FAO Fisheries Report No. 316 FIDI/R316

Report of the

TWELFTH SESSION OF THE COORDINATING WORKING PARTY ON ATLANTIC FISHERY STATISTICS

Copenhagen, Denmark, 25 July to 1 August 1984

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

REPORT OF THE TWELFTH SESSION OF THE COORDINATING WORKING PARTY ON ATLANTIC FISHERY STATISTICS

Copenhagen, Denmark, 25 July - 1 August 1984

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
September 1984

M-74
ISBN 92-5-102156-2

PREPARATION OF THIS DOCUMENT

This document is the Report of the Twelfth Session of the Coordinating Working Party on Atlantic Fishery Statistics (CWP) held in Copenhagen, Denmark, 25 July - 1 August 1984.

Distribution:

FAO Fisheries Department
FAO Regional Fisheries Officers
Member Countries
Participants of the Session
CARPAS
CECAF
EUROSTAT
GFCM
IBSFC
ICCAT
OECD
ICES
ICSEAF
NAFO
CCAMLR
IATTC

For bibliographic purposes this document should be cited as follows:

FAO, 1984 Report of the twelfth session of the Coordinating Working Party on Atlantic fishery statistics. Copenhagen, Denmark, 25 July - 1 August 1984. FAO Fish.Rep., (316):60 p.

ABSTRACT

The final formal Report of the Twelfth Session of the Coordinating Working Party on Atlantic fishery Statistics (CWP) held in Copenhagen, Denmark, 25 July - 1 August 1984, is presented. EUROSTAT, FAO, ICCAT, ICES, ICSEAF, NAFO, OECD were the participating agencies. Major topics considered were: review of recommendations and proposals from CWP-11 and progress; agency programmes and publications presenting Atlantic fishery statistics; FAO consultation on global catch statistics; catch and landing statistics - nationality issues; conversion factors; statistics on aquaculture; misreporting of catch and landings data; discrepancies in statistics held in databases; fishing logbooks; glossary of fishery statistics; harmonized format for the transmission of STATLANT data; fishing areas for statistical purposes; fishing fleet statistics; fishermen statistics; landing statistics - quantities and values; socio-economic data; STATLANT system.

CONTENTS

APPENDICES

1. PROCEDURAL MATTERS

1.1 Opening of the Session

The Secretary of the Coordinating Working Party on Atlantic Fishery Statistics opened the 12th Session. He introduced Dr.B.B.Parrish, General Secretary of ICES, who welcomed the participants to Copenhagen on behalf of the host agency. A list of participants is given in Appendix 1.

1.2 Election of Officers

The Secretary proposed the nomination of Ms. K. Paine, Chairman of the ICES Statistics Committee, as Chairman, and Mr. Moller Jensen, Chairman of the NAFO Standing Committee on Research Coordination, as Vice-Chairman. They were elected unanimously.

1.3 Agenda

The Agenda was approved with the addition of two items and is given in Appendix 2. Task forces were established to discuss the harmonized format for the transmission of data and the Glossary of Fishery Statistics. Rapporteurs were assigned for each agenda item.

2. REVIEW OF RECOMMENDATIONS AND PROPOSALS FROM CWP-11 AND PROGRESS

Relevant documents: CWP-12/1, 2 and 3

2.1 The CWP Secretary presented his report listing the various recommendations and proposals made by the CWP during its 11th Session, 21-28 July 1982, Luxembourg.

After reviewing each recommendation and proposal, he summarized the action taken and the degree to which progress has been made.

2.2 The CWP noted that action taken on many of the recommendations and suggested to leave the discussions and comments until each relevant document was analyzed.

2.3 The CWP participants were requested to express their opinion on the currently used procedures to distribute the quarterly computer-printed FAO-ISSCAAP list providing up-dated versions of the species items available in the FAO database. The CWP participants expressed the wish to receive only twice a year the up-datings affecting the list and proposed that the CWP Secretary distribute the list to the participating agencies during the months of March and September.

The CWP proposed that FAO investigates the feasibility of amending the computer programme providing the ISSCAAP list in order to reproduce in future only one fully up-dated list during the first part of the year and one separate list providing exclusively the changes in the second part of the year.

3. AGENCY PROGRAMMES AND PUBLICATIONS PRESENTING ATLANTIC FISHERY STATISTICS

Relevant Documents: CWP-12/4, 5, 6, 7, 8, 9, 10 & 11

3.1 FAO Fishery Statistical Programme and Publications (CWP-12/4)

3.1.1 Since the 11th Session of the CWP there has been further concentration of the fishery statistics work in FAO. This included among other things transfer of responsibility for the preparation of regional bulletins, and of Commodity balance work to the unit concerned with other fishery statistics. Both these changes were seen as likely to improve the consistency of the published data. It was noted that these moves had brought extra personnel but that staff changes overall, since the 11th Session, had led to loss of persons devoted to the dispatch of questionnaires, checking of the returns and the publication of the data.

3.1.2 Further improvements had been made in the capacity to store, process and transmit statistical data. Catch data were now loaded into a host computer at the European Space Research Agency computer and could now be accessed via telecommunication or telex by users all over the world. The fisheries statistical programme is benefiting from the acquisition of a larger computer within FAO which is permitting a much more rapid retrieval of data. A search programme has been in operation since the beginning of 1983 to handle specific requests from users for aggregations of catch data in many other ways than those presented in the Yearbook.

3.1.3 So far as the FAO subsidiary bodies for the Atlantic were concerned the statistical working parties of CECAF and WECAFC had met during the intersessional period and were now beginning to generate improved statistical data from member countries. The GFCM was meeting at the same time as the current CWP session; only CARPAS had been inactive.

3.1.4 In the discussion it was questioned whether the fact that the regional bulletins now contained official data as included in the FAO database might not lead to the loss of more reliable or detailed data brought by scientists to working parties. In any event, it was felt that for example in the case of the Mediterranean more data were available than presently included in the database, these data could be used without embarrassment to its provider, and that its use should be investigated.

It was also commented that the CWP agencies, while normally receiving invitations to the general session of the FAO regional bodies, were not always invited to working parties in which they had an interest and FAO was asked to review either policy or practice in this respect.

3.1.5 The CWP noted that a number of species identification sheets and check-lists had been published by United Nations organizations (particularly FAO and Unesco) and suggested that, although the coverage and aim of these publications did not correspond completely, attention should be paid to co-ordinating these activities.

3.2 EUROSTAT Fishery Statistical Programme and Publications (CWP-12/5)

3.2.1 The EUROSTAT participant, in introducing the report on EUROSTAT's statistical programme, said that recent work had concentrated on improving the quality and range of data on the CRONOS database.

3.2.2 An organizational change within the office and budgetary restraints, while not affecting routine work, had retarded progress in developing computer techniques for detecting discrepancies and updating the database. However, initial work showed that the techniques were promising and should result in a more efficent use of staff resources.

3.2.3 The statistical register of Community fishing vessels was now fully established and a software package had been found that enabled EUROSTAT to meet ad-hoc requests for data from the register.

3.2.4 The publication programme has been changed. A single "Yearbook of Fishery Statistics" replaces two more detailed annual publications and the quarterly bulletin on landings has become an internal publication of the office. These two changes have resulted in a considerable saving of money and the general reader obtains a better overview of Community fisheries. The detailed data are more readily available to expert users through the increased access to CRONOS data via the EURONET computer network.

3.3 OECD Fishery Statistical Programme and Publications (CWP-12/6)

3.3.1 In June 1983, a fishery products trade database was established using the OECD Statistical Information Research and Inquiry System (OSIRIS). OSIRIS is a system for the management, retrieval and analysis of macro-economic statistical information. OSIRIS provides the producers of statistical information with the means to cross-classify information by many criteria and to associate almost unlimited amounts of qualitative information with individual observations, groups of observations, whole time-series or multi-dimensional matrices. The fishery trade data matrix is six-dimensional in that it contains time (1978-82), direction of trade (imports and exports), measure (value and volume), products (according to SITC classification), trade partners and reporting countries (all OECD countries), i.e. almost 50,000 observations for each year.

3.3.2 The Annual Review of Fisheries is being published for the 17th consecutive year, a relatively long time-series. A major review of the content towards a more in-depth coverage of management polices has been implemented. In this context an attempt has been made to provide more comprehensive data of landings, i.e. species composition and values, and trade. As from 1983, the presentation of statistics has changed. Statistics on fishing fleets, fishermen and utilization, which previously appeared as one table for each country, have been compressed to one table each for fishing fleets, fishermen and utilization, making country by country comparisons easier. Also, the structure of the Review has changed and now contains three separate parts. Part I, entitled "General Part", is a summary of major events in the year under review with separate sections on international cooperation, state intervention, utilization, fishing fleets, catch, demand and trade. The summary tables, based primarily on information submitted by member countries, are attached to this Part. Part II is the textual part, containing a review of the fishing sector of each member country for the year under review. Finally, Part III of the publication contains all the statistics pertaining to the country chapters. It is envisaged that this format will make any comparison of statistics much easier.

3.3.3 Initiated by a Mandate of May 1982 from the Council of Ministers, a major undertaking over the last two years has been the study "Problems of Trade in Fishery Products". In short, this study reviews the import and export measures of OECD member countries, analyses their implications on trade and finally, reviews the world supply and demand situation for groundfish, tuna and crustaceans. The study contains a large amount of statistics on production, trade and consumption. It is anticipated that this Study will be finalized for publication at the end of 1984. In this context, the Secretariat has made use of other CWP agencies' publications.

3.3.4 In conjunction with the 51st Session of the OECD Committee for Fisheries held from 30 May to 3 June 1983, an Extended Meeting on Experiences in the Management of National Fishing Zones was convened. This meeting was divided into three sessions. Thirteen papers were presented by experts from both within and outside national governments and of different professions, i.e. law, marine biology, economics, statistics, etc. The three sessions were:

i) Technical Aspects of Quota Management

ii) General Experiences in Fisheries Management

iii) Joint Stock Management and Other International Issues

The papers presented at the meeting, together with a summary entitled "The Sense of the Meeting", were published in April 1984. It is thought that meetings of this kind, which create a forum for the interchange of information and experiences on specific aspects of management, are useful, hence further meetings are anticipated.

