisions of FAO areas in the Pacific could be revisited following the conclusion of negotiations for the establishment of a management organisation or arrangement for tuna fisheries in the central and western tropical Pacific.

128. Discussions have been held at the 10th Session of IOFC and the 24th Session of IPFC on IPTP proposals to modify FAO Statistical Area boundaries in the Indian Ocean. The rationale behind the need for change is that in some cases the boundaries do not coincide with administrative areas used for statistical monitoring by national authorities, nor do they coincide with boundaries used by other regional organisations with competence in fishery statistics, or they bisect important fisheries.

129. Any proposed changes should take into account the following factors:
- Statistical boundaries should not cut through major fishing areas, but should, as far as possible, lie in areas of low fishing intensity;
- Account should be taken of the feasibility and ease of reporting for flag states fishing in the affected areas; and
- It must be possible to recalculate time series into the correct aggregates for the newly defined areas if significant quantities of catch are involved.

130. Proposed changes in relation to four major fishing area boundaries were discussed: (1) between Areas 47 and 51, (2) between Areas 51 and 57, (3) between Areas 57 and 71 and (4) between Areas 57 and 81. CWP recommends adopting these changes, subject to the agreement of national fisheries statistical authorities of the countries fishing these waters and assurances that historical time series can be adjusted. The inclusion of industrial tuna catches in these areas into the appropriate FAO Statistical Area aggregates is possible as data are available by 5° x 5° (and sometimes 1° x 1°) grid areas. Maps showing the proposed changes are provided in Appendix 5.

Areas 47 and 51 off South Africa

131. It is proposed to include part of Area 47 off the South African coast between the current boundary at 30°E and 20°E and 50°S into Area 51. This change would fill the gap between the ICCAT area which extends to 20°E and the IOTC area which is limited to Area 51. Construction of time series of South African line fish catches is possible, as are the catches from other fisheries in ICSEAF Divisions 2.1 and 2.2. A problem exists with respect to catches in ICSEAF Subarea 3.0 which would be bisected, but these catches are small and some may in fact be the result of misreporting. Consultation of alternative sources of information may permit resolution of this issue. This change would facilitate compilation of catch data for ICCAT and not affect the compilation of catch data for CCAMLR

Areas 51 and 57 near India

132. Indian statistics are currently reported by East/West coasts and the current boundary bisects Tamil Nadu State, leading to incorrect Area allocation of the catches in that state. It is proposed to include the area around Sri Lanka into Area 57 by breaking the 80°E boundary eastwards between Areas 51 and 57 at the Equator to 77°E, then northward to the Indian coast. This line coincides very closely with the EEZ median lines between Maldives and Sri Lanka. Sri Lankan catches would have to be reallocated to Area 57. In recent years, the Sri Lankan multi-day fishery has extended partly past the proposed boundary into Area 51. Historically, the volume of such catches are not thought to be significant and, in the future, a newly introduced logbook recording system will provide the necessary Area breakdowns.

Areas 57 and 71 between Australia and Indonesia

133. The current boundary, between Areas 57 and 71, off northern Australia, at 11.5°S, bisects an important tuna longline fishery for which catch location information has only recently become available. It is proposed to move the boundary northwards to 8°S to include this fishing ground in Area 57. The eastern boundary position at 129°E to the Australian coast corresponds with Australian state boundaries (the sea boundary between Western Australia and the Northern Territory follows a line west of 129°E), but bisects a shrimp fishery and a deepwater snapper fishery. CWP suggests that FAO investigates the feasibility of moving this boundary to 130°E, or westward, in consultation with Australia and Indonesia.

Areas 57 and 81 south of Australia

134. It was proposed to move the boundary from 150°E to 141°E so as to align it with the South Australia/Victoria boundary and the boundaries of IOTC and SPC. However, it was recognised that 140°E might be more convenient and so FAO should discuss this issue with the Australian authorities, IOTC and SPC to develop a mutually acceptable solution.

CATCH, BYCATCH AND DISCARD ISSUES
(Agenda item 14; Documents CWP-17/14A - E)

135. The need for data on bycatch and discards has grown in importance in recent years, particularly as the result of international initiatives such as the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Code of Conduct for Responsible Fisheries. All CWP member agencies had progressed in addressing these issues.

136. CCAMLR welcomed the establishment, by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), of the Ecologically Related Species Working Group. In particular, terms of reference of the ERS-WG include the consideration of information on tuna/seabird interactions. CCAMLR has encouraged other Conventions regulating longline fishing, especially ICCAT and the IOTC, to follow the lead of the CCSBT to consider establishing working groups to tackle the problem of seabird by-catch in longline fisheries.

137. It was noted that there was still a need to clarify the terminology used with regard to bycatch and discards. The Technical Consultation on Reduction of Wastage In Fisheries[1] defined the total catch as that quantity taken by the fishing gear and which reaches the deck of the vessel; discards as that portion thrown away at sea; and the landed catch or retained catch as the remainder. The Technical Consultation further subdivided the retained catch into target catch and incidental catch, bearing in mind the volume, value, the incidence of species caught and the nature of the fishing operations. While the present meeting generally accepted the usefulness of these definitions, it noted that in certain fisheries, such as tuna longline and purse-seine fisheries, fish could be discarded before reaching the deck of the vessel or after the vessel had returned to port. The meeting also noted that reference should be made to the condition of the fish discarded, such that live discards are distinguished from dead discards, and that the relative proportions of each will depend on the species and the fishery.