3.3.5 In 1984, the "Multilingual Dictionary of Fish and Fish Products" was reprinted with minor corrections. It is anticipated that the Multilingual Dictionary will undergo a major third revision in 1987 and that preliminary work will begin during late 1985. The Secretariat welcomes any comments and suggestions as to the content and presentation of this dictionary.

3.4 <u>ICCAT Fishery Statistical Programme and Publications (CWP-12/7)</u>

3.4.1 The ICCAT Assistant Executive Secretary reported that the unsuitability of the STATLANT questionnaires for the collection of data on migratory pelagic species had caused ICCAT to introduce its own questionnaires covering the following elements:

- total annual nominal catch and fishing power statistics
- catch and effort data for $1^{\circ} \times 1^{\circ}$ rectangles by month
- length frequencies of sampled fish.

3.4.2 Sections of the tuna fleet not covered by these national statistics (some joint venture fleets, fleets flying flags of convenience and those based at ports far from home) are covered by ICCAT samplers based at major landing ports. These samplers extract data from vessel logbooks and measure fish.

3.4.3 ICCAT has adopted a policy of accepting and publishing scientists' best estimates in those cases where such data are considered as being more accurate than data from official statistics. The source of each figure is indicated. ICCAT has two major statistical publications:

- Statistical Bulletin (annual nominal catches)
- Data Record (database catalogue and detailed data output)

3.4.5 Following a recommendation of the 9th Session of the CWP active consideration is being given to the formation of an inter-agency working group covering world-wide tuna statistics (a species-orientated CWP). The precise details of how this group will be established are as yet uncertain but the organizations involved include FAO and the regional agencies ICCAT, IATTC, SPC, IPFC and IOFC. The CWP welcomed the positive approach toward the 9th Session's recommendation and hoped that both CWP agencies concerned would pursue this matter further.

3.5 <u>ICSEAF Fishery Statistical Programme and Publications (CWP-12/9)</u>

3.5.1 The Chairman of the ICSEAF Standing Committee on Statistics (STAT) reported that advances had been made in improving the quality and coverage of statistical data collected by the organization. The basis of the statistical programme are the STATLANT 47A, 47B and 47E (provisional catch data for January-June) questionnaires.

3.5.2 A system has been established for the reporting by telex of provisional monthly data on catches of Cape horse mackerel and Chub mackerel. During 1982-83 the reporting of catch statistics for some important species by $1^{\circ} \times 1^{\circ}$ rectangles was introduced, the area dimensions being a compromise designed to fit with national statistical practices. The forms for the collection of biological information (BIOLDAT 1 and BIOLDAT 2) have undergone minor revisions and a BIOLDAT 3 form was introduced in 1982 for the submission of length measurements of samples.

3.5.3 All biological and statistical data are incorporated in the Sampling Bulletin (Vol.10 - May 1983 and Vol.11 - May 1984) and the Statistical Bulletin (Vol.11 - May 1983 and Vol.12 - May 1984). Proposals from national authorities for changes to the ICSEAF Statistical Bulletin are to be discussed at the December 1984 meeting of STAT.

3.5.4 ICSEAF has improved its capability to process data with the acquisition of a mini-computer and peripherals. Existing software includes programs for

- data storage, processing and dissemination
- statistical analysis
- stock assessment

3.5.5 The ICSEAF Secretariat is currently studying the extent and causes of discrepancies between the ICSEAF and FAO databases and will be presenting a document on the topic to the next Annual Meeting. Cooperation with other agencies in the elimination of these discrepancies is foreseen.

3.6 <u>ICES Fishery Statistical Programme and Publications and ADP (CWP-12/8)</u>

3.6.1 ICES compiles two series of catch statistics:

1) The data officially reported by the national statistical offices

2) Data brought by scientists to meetings of Fish Stock Assessment Working Groups, which may differ from the official data for several reasons.

3.6.2 The official data are based on two forms giving preliminary data and three giving final data:

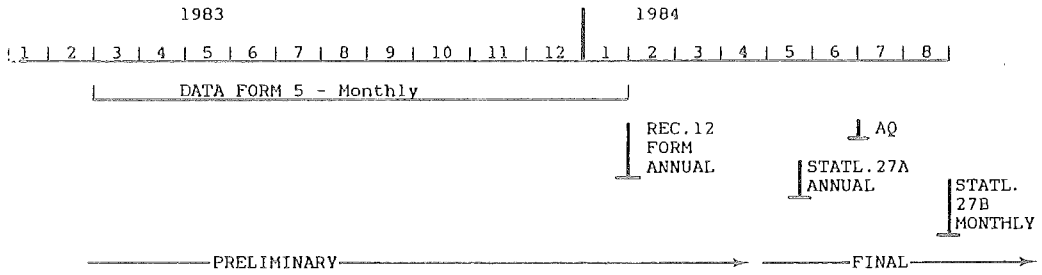
Form 5 is used for reporting preliminary monthly catch data on a stock basis within 30 days of the month in which the catch was taken.

The Recommendation 12 Form is used for reporting preliminary annual data on a stock basis within 1 month after the end of the year.

Form STATLANT 27A report final annual data within 5 months and AQ within 6 months after the end of the year on a statistical area basis.

Form STATLANT 27B reports final monthly data and effort data within 8 months after the end of the year.

TIMETABLE OF THE REPORTING



3.6.3 The catch data brought to the Fish Stock Assessment Working Group Meetings are published in the Working Group and ACFM Reports and will be available on a computer next year.

3.6.4 One of the most serious problems at present is the discrepancy between the catch estimates used in the assessments and the officially reported data. This means that for some important fishing areas the official figures as reported to ICES and published in the Bulletin Statistique are not used by the fishery biologists. It does not however usually invalidate the assessments and the scientists are normally able to provide adequate data for this purpose.

3.6.5 The other problems are coverage and timeliness. Without an improvement in these two aspects the setting up of any current data bank at ICES does not seem worth-while.

3.6.6 The circulation of statistics is not bound to printed matter these days. With computer based data banks data can be made available on paper and computer readable media as soon as they have been entered into the machine. In many cases the number of observations makes this the only feasible solution. The publication of Bulletin Statistique has in recent years been delayed, due to late incoming data, to a degree that greatly reduces the usefulness of this series, but computer printouts of more recent official data are made available on request.

3.6.7 The scientists' estimates used in fish stock assessments are published in the Cooperative Research Report series of ICES. Ten years' series 1974-83 were issued January 1984 in Cooperative Research Report No.128.

3.6.8 The revival of the interest in using effort data in fish stock assessments has not meant an increase in interest in making use of the STATLANT 27B data in the ICES data bank. It seems that in the present form it is not organized in a way allowing more advanced statistical analysis. One of the problems is that retrieval and analysis is very difficult, another is that the grouping of vessel categories as defined by the STATLANT system does not tally with the unit-fleets used by the scientists. Upgrading of the data bank to a database allowing easier retrieval and analysis is under consideration at present.

3.7 CCAMLR Fishery Statistical Programme and Publications (CWP-12/9)

3.7.1 The second meetings of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) and its Scientific Committee were held in Hobart, Australia, during September 1983. During the meeting of the Scientific Committee an Ad-Hoc Working Group on Data Collection and Handling was formed. The Working Group will meet intersessionally to examine the types of data inputs likely to be required to enable ecosystem resource management and to further develop a description of the Commission's data requirements.

3.7.2 To date the only data requested of CCAMLR members have been of the commercial summary type. However, it was decided that existing data collected by members should be identified. Each member has been requested to submit inventories of both commercial harvesting data as well as data collected during relevant scientific investigations. Specific requests for data will be made after an assessment methodology has been adopted by the Scientific Committee and its data requirements are clearly defined.

3.7.3 The STATLANT data were discussed by the Scientific Committee and the CCAMLR Secretariat was asked to assemble all available STATLANT data from the major fishing areas 48, 58 and 88. All data submitted to FAO have been acquired. Where these appear to be incomplete, CCAMLR members have been asked for any further data which may be available. Once completed, these data will be the basis for the draft statistical bulletin to be prepared by the Secretariat for discussion by the Scientific Committee at its next meeting in September 1984.

3.7.4 In order to establish computer access to subarea specific catch data, the CCAMLR Secretariat will encode and key enter data from photocopied duplicates of 08A and 08B reporting forms. The codes assigned during this process are compatible with those in use at FAO. Where possible, FAO standards have been adopted in order to enable the convenient inter-related use of FAO and CCAMLR data.

3.7.5 The Secretariat has acquired access to the Australian Commonwealth Scientific and Industrial Research Organization's (CSIRO) computer time shared network service (CSIRONET). Extensive scientific software are available. International network links have been implemented.

3.8 NAFO Fishery Statistical Program and Publications (CWP-12/10)

3.8.1 The Assistant Executive Secretary of NAFO reviewed statistical activities relevant to the Northwest Atlantic, noting that the STATLANT 21A and 21B reports from national statistical offices continue to form the basis of NAFO Statistical System. The STATLANT 21A reports, with a 15 April deadline, provide the preliminary inventory of the previous year's nominal catches by species and division for use at the June Meeting of the Scientific Council. The STATLANT 21B reports, with a 30 June deadline, provide the detailed catch and effort data by divisions, gear, vessel size and month for publication in the NAFO Statistical Bulletin.

3.8.2 Publicaton of the Statistical Bulletin in recent years has been delayed by several months for two basic reasons: late submission of STATLANT 21B returns from countries which are not Contracting Parties of NAFO, and additional time required for verification of statistics resulting from joint-venture operations between coastal states and several countries. Volumes 30 and 31, containing data for 1980 and 1981, have been published since the 11th Session of the CWP.

3.8.3 Computer processing of fishery statistics has generally remained the same since 1972 when input and output computer programming was developed to utilize the data reported on STATLANT 21B forms. A description of the automatic data processing system was presented at the 10th Session of the CWP in 1980 (CWP-10/11). The computerized database currently extends back to 1964.

3.8.4 At its meeting in June 1983, the Scientific Council of NAFO reviewed the report of the 11th Session of the CWP and re-affirmed its previous commitments to use the STATLANT System for acquiring fishery statistics and to follow CWP recommendations on classification of fishing gear and associated fishing effort measures, 3-alpha identifiers for species and countries, and allocation of catches by nationality.

3.8.5 The triennial publication of the NAFO List of Fishing Vessels will be continued. The last volume containing data for 1980 was published in 1983, and data for 1983 are now being collected for publication possibly in 1985.

4. FAO CONSULTATION ON GLOBAL CATCH STATISTICS

4.1 The Consultation was held in Copenhagen, from 23 - 25 May 1984, at the ICES Headquarters, with the objective of examining the present and future needs of users of FAO fishery statistics. The report, which was introduced by the CWP Secretary, is attached as Appendix 3.

4.2 It was the view of the some of the CWP participants that the Consultation was probably expecting too much of the FAO database and Yearbook. In particular, it suggested that FAO should not give very high priority to efforts to increase the detail so far as place and time of capture was concerned (maximum resolution). This was handled by other bodies and appeared in other reports and bibliogrpahical references to it could appear in the Yearbook - a step which incidentally would be in agreement with one of the other recommendations of the Consultation.

4.3 The CWP participants questioned the re-introduction of graphical presentation into the Yearbook and in this connection it was commented that with the growth of modern means of data transmission, users of the data would be increasingly accessing the database rather than referring to published data.

4.4 After discussion, the recommendation to publish extended time-series data base was supported; although it was suggested that this might appear every five years. Other priority items of action for the FAO Secretariat were noted as restoration of value data, publication of per capita consumption statistics and the publication of data on aquaculture.

5. CATCH AND LANDING STATISTICS: NATIONALITY ISSUES

Relevant Document: CWP-12/26

5.1 The EUROSTAT participant described two examples that may have some bearing on the CWP's long-standing concept regarding the allocation of catches by nationality.

5.2 The first example involves agreements between the European Economic Community (EEC) and African, Caribbean and Pacific (ACP) states, whereby preferential access to EEC states of seafood products from these ACP states are subject to certain rules on the original of products. The rules specify that the vessels which catch the fish must not only be registered in and fly the flag of one of the states involved but also be at least 50 percent owned by, and 50 percent of the crew consist of nationals of the states involved in the agreements.

5.3 The second example involves joint fishing operations whereby a net is put into the sea by a vessel of an EEC state, the net is towed by a vessel from a non-EEC state, and the net with its catch is taken on board the EEC vessel which claimed the catch as its own.

5.4 With regard to the first example, the CWP noted that, although the rules could lead to increased misreporting of catches by those states in order to achieve preferential treatment by the EEC, the efforts by the ACP states to have the ownership and crew restrictions reduced or eliminated would bring the EEC concept of nationality more in line with the CWP recommendation. The CWP concluded that the second example should not be a problem because its recommendation clearly states "that the flag of the vessel catching the fish should be considered the paramount indication of the nationality....".

6. CONVERSION FACTORS

Relevant Documents: CWP-12/12 & 24

6.1 The EUROSTAT representative drew attention to some of the potential problems resulting from the application of differing national conversion factors in the monitoring of international catch quota systems. The CWP noted that in the overall question of poor landings data deliberate misreporting presently represented a much greater problem than inaccurate conversion factors, but they would assume greater importance as inspection procedures were more rigorously enforced. Differing national practices in the handling and processing of fishery products warranted the use of differing conversion factors but the CWP stressed that national authorities had an obligation to check the reliability of their conversion factors.

6.2 The CWP Secretary reported that FAO had experienced some difficulty in undertaking the tasks allocated to us at the 11th Session of the CWP. As a consequence, a new form, requesting information on conversion factors, had been designed which would give greater flexibility both to those completing it and those analyzing the answers. This form was agreed by the CWP and will be sent to all countries in due course. For those administrations which have already supplied information, it was recommended that the products identified in previous submissions should be pre-printed on the form - although not the conversion factors themselves. It was further recommended that in the dispatch of the form it should be made clear that information was sought only on fish processed at sea; work on the derivation of conversion factors for land-based products should be treated in a separate exercise.

7. STATISTICS ON AQUACULTURE

Relevant Documents: CWP-12/13 & 4

7.1 The STATLANT AQ Form was distributed for the first time in 1983 to the ICES member countries, and it was expected some extra effort would have to be made to sort out problems and tidy up some of the returns. Therefore, a number of follow-up questions were sent out in February 1984.

7.1.1 The situation concerning the request for 1982 data as per 1 June 1984 was as follows:

Of the 22 countries which had received the questionnaire, five countries had not replied at all (Belgium, Ireland, Poland, Portugal and USSR).

Three countries had indicated that they had no official data to report on aquaculture (France, Federal Republic of Germany and Denmark).

Of the remaining 14 questionnaires follow-up questions were necessary in 9 cases. Five countries responded to the follow-up questions giving more final or more detailed figures. Four countries had not responded, and the remaining questions are indicated by footnotes in Table 1 of CWP-12/13.

7.1.2 The ICES Secretariat has had the possibility to check the returns with other sources especially a table on mariculture production from the Mariculture Committee of ICES.

It turns out from this comparison that in spite of the lack of response from some countries, the returns received, so far, on the STATLANT AQ cover the major part of the mariculture of salmonoids. The expert estimate from the Mariculture Committee of ICES of the production of North Atlantic Salmon in 1982 was 12,599 tonnes (12,972 in the AQ returns) and 11,414 tonnes of rainbow trout (10,042 in the AQ returns). For other species and freshwater production there are large gaps.

With the limited response ICES will treat 1982 as a trial year, and the data will not be published at this stage.

7.2 FAO presented a FISHSTAT AQ form intended to go to countries outside the ICES area. It differs considerably from the form adopted for ICES, especially in asking for information on the area under aquaculture, type of equipment (pond, cage, etc.) and value.

7.2.1 Following comments from the CWP it was agreed to indicate the major FAO area on the form (not only the country) and use in the notes for completion the definition of "final output" suggested by CWP-11 (section 12), viz:-

> The production would only be recorded at the stage where the products passed from the aquaculture sector either as releases (to conditions outside the influence of husbandry) or as a product for direct human consumption. This would exclude products sold between aquacultural establishment, (e.g. fry sold by a hatchery to a growing-on establishment) and products passing from one stage in the life cycle within the same enterprise.

This definition will have to be amended slightly so as not to exclude aquatic plants used for industrial purposes.

8. MISREPORTING OF CATCH AND LANDINGS DATA

Relevant Documents: CWP-12/14 & 27

8.1 Misreporting, which leads to inaccurate or unreliable data may result from several factors: incomplete coverage (e.g. subsistence or recreational catches may not be included), omission of confidential data (it is a legal requirement in some countries to keep confidential the data pertaining to a single individual or company), uncertainty on nationality of catch (as in joint-ventures or where national flag vessels operate out of foreign ports), and falsification of reports (either by fishermen or government agencies). Misreporting may result in inaccurate estimates of total quantities caught or in misclassification of these quantities with respect to area, species, time, or method of capture. At present, ICCAT uses scientists best estimates in its Statistical Bulletin and NAFO publishes official statistics which are of sufficient accuracy for assessment work. However, scientists working in other international groups often are forced to develop "best estimate" data series to correct for incomplete or false reporting in order to make assessments.

8.2 The problem of incomplete coverage is of most concern in the less developed fishing countries where the resources assigned for collecting statistics are often inadequate or where the small-scale nature of the fisheries makes data collectin labour-intensive. One purpose of the CWP is to encourage the improvement of statistical data collection systems in these countries. The CWP is also concerned with the problem of falsification of reports, which may occur in either developed or less developed countries. When these problems are known, agencies do or should adjust reported catch statistics. For example, sampling data on species composition of tuna catches have been used to correct reported tuna landings by species, and information on species' known ranges has been used to exclude groundfish catches reported for certain statistical zones.

8.3 The CWP reiterated its policy that agencies should continue their present practices for publishing official fishery statistics. The CWP recognizes that official statistics often represent the only available time-series, and considers it unadvisable to disrupt these series. It, however, also encourages the use of scientists' best estimate data, where these are available. The CWP suggests that statistical publications include references to the sources and level of detail of the primary data used in the publication, which may be helpful in assessing the overall accuracy and reliability of the data.