138. While it was recognised that the terms “bycatch”, “non-target species” and “incidental catch” are widely used, it was suggested that for purely statistical purposes these terms were irrelevant, since the usual objective is to estimate total removals of all species in a given fishery.

139. It has long been recognised that operational level catch and effort data submitted by fishers on logbooks were a poor source of data on bycatches and discards. The meeting emphasised that observer programmes were the best means of collecting such data, although it was noted that it was often difficult to achieve the required level of observer coverage due to the lack of human and financial resources.

140. FAO reported that it does not include discards in its fishery production statistics, while ICCAT reported that it includes discards under explicit gear codes (e.g. LLD for longline discards, PSD for purse-seine discards, etc.). It was noted that estimates of discards are usually, but not always, less accurate and less reliable than estimates of retained catch, and that the usage of estimates of discards was usually in a specifically scientific context; hence it may not be appropriate to publish or otherwise disseminate estimates of discards in the same manner as estimates of retained catch. On the other hand, it was recognised that estimates of discards must, where available, be included in estimates of total removals and that estimates of discards for certain species must sometimes be disseminated for political reasons. In any case, it was suggested that when disseminating estimates of discards, there should be a clear indication of the accuracy and reliability of such estimates.

141. The meeting discussed aspects of statistical collection for elasmobranchs. ICCAT now collects estimates of shark catches incidental to tuna fisheries, with a specific form developed for that purpose. Other agencies were encouraged to do likewise. ICES reported that while it had provided information on sharks to the International Union for the Conservation of Nature (IUCN), ICES’ concern with sharks was largely internally driven. It was agreed that FAO was the appropriate body to collate shark data at a global level.

142. It was noted that Resolution Conf. 9.17 of CITES called for cooperation with FAO with regard to the study on the status of stocks and bycatch of shark species. It was also noted that the resolution had led to parallel endeavours by certain agencies, which in turn have led to duplicate requests for information to national governments. It was further noted that certain of the agencies concerned had not been contacted directly by CITES in regard to the Resolution. It was suggested that to be effective and to avoid duplication, the responses to CITES Resolutions need to be actively coordinated.

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[1] FAO. 1996. Report of the Technical Consultation on Reduction of Wastage in Fisheries. Tokyo, Japan, 28 October - 1 November 1996. FAO Fisheries Report No. 547. Food and Agriculture Organization of the United Nations, Rome. 27 p.

143. FAO sought comments on a proposed global inventory of fisheries. Article 36 of the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks provides for review of the implementation of the Agreement four years after its entry into force. Also, FAO is obliged to monitor and report on the implementation of the Code of Conduct for Responsible Fisheries and its effects on fisheries, including action taken under other instruments and resolutions by UN Organizations, in particular, the UN Agreement. In order to undertake any comprehensive review of the implementation of these international initiatives, it would seem essential to have an inventory of world fisheries in order to appraise which fisheries fall within the responsibility of States or regional fisheries management organisations or arrangements, and which ones are not. From the aspect of fisheries data, this could be useful in identifying where major weaknesses exist due to the absence of formal responsibilities, and their real importance, with the aim of directing international efforts for the improvement of data.

144. For a fisheries inventory to be globally operable, it has to be fairly general, because in many parts of the world there have been few fisheries typology studies and a common sense classification is necessary. A simple and workable definition of a fishery could be the definition of a métier given by the IFREMER Workshop on Assessment of Technical Interactions in Mixed Fisheries (Nantes, 1987) as a combination of gear, target species, location and seasonality. Such a scheme may not be feasible for artisanal fisheries, which can in most cases be assumed to occur within the EEZ of the State where the fishing units are based.

145. Such inventories would probably be assembled by national experts using available data, supplemented by estimates based on local knowledge and experience. An example was presented of how such a fisheries inventory might be structured.

146. Some reservations were expressed about the way the proposed inventory was structured, as the same vessels can appear in several fisheries but the linkages are not apparent.

REQUIREMENTS FOR FISHING FLEET STATISTICS
(Agenda item 15; Document CWP-17/15)

147. The European Commission (DG XIV) described how the EU register of fishing vessels was compiled from records of individual vessels received from the national authorities and how it was proving to be a valuable and flexible tool in the administration and monitoring of structural matters and control elements of the Common Fisheries Policy. Eurostat reported that annually it obtained an edited record for each vessel on this administrative register and used these to construct a statistical register. These limited records did not identify individual vessels, but included the essential parameters for each vessel (for example, tonnage, power, length and year of construction) and, with specially-developed software, permitted the compilation of customised statistical tabulations.

148. CWP noted that the EU fishing vessel register is proving to be a valuable and flexible tool in the administration and monitoring of structural matters, fishing effort, decommissioning schemes and control elements of the Common Fisheries Policy.

149. FAO said that, due to limited staff resources and doubts as to the direction in which the work should develop, fishing fleet statistics has been assigned a lower priority. The current FISHSTAT FF questionnaire requested national data according to a number of tonnage, length and power classes, and there were doubts as to the comparability of the different national submissions and as to the use that could be made of the data. It was noted that attention had to be given to the definitions used in fleet statistics and that national authorities experienced problems in assigning vessels to the categories included in the ISSCFV vessel type classification

150. CWP recommends that FAO should review its future fleet statistics programme and consider the feasibility of changing the data structure to accommodate information on individual vessels (which need not be identified), including attributes such as age.