9. DISCREPANCIES IN STATISTICS HELD IN DATABASES

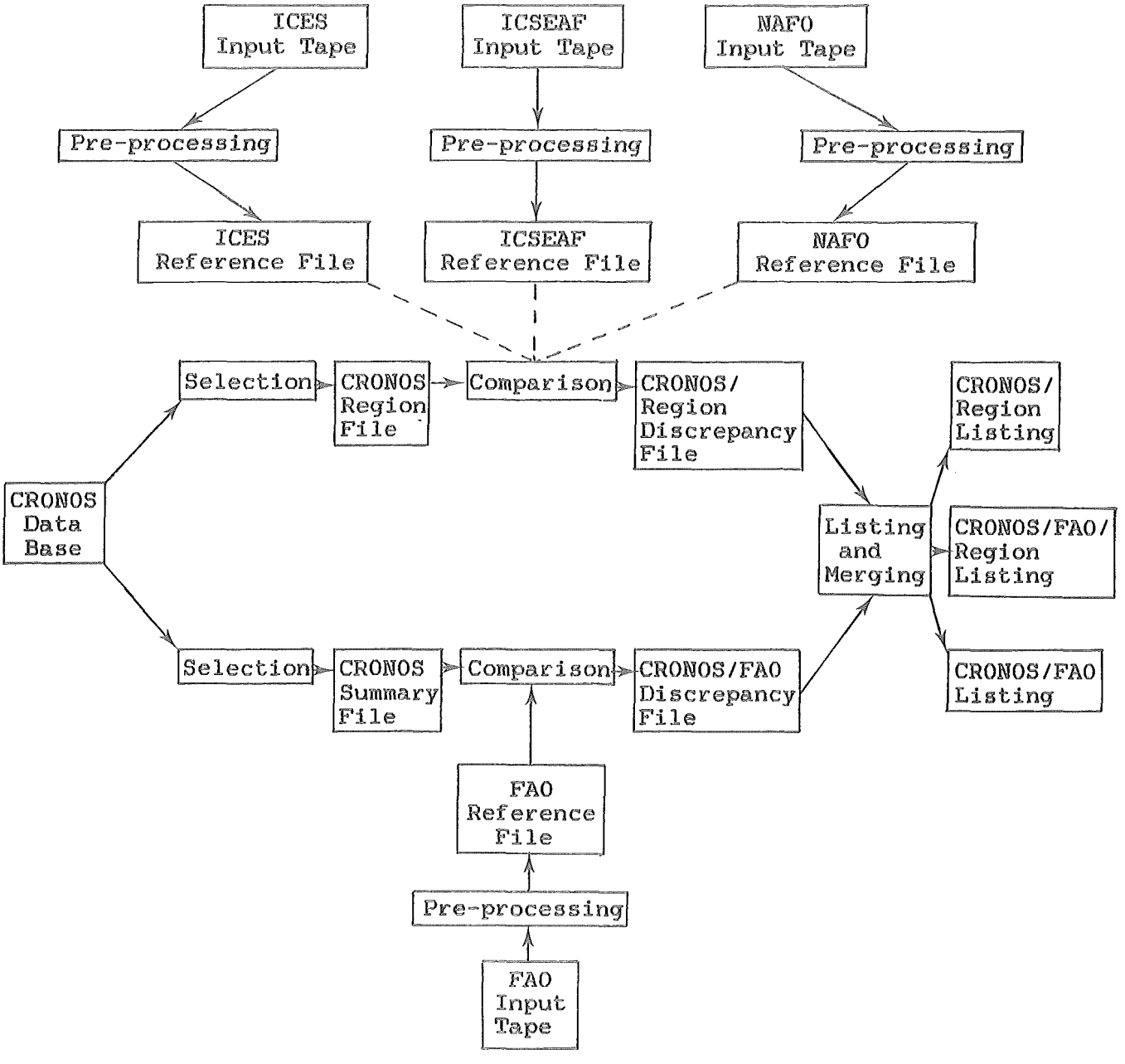
Relevant Document: CWP-12/15

9.1 The EUROSTAT representative reported that, after a delay caused by staff shortages, the work on the development of computer programs to identify discrepancies between the databases of CWP member agencies had been resumed. This project has been integrated with plans to enlarge the CRONOS database and to computerize the data processing of STATLANT data and it was hoped that the total work would be completed within 18 months.

9.2 The section of the work on identification of the discrepancies may be represented as in Figure 1. Once the system is established the STATLANT data from each CWP member agency would be stored as 'reference file' in a CRONOS format available for comparison where appropriate, with a new incoming file. Early indications were that the elimination of discrepancies in the historic files could be largely managed by the agency secretariats without recourse to seeking advice of the national authorities and that, thereafter, the procedure would provide a method of readily identifying data items for which notification of up-datings had not been made available to all the agencies concerned.

FIGURE 1

Diagrammatic representation of the programmes to detect discrepancies in databases.



10. FISHING LOGBOOKS

Relevant Document: CWP-12/17

10.1 The CWP reviewed the draft guidelines for the establishment of logbook and related systems prepared by Mr. J. Pope (Aberdeen) under contract with FAO. The guidelines have been drafted following the recommendation of the 11th Session of the CWP "that FAO produces a report or a manual identifying the requirements for planning, designing and implementing logbook systems and that this be completed ....". Some lengthy discussions took place as to whether or not the draft guidelines accommodate the needs of developing coastal nations in designing a logbook form for their artisanal fisheries; whether or not a sample(s) of logbooks are needed together with the text; and if a major modification is needed to the text to include other statistics collection systems than through logbooks.

10.2 The CWP approved the draft subject to a number of modifications:

(a) An introduction should be added to the text, giving a clear description of the objectives of the whole paper, referring to the original CWP recommendations.

(b) An annex which contains some sample logbook forms and brief summaries of conditions under which the logbook is used (or description of fisheries) should be added.

Recognizing the usefulness of the guidelines for certain countries in developing a logbook form for a certain fishery, the CWP recommended that the paper with the above modifications be published by FAO in one of the FAO publication series if possible by the end of 1984.

10.3 The CWP members are invited to introduce any editorial modifications to the text but such comments should be made not later than 15 October 1984. It was also suggested that the FAO review its collection of logbook forms and select relevant forms concerning Atlantic fisheries, covering various industrialized and artisanal fisheries. For each form selected, FAO should require concerned regional agencies to submit brief descriptions of fisheries and circumstances in which the logbooks are used.

10.4 The CWP recommended that FAO should solicit papers from authors in differents parts of the world reviewing their experiences in operating logbook systems. The review should cover a range of different fisheries. Preparation of a paper including these reviews should not however delay publication of the logbook paper under review.

11. GLOSSARY OF FISHERY STATISTICS

Relevant Document: CWP-12/18

11.1 The "Glossary of Fishery Statistics", prepared by Mr. L. P. D. Gertenbach, was presented for discussion. It was noted that the document was in draft form and that there was considerable scope for revisions, additions, and change in form of presentation.

11.2 Some concern was expressed that the document was too heavily weighted with material describing the FAO system and was rather short on descriptions of the systems operated by other Atlantic fishery agencies. Concern was also shown about the way in which the document sometimes went beyond the original objective of introducing the fishery statistical terms and descriptions as generally accepted at the present time.

11.3 The CWP then set up a small ad hoc Task Force to make specific suggestions for improvement of the document. The task force suggested changing the title to "Handbook on Fishery Statistical Standards for the Atlantic". It appoved the general approach by section (as opposed to the Glossary approach of short alphabetically listed entries) and also felt that while some improvements could be effected the present section headings were along the right lines.

11.4 Other changes which were suggested included the preparation of an index (necessary in view of the section approach) and the addition of an introduction which would include some material on the origin of the fishery agencies.

11.5 It was recognized that this was only a first draft and substantial editing was still required both to remove duplication (e.g. discussion of time periods in Section II and Section V paragraph 6) and to take out those elements of speculation in the draft handbook, which together with additional material might form the subject of a separate paper.

11.6 It was agreed by the CWP that so far as the material available to the author would permit, he should be asked to produce a revised draft.

In addition agencies would be asked to (or could of their own volition) submit additional material which the EUROSTAT participant had kindly agreed to incorporate into the draft handbook. A revised version would be submitted to the next Ad-Hoc Inter-Agency Consultation.

12. HARMONIZED FORMAT FOR THE TRANSMISSION OF STATLANT DATA

Relevant Document: CWP-12/19

12.1 The CWP noted that the need for a harmonized format for the transmission of data between international agencies on magnetic tape was of a lower priority than at the time of the 11th Session of the CWP, most agencies having developed their own programs for reading incoming tapes. However, it was considered that, as national computer systems develop, such a format could be of interest to the national authorities for the submission of STATLANT data to international agencies, particularly for those authorities making submissions to several agencies.

12.2 The CWP considered that the format for data records contained in CWP-12/19 was unsatisfactory in several respects but proposed that, before further work was undertaken, the member agencies ascertained the degree of interest of the national reporting offices in the development of such a harmonized format.

13. FISHING AREAS FOR STATISTICAL PURPOSES

Relevant Document: CWP-12/20

13.1 Changes in Boundaries of Major Fishing Areas

There have been no changes in the boundaries of the major fishing areas since the 11th Session of the CWP (July 1982). However, new statistical grids have been or are to be proposed for several of the areas (e.g. CECAF, WECAFC, CCAMLR). The CWP noted the working principle on boundary changes which were established and approved at the 1982 meeting (FAO Fish.Rep.,No.274, p.9), namely

(a) changes in the existing system should be considered only when strong reasons for doing so have been clearly demonstrated and documented;

(b) in addition to the advantages, consideration of changes must take into account the disadvantages which would follow if alterations were to be implemented;

(c) possible alterations to existing statistical areas could take the form of a change in a boundary or the creation of subdivisions within a statistical area;

(d) if the need for a change is accepted, the nature and extent of the alteration should be determined principally on the basis of biological considerations, taking into account the distribution of fisheries and possible effect on the existing statistical data series, together with administrative/political considerations; and

(e) any proposal to alter a statistical area must also be supported by the following documentation:

i) evidence of the distribution of the exploitable phase of the major stocks concerned;

ii) a list of all other stocks occurring within or around the boundary of the fishing area concerned;

iii) information on the movements of these stocks within or across the boundaries;

iv) the distribution of fisheries in and around the area concerned;

v) details of natural marine boundaries, such as bottom topography; and

vi) an analysis of how implementation of the proposals would be likely to affect long-term data series.

The CWP requested that these proposed changes be reviewed with respect to these criteria before they are adopted.

14. FISHING FLEET STATISTICS

Relevant Documents: CWP-12/21, 25 & 28

14.1 Definition and Classification of Fishing Vessel Categories

Mr. W. Orszulok introduced document CWP-12/25 by saying that his study of fishing vessel categories had been commissioned by FAO as a result of the recommendation from the 10th Session of the CWP and would be published in the FAO Fisheries Technical Paper series. The proposed classification was a development of earlier classifications and the codes assigned had been selected to avoid confusion with fishing gear category codes. The CWP warmly congratulated Mr. Orszulok on his study which it was felt would prove invaluable to fishery workers.

14.2 The ICCAT representative pointed out that the proposed classification in CWP-12/21 differed slightly from a proposed classification in CWP-12/25 and that the proposed alphabetic coding conflicted with codes already used by ICCAT. The CWP Secretary stated that the classification in CWP-12/25 should be the definitive version and that, since the only CWP agency coding vessel categories was ICCAT, there would be no difficulty in accepting the ICCAT code where conflict occurred. The CWP then adopted the proposed classification slightly amended as above (see Appendix 4).

14.3 The CWP Secretary introduced CWP-12/21 by remarking that, in addition to the proposed changes to class intervals for length and power parameters, FAO intended to review the form and content of requests for statistical information and sought the advice of the CWP on the parameters to be selected and the periodicity of the requests.

14.4 The EUROSTAT representative considered that instructions for the completion of statistical returns on fleet statistics have been rather imprecise and pointed out some of the problems with existing parameters (CWP-12/28). The new IMO Gross Tonnage measurement (International Convention on Tonnage Measurement of Ships, 1969, which came into force on 18 July 1982), was only to be applied to all such vessels of over 24m in length and would not be applied to all fishing vessels until 1994, when even existing vessels would be required to be re-measured in accordance with its provisions. 1/

1/ IMCO/OMCI, International Conference on tonnage measurement of ships, 1970 1969. Final Act of the Conference with attachments including the text of the adopted Convention. Conférence internationale de 1969 sur le jaugeage des navires. Acte final de la Conférence avec documents joints comprenant le texte de la Convention adoptée. London, IMCO(IMCO 1970:1), 83p.

14.5 The CWP welcomed FAO's intention of generally reviewing fleet statistics and advised that no changes to parameter class intervals be made until after the reviews had been completed. Since annual changes in national fleets could be appreciable the CWP advised FAO to maintain a periodicity of one year for the collection of fleet statistics.

14.6 The EUROSTAT participant pointed out that its statistical register of fishing vessels contained only records for the active fishing vessels, a situation which seemed to meet the wishes of the fishery administrators. Because of the differences in the operations of fishing fleets the national authorities were requested to select the definition of "active" that best suited their situations.

15. FISHERMEN STATISTICS

Relevant Document: CWP-12/22

15.1 The OECD participant introduced the survey of the concepts by which fishermen are classified at the national level in OECD countries. The survey concluded that the concepts used cannot be harmonized in any useful manner at the international level because the national classifications are motivated by factors other than the mere enumeration of fishermen. Meanwhle, data on fishermen were found to be a useful tool, inter alia, to give a productivity measure and as well as to test the validity of other data.

15.2 The CWP concluded that future work on fishermen statistics should concentrate on systems associated with the sectors of the industry in which the fishermen work.

16. LANDING STATISTICS: QUANTITIES AND VALUES

No Document

16.1 The CWP Secretary reported that due to the long interval between the retirement of the previous Secretary and his own appointment, it had not been possible to tackle this problem in the way recommended by CWP-11. The integration of value data into the FAO database was however to be given high priority. It was noted that many countries collected and published such data and that considerable progress could probably be made by library research. It was therefore agreed that FAO would examine the suitability of the data which could be obtained in this way for inclusion in the database. A paper would be prepared by FAO for CWP-13, containing a review of the work undertaken together with proposals for further action.

16.2 It was noted that when such data had previously been published in the Yearbook, the concept aimed at had been first hand sale prices but that a major conceptual problem had been that some fish were landed whole, while the value of fish landed processed e.g. fillets, would include a greater element of value added. Suggestions for handling this problem - including the possibility of using the gross value of output rather than a hypothetical value of catch concept, should also be included in the paper to be presented at the 13th Session.

17. SOCIO-ECONOMIC DATA

Relevant Documents: CWP-12/16A & 16B

17.1 In introducing document CWP-12/16A the ICES representative stressed the need for dialogue between biologists and fishery-economists for assessing the economic consequences of management measures. At the 71st Statutory Meeting of ICES a discussion of economic data had led to the conclusion that there was a need for economic analysis since without it the biological advice in managing fishery resources could turn out to be naive.

17.2 The representatives of several CWP agencies felt that even in the cases where economic data exist, they were not used because the management decisions often reflect political strength rather than those based on biological, economic and technical data.

17.3 The OECD representative, while introducing CWP-12/16B reported that most OECD member countries conduct economic analyses of their fishing sections. However, these analyses were often not detailed, nor representative nor on a systematic basis. Also the information available did not seem to be used in management decisions.

17.4 Most representatives were of the opinion that economic studies have to be carried out scientifically at the national level rather than in international agencies. However, international agencies may favour a role in collecting the economic data in connection with other data collection programmes. To this end the EUROSTAT representative reported that EUROSTAT's fishing fleet register contained data which could be used in economic analysis.

17.5 It was recognized that the fishing fleet level was the most appropriate level to collect economic data; this could also allow for more sophisticated analysis. In this context the ICCAT representative mentioned the problems of confidentiality which may show the collection of data at the fishing fleet level impracticable.

17.6 A lengthy discussion of the role which the CWP could play in the area of economic data took place. The EUROSTAT, ICES and OECD representatives stressed the need for action by the CWP to identify the information required. On the other hand the FAO, NAFO and ICCAT representatives reserved their positions.

17.7 With the purpose of arriving at a thorough understanding of the issue, it was agreed that the OECD prepare for the 13th session of the CWP a study which would:

i) analyse the role of economic data in fishery management;

ii) identify the role of the CWP in the field of economic data; and

iii) compile a list of information required for economic analysis of a fishing unit (e.g. vessel, fishing enterprise, fleet).

Also the OECD will solicit from among its membership national case studies of integrated data collection and data processing system for the economic analysis of fishery management units. The ICES representative kindly offered to provide such a study dealing with the Faeroe Islands.

18. STATLANT SYSTEM

No Document

18.1 A number of difficulties which had been experienced in the operation of the STATLANT system were referred to. So far as the form NS 1 was concerned it was noted that

i) although countries were requested to revise data for previous years, they frequently failed to do so;

ii) when countries did do this, there was no mechanism for ensuring revision of the data by division or subdivision; and

iii) The NS 1 form included data on aquaculture while the STATLANT 27A form excluded it.

18.2 So far as the first point was concerned, it was felt that a revision of the notes for completion might help. In any event, it was considered appropriate to review all notes concerned with the STATLANT system to reduce the workload on the FAO Secretariat and to make them more effective in their guidance of national offices. FAO was requested to circulate for approval revised drafts to agencies as soon as possible and to devise a single text which could be applicable to all areas.

18.3 So far as aquaculture was concerned, it was agreed that with the introduction of the STATLANT AQ forms (See Item 7), the aim should be to exclude data on aquaculture both from the NS 1 and from the STATLANT A forms and that it should be stored and presented separately in the database and Yearbook.

18.4 It was also noted that some agencies used the STATLANT B forms more than others. NAFO and ICSEAF found them indispenable. ICES processed them but did not make use of the results in undertaking its assessment work. CECAF had not until now been using the data, but work was shortly to begin on its processing and analysis. Several aspects of this problem were commented on. In the case of ICES, there were often a large number of countries involved, not all of which made returns and this severely reduced the value of the data; however, even when complete coverage was achieved, the data were not used for assessment purposes.

18.5 Against this, it was noted that the data had some value for economic analysis and perhaps if it were published or were more widely known to be available, it would be used by persons other than those directly involved in making assessments. Moreover, attention was drawn to the fact that not only effort data were included on the form B but that it also provided information on the seasonal pattern of fishing opertions and was useful to check data from other sources.

18.6 In view of the potential value of the information collected on the STATLANT B forms, ICES and CECAF were requested to review the use which could be made of this data and report to the 13th Session of the CWP.

19. ANY OTHER BUSINESS

The EUROSTAT representative kindly offered to continue production of the STATLANT Newsletter during the inter-sessional period. The offer was accepted with thanks by the CWP. It was noted that the mailing list required up-dating and the agencies agreed to submit a revised list of addresses.

20. DATE AND PLACE OF THE 13TH SESSION OF THE CWP

It was agreed that the 13th Session would take place in Rome from 11-18 February 1987 and that the *Ad Hoc* Inter-Agency Consultation would take place in London on 5 and 6 October 1985 immediately preceding the ICES Statutory Meeting. A draft agenda for the 13th Session of the CWP would be circulated before the Inter-Agency Consultation.

APPENDIX I

Agenda: Twelfth Session of the CWP

Agenda Item	
1	Procedural matters
2	Review of recommendations and proposals from CWP-11 and progress
3	Agency programmes and publications presenting Atlantic fishery statistics
4	FAO consultation on global catch statistics
5	Catch and landing statistics: nationality issues
6	Conversion factors
7	Statistics on aquaculture
8	Misreporting of catch and landings data
9	Discrepancies in statistics held in databases
10	Fishing logbooks
11	Glossary of fishery statistics
12	Harmonized format for the transmission of STATLANT data
13	Fishing areas for statistical purposes
14	Fishing fleet statistics
15	Fishermen statistics
16	Landing statistics: quantities and values
17	Socio-economic data
18	STATLANT System
19	Any other business
20	Date and place of the 13th Session of the CWP

APPENDIX II

List of Documents: Twelfth Session of the CWP

General Series

CWP-12/A	General announcement
B	Agenda
C	Annotated agenda
D	List of documents
E	List of participants
J	List of selected acronyms and abbreviations: Fisheries and statistics
K	CWP Sessions: Dates, places and reports

Technical Series

CWP-12/1	Report of the Eleventh Session of the Coordinating Working Party on Atlantic Fishery Statistics, Luxembourg (Grand Duchy), 21-28 July 1982
2	Report of the Ad-Hoc Inter-Agency Consultation on Atlantic Fishery Statistics, Gothenburg, 8-9 October 1983
3	Report by the CWP Secretary on recommendations and proposals from CWP-11 and progress
4	Report on the FAO fishery statistical programme and publications in general and specifically for the Atlantic and for WECAFC, CECAF, GFCM and CARPAS
5	Report of the EUROSTAT fishery statistics programme, publications and ADP processing
6	Report on the OECD fishery statistical programme
7	Report on the ICCAT statistical programme, publications and ADP processing
8	Report on the ICES statistical programme, publications and ADP
9 & Addendum	Report on the ICSEAF statistical programme, publications and ADP
10	Report on the NAFO statistical program data-processing and publications, 1982-84