AQUACULTURE STATISTICS
(Agenda item 16; Documents CWP-17/16A - C)

151. Eurostat reported that the production elements of the FISHSTAT AQ questionnaire had been translated into EU legislation, but those elements on the value of production and the structure of aquaculture enterprises had been withdrawn from the original proposal for legislation due to conceptual and technical difficulties encountered by the national authorities.

152. FAO said that due to the appointment of an aquaculture statistician it had been able to increase its efforts to improve the quality of aquaculture data and to separate aquaculture production and catch data. The 15th Session of the Asia and Pacific Commission on Agricultural Statistics recommended to FAO that consideration be given to the inclusion of aquacultural activities in the World Census of Agriculture Programme (WCA 2000) and drafted a Supplement on Aquaculture for inclusion in WCA 2000. This supplement was reviewed by aquaculture experts at a Round Table Discussion at the FAO Regional Office in Bangkok in November 1996 and it was noted that the WCA 2000 Programme would limit the aquaculture content to those activities conducted on agricultural enterprises. It was proposed that the guidelines issued by FAO for the carrying out of the Census should be sufficiently flexible to permit those national authorities wishing to include a more extensive survey of aquaculture to do so.

153. Continuing developments in aquaculture has given rise to doubts amongst aquaculture experts as to the suitability of the definition of aquaculture and, as a result, the definition of aquaculture is under review within FAO.

154. CWP notes that in compiling its Annual Review of Fisheries, OECD requested its national correspondents to include information on the structure of aquacultural enterprises, on the production from aquaculture, on the marketing of aquaculture products and on the national policy towards aquaculture. While the response was not complete, the Annual Review contained useful information to complement the submissions on the FISHSTAT AQ questionnaire.

CONVERSION FACTORS
(Agenda item 15; Documents CWP-17/17A, B)

155. Eurostat reported that conversion factors had been the subject of several studies within the EU and that these studies were primarily motivated by a desire for a greater transparency in the factors applied by national authorities in catch quota monitoring systems and in the compilation of catch statistics. These studies had had access to the conversion factors collected in the latest FAO survey using the FISHSTAT CF1 questionnaire and data from countries which had not responded to the FAO survey. These studies had revealed that many nationally applied factors were of uncertain origin and had often been applied without review for many years. Although there were difficulties in ensuring that identically labelled products were in fact identical, there was sufficient evidence from relatively unprocessed products (for example, fresh gutted fish) to suggest that there are significant differences in the factors being applied by different authorities. There is a growing interest among quota managers in the possibility of harmonising the factors used in a particular fishery. Initially this might involve using the means of the currently used factors, though in the longer term it would be preferable to base any harmonised factors on scientific studies.

156. CWP recommends that Eurostat and FAO amalgamate the conversion factors collected in the course of the various surveys and studies with a view to their publication.

157. CWP was informed that the Russian and Norwegian authorities had been studying the factors in use in the Barents Sea cod fishery and considerable differences had been found. These countries have developed a protocol on agreed scientific methods for estimating conversion factors.

158. The SPC representative reported that his organisation made use of length-length and length-weight conversions for research purposes, as well as weight-weight conversions. Although it was generally believed that a range of environmental, physical and biological factors could affect the conversion factors, a limited study on length-weight conversions for yellowfin tuna suggested that sampling a wide range of sizes might be more important than sampling stratified by year, quarter, longitude and latitude.

HANDBOOK OF FISHERY STATISTICS
(Agenda item 21; Documents CWP-17/18A, B)

159. The Eurostat representative reported that additional staff resources has permitted the revision of existing chapters and the preparation of new chapters of the Handbook. CWP agencies were requested to study the results and to send their comments to Eurostat. The texts would then be finalised and published by FAO. CWP expressed its gratitude to Eurostat for its efforts to up-date and complete the Handbook.

LANDING VALUE STATISTICS
(Agenda item 19; Document CWP-17/19)

160. The scarcity of fishery economic data for management and economic analyses has been repeatedly noted. The Sixteenth Session of CWP recommended that, as a minimum, FAO and other Agencies should give consideration to the collation of landings values at the first point of sale.

161. FAO reported on the work accomplished in preparation to the reintroduction of a systematic collection of value statistics as part of its annual fishery statistical enquiry. Total and unit value of species caught were extracted from available published national fishery statistics, and used to calculate unit values at ISSCAAP group level as weighted averages of national unit values for the most significant species. The aggregates by species group, providing an indicative annual estimate of the value of world catches at the first point of sale, are published in the FAO Yearbook of Fishery Statistics: Commodities.

162. Several problems have been encountered in the compilation of data. There are serious information gaps as many countries, including some of the largest fishing nations, do not publish fishery value data; other countries present their statistics according to subdivisions not easily reconcilable to the catch information provided in the NS 1 reports. In order to improve the basis for its estimate, FAO is therefore planning to request national statistical offices to report value of species caught in an appropriate questionnaire, similarly to what is done in the aquaculture production enquiry.