11	Report on the CCAMLR fishery statistical programme and publications
12	Conversion factors
13	Statistics on aquaculture 27 AQ
14	Misreporting of catch and landings data
15	Discrepancies in statistics held in databases (EUROSTAT)
16A	Socio-economic data (OECD)
16B	Socio-economic data (ICES)
17	Fishing logbooks
18	Glossary of fishery statistics (draft)
19	Harmonized format for the transmission of data
20	Fishing areas for statistical purposes (FAO)
21	Fishing fleet statistics
22	Fishermen statistics
23	Not issued
24	The use of conversion factors in catch monitoring (EUROSTAT)
25	Definition and classification of fishery vessel categories
26	EEC/ACP ruling on nationality of catch
27	FAO Consultation on global catch statistics (Copenhagen, Denmark, 23-25 May 1984)
28	Developments in fishing fleet statistics
29	STATLANT Newsletter: Progress report
N.B.	Two complete sets of all working documents will be supplied to the CWP agencies

APPENDIX III

List of Participants: 12th Session of the CWP

EUROSTAT

Mr. David G. Cross
Directorate for Demographic, Social and Agricultural Statistics
EUROSTAT
Batiment Jean Monnet
B.P. 1907
Luxembourg (Grand Duchy)

Mr. J. Lokkegaard
Fiskeriministeriet
Stormgade 2
Copenhagen DK-1470
Denmark

CECAF

Mr. G. V. Everett
Programme Leader, CECAF
C/o UNDP
P.O.Box 154
Dakar
Senegal

FAO

Mr. M. A. Robinson
Senior Fishery Statistician
Fishery Information, Data and Statistics Service (FIDI)
Fisheries Department
FAO
00100-Rome
Italy

Mrs. F. de Luca
Fishery Statistician
Fishery Information, Data and Statistics Service (FIDI)
Fisheries Department
FAO
00100-Rome
Italy

ICES

Mr. K. Hoydal
ICES Statistician
ICES (International Commission for the Exploration of the Sea)
Palaegade 2-4
Copenhagen DK-1261
Denmark

Ms. K. Paine
Statistics Committee Chairman (ICES)
Digital Equipment Corp.
555 Virginia Road
Concord, MA
USA

ICCAT

Mr. P. M. Miyake
Assistant Executive Secretary
ICCAT (International Commission
for the Conservation of
Atlantic Tunas)
Calle Principe de Vergara 17-70
Madrid 18001
Spain

NAFO

Mr. Vince M. Hodder
Assistant Executive Secretary
NAFO (Northwest Atlantic
Fisheries Organization)
P.O.Box 168
Dartmouth, Nova Scotia
Canada B2Y 3Y9

Mr. J. Moller Jensen
Gronlands Fiskeriundersogelser
Tagansvej 135, 1
Copenhagen DK-2200
Denmark

OECD

Mr. Carl-C. Schmidt
Administrator
Fisheries Division
OECD
2 rue Andre-Pascal
75775 Paris 16
France

Mr. Bengt Lindfors
Statistics Sweden
SCB
Fisheries Division
S-115 81 Stockholm
Sweden

WECAFC

Mr. A. C. Jones
National Marine Fisheries
Service
NOAA
75 Virginia Beach Drive
Miami
Florida 33149
USA

Consultant

Mr. W. Orszulok
ul. Slowackiego 28/4
81-872 Sopot
Poland

APPENDIX IV

International Standard Statistical Classification of Fishery Vessels - ISSCFV

Vessel Categories	Standard Abbreviation	ISSCFV Code
FISHING VESSELS		
TRAWLERS	TO	01.0.0
Side Trawlers	TS	01.1.0
wet-fish	TSW	01.1.1
freezer	TSF	01.1.2
Stern trawlers	TT	01.2.0
wet-fish	TTW	01.2.1
freezer	TTF	01.2.2
factory	TTP	01.2.3
Outrigger trawlers	TU	01.3.0
Trawlers, nei	TOX	01.9.0
SEINERS	SO	02.0.0
Purse seiners	SP	02.1.0
- North American type	SPA	02.1.1
- European type	SPE	02.1.2
Tuna purse seiners	SPT	02.1.3
Seine netters	SN	02.2.0
Seiners, nei	SOX	02.9.0
DREDGERS	DO	03.0.0
using boat dredge	DB	03.1.0
using mechanical dredge	DM	03.2.0
dredgers, nei	DOX	03.9.0
LIFT NETTERS	NO	04.0.0
using boat operated net	NB	04.1.0
lift netters, nei	NOX	04.9.0
GILLNETTERS	GO	05.0.0

APPENDIX IV

(continued)

Vessel Categories	Standard Abbreviation	ISSCFV Code
TRAP SETTERS	WO	06.0.0
Pot vessels	WOP	06.1.0
Trap setters, nei	WOX	06.9.0
LINERS	LO	07.0.0
Handliners	LH	07.1.0
Longliners	LL	07.2.0
Tuna longliners	LLT	07.2.1
Pole and line vessels	LP	07.3.0
Japanese type	LPJ	07.3.1
American type	LPA	07.3.2
Trollers	LT	07.4.0
Liners, nei	LOX	07.9.0
VESSELS USING PUMPS FOR FISHING	PO	08.0.0
MULTIPURPOSE VESSELS	MO	09.0.0
Seiner-handliners	MSN	09.1.0
Trawler-purse seiners	MTS	09.2.0
Trawler-drifters	MTG	09.3.0
Multipurpose vessels, nei	MOX	09.9.0
RECREATIONAL FISHING VESSELS	RO	10.0.0
FISHING VESSELS NOT SPECIFIED	FX	49.0.0
NON-FISHING VESSELS		
MOTHERSHIPS	HO	11.0.0
Salted-fish motherships	HSS	11.1.0
Factory motherships	HSF	11.2.0
Tuna motherships	HST	11.3.0
Motherships for two-boat purse seining	HSP	11.4.0
Motherships, nei	HOX	11.9.0

APPENDIX IV

(concluded)

Vessel Categories	Standard Abbreviation	ISSCFV Code
FISH CARRIERS	FO	12.0.0
HOSPITAL SHIPS	KO	13.0.0
PROTECTION AND SURVEY VESSELS	BO	14.0.0
FISHERY RESEARCH VESSELS	ZO	15.0.0
FISHERY TRAINING VESSELS	CO	16.0.0
NON-FISHING VESSELS, nei	VOX	99.0.0

APPENDIX V

FAO Consultation on Global Catch Statistics

The meeting was held from 23-25 May 1984, at the ICES Headquarters, 2-4 Palaegade, Copenhagen. It was chaired by Mr. B. G. Thompson (U.S.A.); a list of participants is given in Annex I.

A. Background and Purpose

1. FAO started its fishery statistical programme in 1947 and published the first of its Yearbooks (with data for 1947, but in some cases going back to 1930) in 1948. The main focus of the published statistics in the early years was landings by country by species, but in the mid-fifties the concept of area of capture (already used by ICES and ICNAF) was introduced and gradually refined until the areas now in use were arrived at in 1965. The nineteen-fifties also saw the introduction of the STATLANT forms, to assist countries in compiling their returns as well as aiming at the standardization of the data.

2. The first Yearbook produced by computer appeared in 1976 from which date it is more correct to speak of the database and related Yearbook; since 1976 a continuous programme, aimed at improving the mechaniccal handling,storage and transfer of the data has been in progress. The enormous potential in this field for the processing and exchange of data, together with changes in world fisheries - the growing importance of management and the change in the legal framework in which such management is undertaken, indicate the desirability of examining the present state of the collection, processing and presentation of fishery data by FAO. This was the essential purpose of the Consultation, which aimed to examine how the existing system meets present needs as well as looking forward to changes which might be of benefit to users in the future.

B. Introduction

3. At the outset the value of the Yearbook to researchers dealing with global or regional problems was taken as axiomatic, and the work of FAO in developing the collection, analysis and presentation of this data over the past 35 years was recognized. This work was regarded by the Consultation as one of the primary tasks of FAO; furthermore, it was a task which could not be undertaken by any other organization and thus FAO has a unique role to play in this field.

4. The Consultation was at the same time aware that FAO is in large measure dependent on the data provided by member governments. Thus although as noted tremendous possibilities were now being opened up for the analysis and dissemination of the data, in the last resort their value depended on the work of the enumerator on the beach or in the port and on the efficiency and integrity of administrators, all of which had a vital impact on the quality of the data. The situation in this regard left no room for complacency and the organization was urged not to relax its efforts in attempts to improve the quality of the data.

5. FAO's dependence on outside sources led the Consultation to recognize that some of the recommendations made could only be implemented over the long term and with the co-operation of member governments (e.g. collection of data in areas of finer resolution); here the role of FAO would have to be one of education and gentle persuasion. Other recommendations (e.g. such as that on recording discards) would be difficult of implementation, were susceptible to different approaches and should perhaps be the subject of in-house working groups. Other recommendations however, (e.g. indications of the general reliability of the data could perhaps be introduced without too much difficulty and with the minimum of delay.

6. The foregoing paragraphs describe some general thoughts which the Consultation wished to express. More detailed considerations are given below.

C. <u>The Existing System - Collection and Publication of Data</u>

7. The Consultation opened with a description of the present system for collection of data. Two basic series are presently in use - the FISHSTAT N.S. (National Summary) and the STATLANT:

NS 1 — This is a computer printout, containing national totals of species by area of capture. It contains data for the past seven years (thus permitting the possibility of revision) with a blank for the most recent year. Sent to all member countries.

NS 2 — Sent only to countries (about 10 major fishing nations) operating in several FAO marine areas. A separate submission for each area requests data by species, thus countries can return figures for specific areas as they become available, and late data for one area need not delay submission for other areas. Contains information for past years, thus permitting revision.