163. It was noted that the demand for fishery value data is increasing and that methodological aspects of landing value data have never been discussed thoroughly by the CWP. The CWP recommends that the collection of value of landings be included in the next session's agenda and that in the intersessional period agencies give consideration to the standard concepts on the basis of which value data should be reported by national offices. CWP recognises the important contribution that OECD can make in this respect.

FUTURE ACTIVITIES OF THE CWP
(Agenda item 20)

164. CWP notes that its role is likely to become more important following the UN Agreement and Code of Conduct, and with the possibility of further new members of CWP. It also notes that the reconstituted CWP has a more permanent character in that the Chairman is in office between sessions and there is provision for a variety of intersessional activities. This, combined with very effective inter-agency communication through email, should facilitate ongoing intersessional work, such as monitoring the follow-up to recommendations, and not limit work to main sessions as in the past. In addition, there is probably no longer a need for the traditional intersessional consultation to plan the next CWP session, as this can be done by email communication. However, topic-oriented intersessional activities could enhance the work of CWP.

165. CWP recommends that each agency should inform the Secretary of any person, other than the agency contact person, who should be included in the standard email list for the intersessional period.

166. CWP recommends that an intersessional activity on economic data requirements and on methodology for collecting landing value data take place in order to report to the next CWP session. If possible, it would be appropriate for OECD to take the lead in this.

167. CWP recommends that an intersessional activity on elimination of discrepancies in agency databases take place in order to report to the next CWP session.

168. CWP notes that the distribution of documents for the Seventeenth Session by email had generally been very satisfactory, and had resulted in a more timely distribution than ever before. This procedure should be followed in future and care should be taken to protect formatting and reduce the size of attachments. The alternative approach of putting documents on the ftp site should also be repeated.

ANY OTHER BUSINESS
(Agenda item 21)

169. Agencies follow different practices concerning what species groups are included in any total catch figures published (e.g. per country or area). Noting that such totals are used mainly by non-specialist users, CWP believes that for them it is probably most important to keep the composition unchanged from year to year.

170. CWP recommends that the chart presented in the FAO Yearbook of Fishery Statistics showing the various components of the catch, should be reviewed by FAO during the intersessional period in consultation with other CWP agencies.

171.Research vessel catches are not always included in agency total catch statistics and they are not mentioned in any instructions for completion of questionnaires. CWP recommends that this should be remedied by stating that research vessel catches should be included where possible.

172.Noting that the STATLANT Newsletter is useful for communicating news on fishery statistics, CWP commends Eurostat for producing it. A version is also available on the WWW.

ARRANGEMENTS FOR THE 18TH SESSION OF CWP
(Agenda item 22)

173. CWP notes that there are several new international initiatives which may impact on the work of the Working Party. It was agreed that the Eighteenth Session of CWP should be held for five days in early 1999. The Eurostat representative invited CWP to hold its Eighteenth Session at its offices in Luxembourg.

ADOPTION OF THE REPORT
(Agenda item 22)

174. This Report was adopted. Recommendations contained in the report are listed in Appendix 5.

175. The Chairman thanked CCAMLR for its hospitality and for providing excellent meeting facilities. He also thanked the participants who had acted as rapporteurs. Participants expressed their appreciation of the Chairman for his skilful handling of the meeting. The Chairman declared the Session closed.

APPENDIX 1

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APPENDIX 2

AGENDA

1. Opening of Session and Adoption of Agenda
2. Appointment of Chairman
3. Changes in Membership of CWP
4. Review of Recommendations from CWP-16
5. Modifications to Agency Programmes in Fishery Statistics
6. International Initiatives of Relevance to the CWP
   - UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks
   - Agreement to Promote Compliance with Internationally Agreed Conservation and Management Measures by Fishing Vessels on the High Seas
   - Code of Conduct for Responsible Fisheries
   - Kyoto Declaration
7. Improvement of Reliability of Catch Statistics
   - Observer programmes
   - Vessel monitoring systems
   - Possible negative impact of ITQs
   - Sample surveys
   - Fishery-independent data
   - Non-Compliance of Fishing Vessels
8. Reporting of National Fishery Statistics on Electronic Media
9. Exchange and Dissemination of Information and Statistics by Agencies
10. STATLANT Issues
11. Harmonisation Among Agency Databases
12. Nationality of Catch
13. Major Fishing Area Boundary Modifications
14. Catch, By-catch and Discard Issues
    - Terminology
    - Data collection
    - Data handling
    - Elasmobranchs
15. Requirements for Fishing Fleet Statistics
16. Aquaculture Statistics
    FISHSTAT AQ reporting inquiry
    - Definition of aquaculture and culture systems
    - Aquacultural structural data in WCA 2000
17. Conversion Factors
18. Handbook of Fishery Statistics
19. Landing Value Statistics
20. Future Activities of the CWP
21. Any Other Business
22. Arrangements for the 18th Session of the CWP
23. Adoption of the Report

APPENDIX 3

LIST OF DOCUMENTS

Note: All documents are available from the originating agency.