NS 6	Requests information on marine mammals inside and outside Antarctic. Hist'orical series allowing for revision.
NS 9	Requests information on aquatic plants by marine areas. Historical data permits revision.
STATLANT A	Collects data on catch by species by detailed sub area divisions. Sent only to countries fishing in the NE, NW, Eastern Central and SE Atlantic, Mediterranean, Eastern and Western Indian Oceans and the Antarctic. Requests data for one year only.
STATLANT B	Collects data on catch and corresponding effort by month and by detailed sub area divisions. Countries are requested to submit a separate form for variations in target species/type of vessel/type of gear. Sent only to countries fishing in the NE, NW, EC and SE Atlantic and the Antarctic.
STATLANT AQ	Collects data on production by species and number of units. Presently sent to member countries of ICES, but a modified FISHSTAT AQ form will be sent to all countries of the world from 1984.
FISHSTAT FF	Collects data on fishing fleets for the most recent year, by type of vessel, by GRT. Sent to all countries.

8. Information collected on STATLANT A and the FISHSTAT N.S. forms after inclusion in the database is issued in the Yearbook. The Yearbook contains 5 sets of tables:

A. Summary tables

B. Species tables

(i) Groups of species by area

(ii) World totals for each species, by area of capture and country

C. Area tables

(i) by groups of species

(ii) species total in each area

(iii) country total in each area

D. Country tables - Country total (by continent) by area of capture

E. Country - Country totals (by continent) by species caught

9. Concerning the figures in the database eventually published in the Yearbook, it was noted that in making summary totals good data were mixed with poor data thus often making the resultant total poor. It was suggested that some indication should be given in the Yearbook of the reliability of the data. This was done with the UN Demographic Yearbook and was thus presumably a politically acceptable practice.

10. The extent to which data were checked before inclusion in the database was raised. It was noted that there was no methodology for automatic editing but that in cases where figures were suspect, i.e. where the catch of a particular species showed a sharp rise or fall or suddenly appeared for the first time or failed to appear, this was always questioned with the country, so that time series would be maintained on a comparable basis. However, some systems of cross checking the data should be available even where there was no change as the absence of change did not necessarily imply compatibility. The practice of repeating figures where no data were available was questioned; more sophisticated techniques might be used but it was noted that any figure derived from the analysis of unreliable data was itself liable to be unreliable.

11. It was questioned whether the notes providing information to help the user in the interpretation of the data were sufficiently explicative, or were likely to come easily to the attention of users. It was noted that there was a problem here and FAO was requested to examine means of highlighting particular features of the data which were of importance to users of the databae and Yearbooks.

12. Reference was made to the Commodities database and the extent to which figures in the two databases were consistent. It was noted that there was no automatic linkage between the data in the Catches and Landings and Commodity systems, but that some of the grosser discrepancies would be revealed in compiling data for the I.C.S. (Interlinked Computer System) which derived per capita consumption and thus nutritional data using standardized food balance sheets (production + import less export less non food uses to give total supply). In such analyses situations where countries were seen to be exporting fish they did not produce would be exposed and the error corrected.

D. Main Users of Data

13. The Consultation identified the main role of the FAO database and Yearbook as supporting research where global or regional trends were concerned. Examples of their value were:

    (i) All review papers at a recent Conference on the Management of Invertebrate Fisheries the world over, had used FAO data.

    (ii) Consultants preparing studies on foreign countries used FAO data for at least their preliminary reviews.

    (iii) Data which could only be supplied by the FAO Yearbook were often requested by Industry (although it was noted that there was no feedback as to how useful it had been).

    (iv) Inter-country comparisons based on FAO data had been used in pressing the case of fishery interest groups.

    (v) FAO was the only source of per capita data on a comparable world-wide basis - such data were used by aid agencies, project planners and others.

    (vi) FAO data were particularly valuable in providing information on highly migratory species such as Tuna and Billfishes.

14. Against this it was noted that the main characteristics of the FAO data system which limited its wider use were:

    1) Its lack of detail where area resolution was concerned

    2) Frequent differences between other published data and FAO statistics

3) The fact that it was not particularly current, industry and Government often required present prices for a particular species in a particular market or catches in recent months

15. The Consultation noted that although the database and related Yearbook were never intended to meet such requirements, they might in part at least be met by Globefish. Steps to meet needs for this type of information might also include the issuing of a bibliographical supplement to the Yearbook, indicating where this type of information might be found.

E. Identification of Priority Needs

16. While there was agreement that the main value of the database was to provide a general overall picture of trends in world fisheries consideration should be given to its improvement by the inclusion of information on the following aspects of fisheries:

i) the value of the catch in US$ with information on exchange rates used in conversion from national currencies. So far as price data were concerned the principal need seems to be for current statistics of actual prices although there was some value in average ex-vessel prices data on which should be restored to the database

ii) data on recreational catch which in some cases exceeded the volume and value of commercial catches

iii) statistics on the artisanal catch and commercial/industrial fisheries should be shown separately. This was necessary if for no other reason, because of the different management problems faced by these sectors

iv) data should be provided on *per capita* consumption

v) data on production from aquaculture should be published

vi) the possibility of including data on fisheries specifically directed to the aquarium trade should be investigated

vii) information on quotas available to third parties should be published

viii) an attempt should be made to record discards. The Consultation was however, aware of the difficulty of this problem. It was noted that there were different kinds of discards, e.g. undersized fish thrown back because of legal size limits, by-catches of shrimp trawlers, etc. It was the view of the meeting that no country was likely to collect data on discards on a regular basis; such data was normally obtained from ad hoc surveys in specific situations

ix) over the longer run, as contributing countries make the data available, FAO should aim to hold in its database information on catches by areas of a finer resolution than at present. This would enable to ordering of statistics by stock, natural management unit, by EEZ or by any other configuration as required. It was recognized that progress in this direction would be presently limited but FAO should be prepared for the time when information would be available.

17. So far as the data collected on STATLANT B were concerned it was noted that catch and effort data as now collected on the forms were, unsupplemented by other information, inadequate for tuning of virtual population analysis and deriving indices of abundance. In the absence of other data they may provide some indication of the economic health of the fishery; more importantly they provide the only real link between economic and biological analysis and should therefore not be dismissed too lightly. It was, therefore, suggested that consideration should again be given to collecting the data using the unit fleet concept as had been recommended to the Tenth Session of the CWP. 1/ This would also simplify the task of completing the forms especially where mixed species were concerned.

18. Attention was drawn to the detail concerning fishing effort that might be available in files and mimeographed documents produced in very limited quantities that might be available in national administrations but not in libraries - the so-called Grey literature. Ways of making use of this should be explored including the possibility of making reference to it in the proposed bibliographical supplement to the Yearbook (see para.no.15 above).

1/ See Doc.CWP-10/30 - "Improvement of questionnaires on catches and fishing effort", by E. L. Cadima, FAO Consultant

F. Data Quality

19. The subject of the poor quality of the data was addressed and several causes of this were noted. These included the mis-classification of species, deliberate misreporting of catches where species under quota were concerned, as well as inadequate system for collection in the field. So far as the latter were concerned FAO should continue its efforts to improve matters although training should only be given in cases where there was already a functioning system in operation; as in many cases the problems were not so much the absence of skills, but lack of government interest, and poor salaries for the enumerators and others in the statistical service which required them to take additional jobs to the detriment of their statistical work.

20. It was also noted that data were often available in national files but for various reasons (lack of staff, lack of interest, secrecy, etc.) was not transmitted to FAO. Country visits, if an expensive means of collecting data, could often produce considerable additional information. So far as transferring data on magnetic tape was concerned it was noted that unless the data were clean it was often less satisfactory then submitting it on manually completed forms, as errors were not revealed until the data were printed. Countries nevertheless should be encouraged to supply data on tapes - the bizarre practice where countries had data on tape which was printed out to be put on forms to be sent to FAO to be put back on tape, was becoming more common.

21. It was observed that the speed with which FAO requested the data also contributed to its poor quality. National statistical services in some countries, rather than fail to meet the deadline for submission, entered estimates where data was not yet available and these estimates could contain significant errors. FAO was therefore requested to stagger the dates by which it requires the information to be submitted. At the same time representatives of other organizations, which publish similar data who were present at the meeting commended FAO for the speed with which the Yearbook appeared even if the latest years' data could only be considered provisional.

22. While realistically rapid improvement in the quality of the data could not be expected, the importance was again stressed of indicating in the Yearbook as clearly as possible the confidence which the user could place in the statistics. To reduce national susceptibilities in this matter, one method of doing this might be to include a map with countries shaded in different ways according to the reliability of data. It might be necessary to do this according to the very broad species groups as reliability differed from group to group. Beyond this - at periodic intervals - it was felt that an Explanatory Supplement should be issued.

6. Output from the System, presentation of data and Access to Database

23. Apart from the consideration relating to the quality of the data, improvements to the presentation of the information in the Yearbook which were suggested included the re-introduction of the graphical presentation of the main trends in World Fisheries. The lack of a long time series was also regretted and the possibility of issuing a supplement every 5 or 10 years was considered although alternatively it was felt that all basic data should be in one volume even to the extent of combining the two Yearbooks.

24. Detailed information (i.e. more detailed than that appearing in the present Yearbook) should generally be confined to the database and not published, although the value of regional bulletins as focal points for fishery bodies was recognized.

25. Concerning the accessibility to the FAO Fishery Statistics, it was mentioned that the catch time series are available through the host computer services of the European Space Agency-Information Retrieval Service (ESA-IRS) in Frascati, Rome. The query system allows for flexible extraction, aggregation and ad hoc reporting of time series as well as electronic mail facilitities for message and data dissemination. For trade and production data a similar service is planned to become operational in mid 1985.

26. It was also pointed out that for market information, the users may want to have access to the GLOBEFISH database containing data on prices, demand, trade and production for major fishery commodities. This database can be accessed using the BRS host computer in USA.