Document No.		
CWP-17/A	FAO	General Announcement
B	FAO	Provisional Agenda
C	FAO	Provisional Annotated Agenda
D	FAO	Provisional List of Documents
E	FAO	Provisional List of Participants
F	FAO	CWP Sessions: Dates, venues, etc.
G	FAO	List of Acronyms
CWP-17/1	FAO	Report of the 16th Session of the CWP (Madrid, spain, 20-25 March 1995)
2	FAO	Report of the CWP Inter-Sessional Consultation (9-10 July 1996, Rome)
3	FAO	Changes in Membership of CWP
4	FAO	Review of Recommendations from CWP-16
5	All Agencies A. NAFO B. Eurostat C. ICES D. FAO E. ICCAT F. SPC G. CCAMLR H. CCAMLR	Modifications to Agency Programmes in Fishery Statistics
6	FAO	International Initiatives of Relevance to the CWP
7	A. FAO B. FAO C. NAFO D. FAO E. ICCAT F. SPC G. ICES	Improvement of Reliability of Catch Statistics
8	A. FAO B. Eurostat	Reporting of National Fishery Statistics on Electronic Media
9	All Agencies A. NAFO	Exchange and Dissemination of Information and Statistics by Agencies

	B. Eurostat C. FAO D. Eurostat	(MARSOURCE)
10	A. NAFO B. Eurostat C. FAO	STATLANT issues
11	A. NAFO B. Eurostat C. FAO	Harmonisation Among Agency Databases (Aquaculture)
12	FAO	Nationality of Catch
13	A. NAFO B. FAO C. CCAMLR	Major Fishing Area Boundary Modifications
14	A. SPC B. NAFO C. ICCAT D. CCAMLR E. FAO	Catch, Bycatch and Discard Issues
15	Eurostat DGXIV	Requirements for Fishing Fleet Statistics
16	A. Eurostat B. FAO C. OECD	Aquaculture Statistics
17	A. Eurostat B. SPC	Conversion Factors
18	Eurostat	Handbook of Fishery Statistics
19	FAO	Landing Value Statistics

APPENDIX 4

LIST OF ACRONYMS

ABARE	Australian Bureau of Agricultural and Resource Economics
AFS	Australian Fisheries Statistics
APFIC	Asia-Pacific Fishery Commission
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CECAF	Fishery Committee for the Eastern Central Atlantic (FAO Regional Body)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CRONOS	Eurostat Database
CPPS	Comisión Permanente del Pacífico Sur
CWP	Coordinating Working Party on Fishery Statistics (formerly Coordinating Working Party on Atlantic Fishery Statistics)
DFO	Department of Fisheries and Oceans (Canada)
EEZ	Exclusive Economic Zone
EIFAC	European Inland Fisheries Advisory Commission (FAO Regional Body)
ERS-WG	Ecologically Related Species Working Group (CCSBT)
EU	European Union
Eurostat	Statistical Office of the European Communities
FAO	Food and Agriculture Organization of the United Nations
FFA	South Pacific Forum Fisheries Agency
FIDI	Fishery Information, Data and Statistics Unit (Fisheries Department, FAO)
FISHDAB	Fisheries Statistical Database (Fisheries Department, FAO)
FSWG	Fisheries Statistics Working Group (Australia)
GFCM	General Fisheries Council for the Mediterranean (FAO Regional Body)
GT	Gross Tonnage
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
IFREMER	Institut français de recherche pour l'exploitation de la mer
IGO	Intergovernmental Organization
IOTC	Indian Ocean Tuna Commission
IPTP	Indo-Pacific Tuna Development and Management Programme (FAO Regional Body)
ICSEAF	International Commission for the Southeast Atlantic Fisheries (ceased: 1990)
ISSCAAP	International Standard Statistical Classification of Aquatic Animals and Plants
ISSCFV	International Standard Statistical Classification of Fishing Vessels
IUCN	World Conservation Union
IWC	International Whaling Commission
IWS	International Whaling Statistics (IWC)
NAFO	Northwest Atlantic Fisheries Organization (previously ICNAF - International Commission for the Northwest Atlantic Fisheries)
NASCO	North Atlantic Salmon Conservation Organization
NEAFC	Northeast Atlantic Fisheries Commission
NGO	Non-governmental Organization
OECD	Organisation for Economic Co-operation and Development
SPC	South Pacific Commission
STACREC	Standing Committee on Research Coordination (of Scientific Council of NAFO)
STATLANT	STATistical Programme for the ATLANTic Fisheries

SEAFDEC	Southeast Asian Fisheries Development Centre
TAC	Total Allowable Catch
WCA 2000	World Census on Agriculture Programme
WWW	World Wide Web

APPENDIX 5

MAPS SHOWING PROPOSED CHANGES TO MAJOR FISHING AREA BOUNDARIES

Figure 1: Possible Modification to Boundary Between Areas 47 & 51

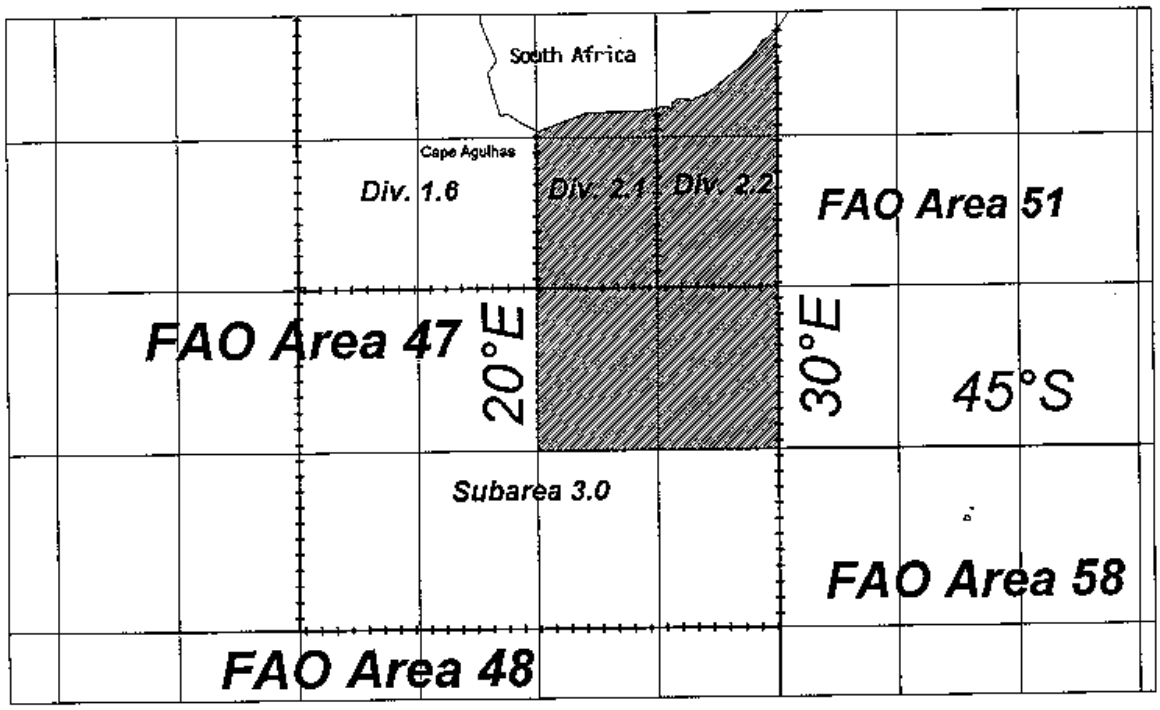


Figure 2: Possible Modification to Boundary Between Areas 51 & 57

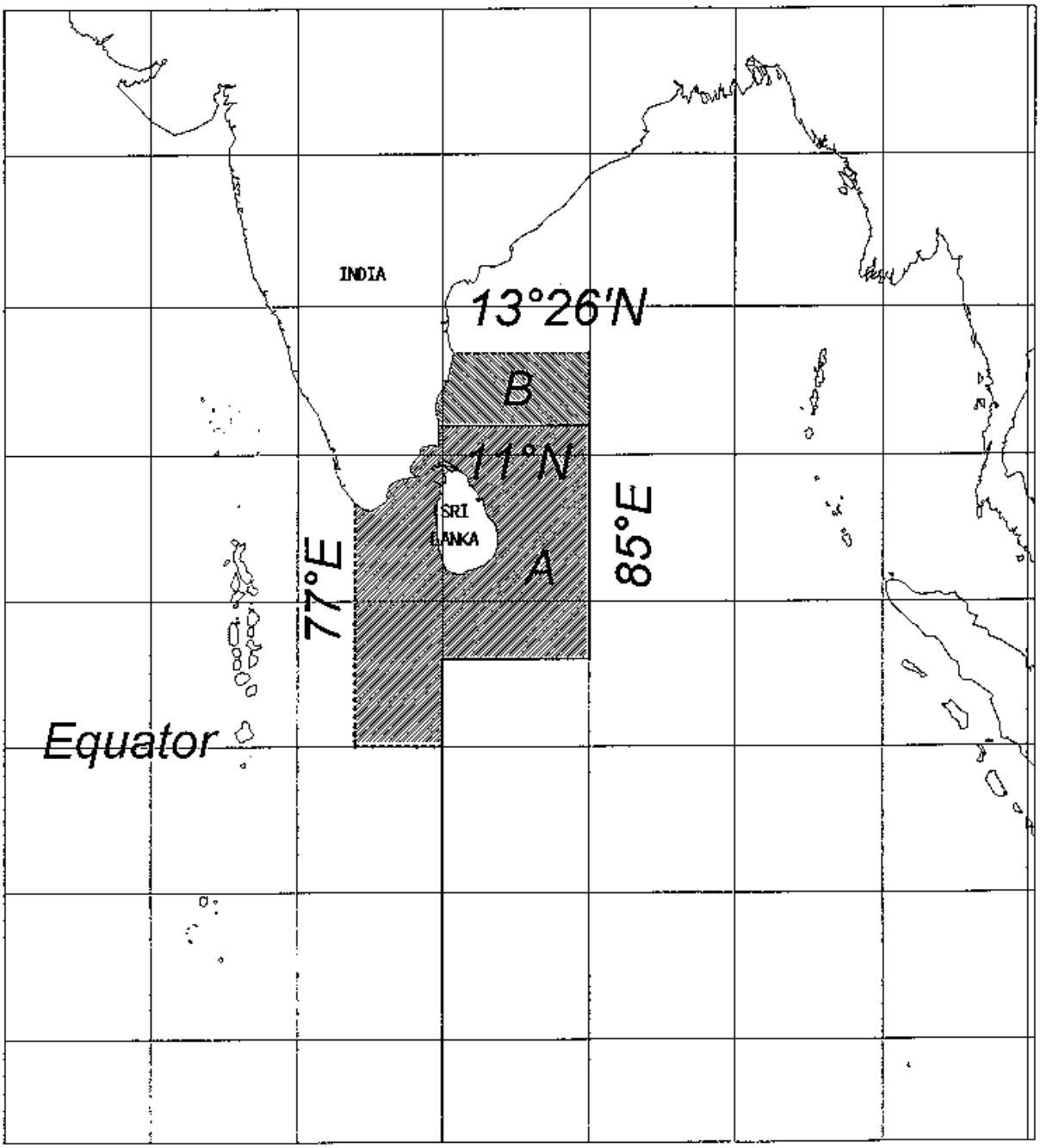
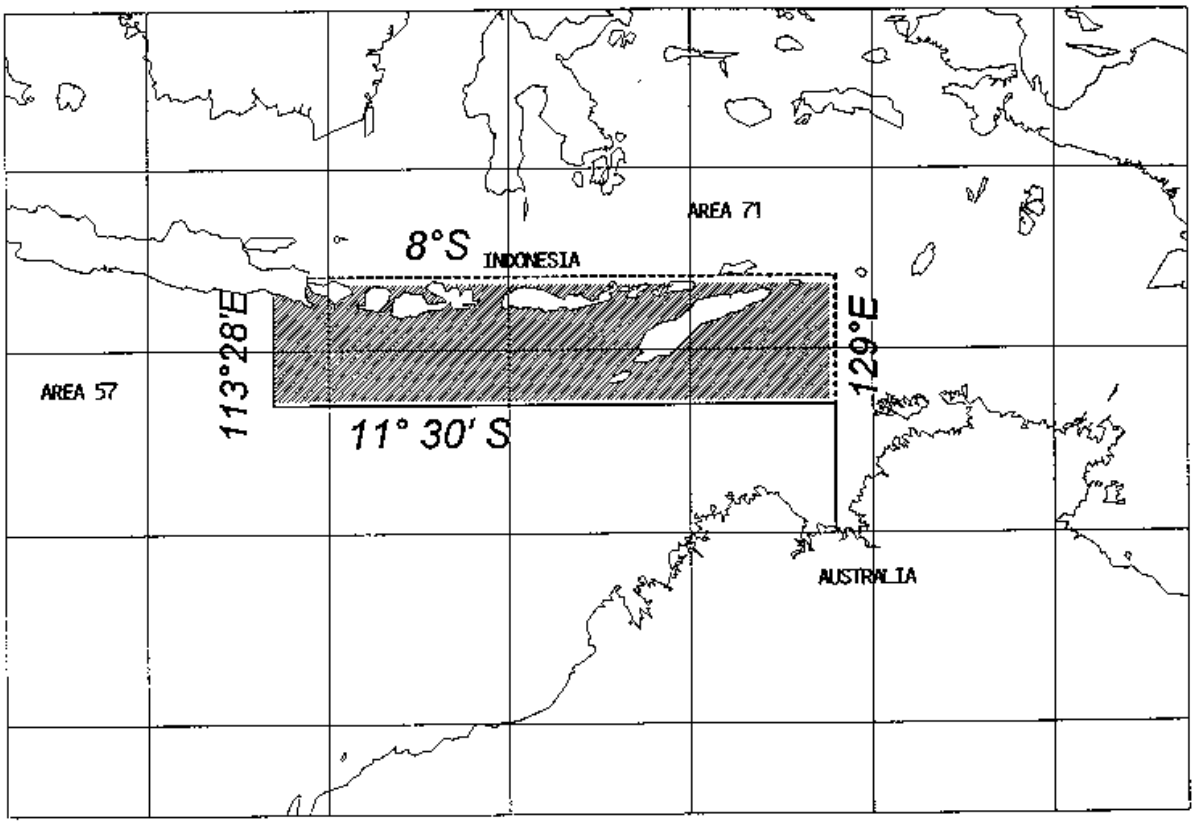


Figure 3: Possible Modification to Boundary Between Areas 57 & 71



APPENDIX 6

RECOMMENDATIONS OR ACTIONS REQUIRED

1. (Para. 82) CWP recognises the great value observer programmes can bring to the collection of good quality data, particularly for those parts of the catch not normally landed, and recommends that wherever appropriate, observer programmes should be implemented. Observers can also be utilised for additional purposes such as the collection of biological data. It has to be recognised, however, that such programmes are costly and that they do not preclude the requirement for adequate catch statistics programmes based on recording landings.

2. (Para. 85) The implementation of satellite vessel monitoring systems is still at an early stage and it is not yet clear how successful they will be. It seems very likely, however, that data on fishing position will be greatly improved, though it is less clear the catch data will necessarily be enhanced. CWP believes that these systems are likely to improve the reliability of data and should be encouraged. CWP also considers that it is desirable to establish at an early stage standards for the transmission of data. Although it is inappropriate at this stage to specify data formats, CWP recommends that existing codes and standards be used where these apply, such as the use of species codes.

3. (Para. 95) CWP recognises the importance of fishery-independent data and recommends that methods to utilise such data should be investigated when substantial biases in catch data are known to occur.