Resume of Main Recommendations

27. The various recommendations scattered throughout the previous paragraphs are listed below for ease of reference. Participants at the Consultation however, wished to emphasize that the implementation of many of these recommendations depends in large measure on the co-operation of member countries in collecting and supplying the data. They wished to reiterate that notwithstanding the enormous technical progress made in the analysis and transfer of data, the usefulness of the entire system still depended on the integrity of the system of collection in the field.

i) Information concerning the derivation of the figures and the confidence that can be placed in them should be given more prominence and brought more easily to the attention of the user. It was noted that there were three aspects to this problem, viz:

a) Some means of indicating the general reliability of the data for each country should be introduced

b) Readers or users having direct acces to the database should be warned by asterisking (or some other means) data for which explanatory notes should be consulted.

c) The preparation, storage in the database and periodic issue (perhaps every five years) of an explanatory supplement highlighting major changes and generally helping with the interpretation of the figures.

ii) Bibliographical reference should be included in the database and printed in the Yearbook indicating national sources of more detailed information. Additionally, consideration should be given to issuing from time to time comprehensive bibliographies of the statistical publications of selected countries.

iii) Some long-time series should be restored to the database and published in the Yearbook or alternatively be the subject of a separate publication.

iv) Graphical presentation should be restored to the Yearbook.

v) There should be a greater measure of integration between the catches and landings volume and the commodity volume in order to get a comprehensive view of the fisheries sector or to ensure greater consistency in the data. It was noted that food balance sheets are an appropriate means of acheiving this.

vi) Attention should be given to a system which permits greater flexilibity in delimiting the area of capture, i.e. minimum resolution.

vii) A distinction should be made between Artisanal catches and those made by industrial vessels.

viii) Data concerning the following categories should be included in the database

a) Aquaculture

b) Sport Fisheries

c) Aquarium fishes

d) Discards

ix) Data on per caput consumption should be included in the database and published annually in the Yearbook.

x) Value data should be included in the database and restored to the Yearbook.

xi) Dates for the submission of data to FAO should be staggered to meet the capabilities of national offices.

xii) The appropriate manuals on how to access and use the computerized database should be widely disseminated.

List of Participants

FAO Consultation on Global Catch Statistics

Mr. B. G. Thompson
Chief
Resource Statistics Division
National Marine Fisheries Service
National Oceanic & Atmospheric Administration
US Dept. of Commerce
3300 Whitehaven Street N.W.
Washington DC 20235
USA

Mr. K. Cormack
Sea Fish Industry Authority
10 Young Street
Edinburgh
UK

Mr. J. Csirke
Marine Resources Service
Fisheries Department
FAO
00100-Rome
Italy

Mr. Veravat Hongskul
SEAFDEC
Olympia Building, 4th Floor
956 Rame IV Road
Bangkok 10500
Thailand

Mrs. F. de Luca
Fishery Information, Data and Statistics Service
Fisheries Department
FAO
00100 Rome
Italy

Mr. M. A. Robinson
Fishery Information, Data and Statistics Service
Fisheries Department
FAO
00100 Rome
Italy

Dr. U. Sommer
Institut fur Landwirtschaftliche Marktforschung
3301 Braunschweig
Bundesalle 50
Federal Republic of Germany

Mr. C. Stamatopoulos
Fishery Information, Data and Statistics Service
Fisheries Department
FAO
00100 Rome
Italy

Mr. K. Sullivan
Fisheries Division
OECD
2 rue Andre-Pascal
Paris 75016
France

Prof. N. J. Wilimovsky
University of British Colombia
Vancouver, B.C.
Canada

Mr. K. Hoydal
ICES
Palaegade 2-4
DK 1261 Copenhagen
Denmark

APPENDIX VI

CWP SESSIONS: DATES, PLACES AND REPORTS

CONTINUING WORKING PARTY ON FISHERY STATISTICS IN THE NORTH ATLANTIC AREA			FAO Fisheries Report No.
1st Session	25-26 May 1960	BERGEN, Norway	a/
2nd Session	6-8 June 1961	WASHINGTON,D.C., USA	b/
3rd Session	18-21 March 1963	ROME, Italy	N. 7
4th Session	9-12 March 1965	ROME, Italy	N.21
5th Session	10-14 April 1967	ABERDEEN, Scotland	N.45
COORDINATING WORKING PARTY ON ATLANTIC FISHERY STATISTICS			
6th Session	3-7 February 1969	COPENHAGEN, Denmark	N. 70
7th Session	10-16 November 1971	ROME, Italy.	N.121
8th Session	12-20 September 1974	PARIS, France	N.156
9th Session	17-23 August 1977	DARTMOUTH, Canada	N.197
10th Session	22-29 July 1980	MADRID, Spain	N.242
11th Session	21-28 July 1982	LUXEMBOURG, Grand Duchy	N.274
12th Session	25 Jul-1 Aug 1984	COPENHAGEN, Denmark	N.316
c/ 13th Session		ROME, Italy	

---

a/ Annexe J of FAO Fisheries Report N.3
b/ Annexe K of FAO Fisheries Report N.3
c/ Proposals for the 13th Session as made by the CWP (12th Session)

APPENDIX VII

Apart from the recommendation contained in the Report of the Global Consultation, which with some reservations (noted in Section 4 of this Report) the CWP endorsed, the work of the 12th Session also gave rise to the following recommendations and proposals for further work.

2.3 The CWP proposed that FAO investigate the feasibility of amending the computer programme providing the list of ISSCAAP species items in order to reproduce only one full up-dated list during the first part of the year and one separate list in the second part of the year providing exclusively the changes.

3.1.4 & 8.3 The use of data other than that officially supplied, e.g. that brought to working parties and scientists' best estimates should be investigated.

6.2 Previous sessions had requested that FAO should increase its coverage in time and area of data on conversion factors. The 12th Session approved a form for collecting this data and recommended that the products identified in previous submissions should be pre-printed on the form - although not the conversion factors themselves. it was further recommended that in the despatch of the form it should be made clear that information was sought only on fish processed at sea.

10.2 The paper on logbooks, CWP-12/17, should be published in an FAO series, if possible before the end of 1984, and with the inclusion of

(a) an introduction, giving a clear description of the objectives of the whole paper, referring to the original CWP recommendations; and

(b) an annex which contains some sample logbook forms and brief summaries of conditions under which the logbook is used (or description of fisheries).

10.3 Item (b) above should be obtained by FAO reviewing its collection of logbook forms and selecting relevant ones concerning Atlantic fisheries - both artisanal and industrial. For each form selected, FAO should require concerned regional agencies to submit brief descriptions of the fisheries and the circumstances in which the logbooks are used.

10.4 As a separate exercise the CWP recommended that FAO should solicit papers from authors in different parts of the world, reviewing their experience in operating logbook systems.

16.1 & 16.2 FAO should prepare a paper reviewing work done towards the integration of value data into the database and Yearbook together with proposals for further action. The paper should contain suggestions for dealing with the problem of fish being landed in different states of processing and therefore with differing degrees of value added. The paper should be presented to the 13th Session.

17.7 OECD agreed to prepare a paper which would

i) analyse the role of economic data in fishery management;

ii) identify the role of the CWP in the field of economic data; and

iii) compile a list of information required for economic analysis of a fishing unit (e.g. vessel, enterprise, fishing fleet.

18.2 FAO was requested to review all notes for the completion of STATLANT forms and to circulate revised drafts to agencies for approval. In revising the notes an attempt should be made to devise a single text which would be applicable to all areas.

18.6 ICES and CECAF were requested to review the use which could be made of STATLANT B data and report to the 13th Session.

19. Agencies were requested to submit to EUROSTAT a revised circulation list for the STATLANT Newsletter.

APPENDIX VIII

List of Acronyms used in this Report

ACFM	Advisory Committee on Fishery Management (ICES)
ACP	Africa, Caribbean and Pacific
BIOLDAT	ICSEAF Biological Information
CARPAS	Regional Fisheries Advisory Commission for the Southwest Atlantic (FAO Regional body)
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CECAF	Fishery Committee for the Eastern Central Atlantic (FAO Regional body)
CRONOS	EUROSTAT Database
CSIRO	Australian Commonwealth Scientific and Industrial Research Organization
CSIRONET	Australian Commonwealth Scientific and Industrial Research Organization Network Service
CWP	Coordinating Working Party on Atlantic Fishery Statistics
EC	European Communities
EEC	(See EC)
EURONET	EUROSTAT Computer Network
EUROSTAT	Statistical Office of the European Communities
FAO	Food and Agriculture Organization of the United Nations
GFCM	General Fisheries Council for the Mediterranean (FAO Regional body)
IATTC	Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea

ICSEAF	International Commission for the Southeast Atlantic Fisheries
IMCO	Inter-Governmental Maritime Consultative Organization (London, UK); now IMO
IMO	International Maritime Organization (formerly IMCO)
IOFC	Indian Ocean Fishery Commission (FAO Regional body)
IPFC	Indo-Pacific Fisheries Commission (FAO Regional body)
ISSCAAP	International Standard Statistical Classification of Aquatic Animals and Plants
ISSCFV	International Standard Statistical Classification of Fishery Vessels
NAFO	Northwest Atlantic Fisheries Organization (previously ICNAF - International Commission for the Northwest Atlantic Fisheries)
OECD	Organisation for Economic Co-operation and Development
OMCI	Organisation intergovernementale consultative de la navigation maritime
OSIRIS	OECD Statistical Information Research and Inquiry System
SITC	Standard International Trade Classification - Revisions 1, 2 and 3 (United Nations Statistical Office)
SPC	South Pacific Commission (Noumea, New Caledonia)
STAT	ICSEAF Standing Committee on Statistics
STATLANT	STATistical Programme for ATLANTic Fisheries (previously STANA)
Unesco	United Nations Educational, Scientific and Cultural Organization
WECAFC	Western Central Atlantic Fishery Commission (FAO Regional body)

See also:

Landi, G., 1979 Initials and acronyms of bodies, activities and projects concerned with fisheries and aquatic sciences. Initiales et sigles des organismes, activités et projets liés à la pêche et aux sciences aquatiques. Iniciales y siglas de organismos, actividades y proyectos relacionados con la pesca y las ciencias acuáticas. FAO Fish.Circ., (110)Rev.3:111 p.

M-74
ISBN 92-5-102156-2