4. (Para. 98) CWP agrees that submission of national data on electronic media should be strongly recommended but that, with the exception of STATLANT data submitted to more than one agency, the development of harmonised formats was less important. CWP agencies are generally prepared to modify their processing procedures to accommodate variations in national submissions.

5. (Para. 99) It was also recognised that national administrations should not be constrained by rigid coding instructions. The administrations should be encouraged to submit data in as disaggregated a form as possible, even when it results in data items that do not correspond with existing groupings in international data-bases. CWP agencies should also hold national data in their data-bases in a form as near as possible to the level in which they were submitted, even though they might normally be aggregated in the agencies' publications.

6. (Para. 107) CWP notes that the WWW offers greatly enhanced possibilities for the dissemination of fisheries data, confirms its belief that STATLANT catch data should be in the public domain and considers that they should be made available at as low a cost as possible. CWP believes that the regional agencies should be responsible for the dissemination of their data, both to ensure that the user is made aware of the constraints associated with the data and that the data disseminated should be the most recent available.

7. (Para. 112) In general CWP agrees that STATLANT B or other catch and effort data are useful and encourages the collection of such data. With respect to the reviews of B questionnaires being undertaken by FAO, CWP supports these and suggests that consideration should also be given to using simplified B type data. FAO will work through GFCM on 37B data and evaluate its usefulness. EUROSTAT and FAO arranged for the recovery of the ICSEAF STATLANT 47A and 47B data up to 1986. EUROSTAT offered to now update the database for the 47A data and will look at the possibility of updating the 47B data.

8. (Para. 117) Discrepancies between the data compiled and published by the different CWP agencies are a continuing cause for concern and CWP recommends that programmes to identify and correct discrepancies should be undertaken regularly.

9. (Para. 118) CWP recommends that reconciliation exercises for the Northeast and Northwest Atlantic be undertaken as soon as possible. It was noted that ICCAT will shortly be able to supply ICES with revised tuna statistics to incorporate in the STATLANT 27A database. This will need some further discussion, however, as the ICCAT data are recorded on a 5° x 5° or 1° x 1° grid area basis and not by ICES statistical areas.

10. (Para. 124) CWP therefore reaffirms that, in conformity with the UN Agreement on Highly Migratory Stocks and Straddling Stocks, responsibility for reporting catches lies with the flag nation. CWP recommends that the label (country) under which catches are reported may be designated by agreement between the two countries concerned, but that in the absence of such agreement, the flag country of the vessels making the catch should always take precedence. To facilitate reporting by the flag State, CWP strongly encourages the establishment of reporting arrangements between the countries whose vessels catch the fish and those in whose waters the catches are taken. It was recognised, however, that this presents severe problems for some countries where distant water catches may not be reported to the flag State of the vessels concerned. In such cases, the nations reporting the catches should report catches by vessels of different flag States separately in order to facilitate the detection of double counting or non-reporting.

11. (Para. 130) Proposed changes in relation to four major fishing area boundaries were discussed: (1) between Areas 47 and 51, (2) between Areas 51 and 57, (3) between Areas 57 and 71 and (4) between Areas 57 and 81. CWP recommends adopting these changes, subject to the agreement of national fisheries statistical authorities of the countries fishing these waters and assurances that historical time series can be adjusted. The inclusion of industrial tuna catches in these areas into the appropriate FAO Statistical Area aggregates is possible as data are available by 5° x 5° (and sometimes 1° x 1°) grid areas. Maps showing the proposed changes are provided in Appendix 5.

12. (Para. 150) CWP recommends that FAO should review its future fleet statistics programme and consider the feasibility of changing the data structure to accommodate information on individual vessels (which need not be identified), including attributes such as age.

13. (Para. 156) CWP recommends that Eurostat and FAO amalgamate the conversion factors collected in the course of the various surveys and studies with a view to their publication.

14. (Para. 163) It was noted that the demand for fishery value data is increasing and that methodological aspects of landing value data have never been discussed thoroughly by the CWP. The CWP recommends that the collection of value of landings be included in the next session's agenda and that in the intersessional period agencies give consideration to the standard concepts on the basis of which value data should be reported by national offices. CWP recognises the important contribution that OECD can make in this respect.

15. (Para. 165) CWP recommends that each agency should inform the Secretary of any person, other than the agency contact person, who should be included in the standard email list for the intersessional period.

16. (Para. 166) CWP recommends that an intersessional activity on economic data requirements and on methodology for collecting landing value data take place in order to report to the next CWP session. If possible, it would be appropriate for OECD to take the lead in this.

17. (Para. 167) CWP recommends that an intersessional activity on elimination of discrepancies in agency databases take place in order to report to the next CWP session.

18. (Para. 168) CWP notes that the distribution of documents for the Seventeenth Session by email had generally been very satisfactory, and had resulted in a more timely distribution than ever before. This procedure should be followed in future and care should be taken to protect formatting and reduce the size of attachments. The alternative approach of putting documents on the ftp site should also be repeated.

19. (Para. 170) CWP recommends that the chart presented in the FAO Yearbook of Fishery Statistics showing the various components of the catch, should be reviewed by FAO during the intersessional period in consultation with other CWP agencies.

20. (Para. 171) Research vessel catches are not always included in agency total catch statistics and they are not mentioned in any instructions for completion of questionnaires. CWP recommends that this should be remedied by stating that research vessel catches should be included where possible.