

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



INDO-PACIFIC FISHERIES COUNCIL

PROCEEDINGS

16th SESSION

Jakarta, Indonesia

30 October - 8 November 1974

SECTION I

REPORT OF THE SESSION

AND OF THE

INDO-PACIFIC FISHERIES COUNCIL - INDIAN OCEAN FISHERY COMMISSION

SYMPOSIUM ON THE ECONOMIC AND SOCIAL ASPECTS OF

NATIONAL FISHERIES PLANNING AND DEVELOPMENT

AND

SECTION II

REPORT OF THE SECOND MEETING

OF THE

IPFC WORKING PARTY ON AQUACULTURE AND ENVIRONMENT

FAO Regional Office for Asia and the Far East
Bangkok 2, Thailand
1975

OFFICE BEARERS OF THE INDO-PACIFIC FISHERIES COUNCIL

1974-1976

EXECUTIVE COMMITTEE

Chairman: Mr. A.S. Mendis (Sri Lanka)

Vice-Chairman: Mr. F.R. Gonzales (Philippines)

Member: Admiral Nizam Zachman (Indonesia)

Secretary •) Mr. D.D. Tapiador

The Office of Secretary to the Council is currently held by the
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IPFC SUBSIDIARY BODIES, 1974-76

1. EXECUTIVE COMMITTEE
2. WORKING PARTY ON DEVELOPMENT AND UTILISATION OF INLAND FISHERY RESOURCES
3. WORKING PARTY ON AQUACULTURE AND ENVIRONMENT
4. *AD HOC* GROUP TO GENERATE ACTION PLANS ARISING FROM THE SYMPOSIUM ON ECONOMIC AND SOCIAL ASPECTS OF NATIONAL FISHERIES PLANNING AND DEVELOPMENT
5. WORKING PARTY ON COASTAL AND HIGH SEAS PELAGIC RESOURCES
6. IPFC/IOFC JOINT WORKING PARTY OF EXPERTS ON INDIAN OCEAN AND WESTERN PACIFIC FISHERY STATISTICS
7. IPFC/IOFC *AD HOC* WORKING PARTY OF SCIENTISTS ON STOCK ASSESSMENT OF TUNA
8. WORKING PARTY ON FISH HANDLING AND PROCESSING TECHNOLOGY AND MARKETING
(18th Session Symposium)
9. SPECIAL COMMITTEE ON MANAGEMENT OF INDO-PACIFIC TUNA
10. COORDINATING COMMITTEE FOR THE SOUTH CHINA SEA FISHERIES DEVELOPMENT AND CO-ORDINATING PROGRAMME
11. *AD HOC* COMMITTEE TO REVIEW THE FUNCTIONS AND RESPONSIBILITIES OF IPFC

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A. INTRODUCTORY AND PROCEDURAL MATTERS

OPENING OF THE SESSION

1. The Indo-Pacific Fisheries Council (IPFC) held its Sixteenth Session from 30 October to 8 November 1974 at the City Hall, Jakarta, Indonesia. The Session was attended by the representatives of 13 nations, members of the Council, by observers from 5 other nations and by representatives and observers from 10 international organizations. A list of participants is given in Appendix IV to this report.

2. The Council was welcomed in an opening address by the Honourable Professor DR. IR. Toyib Hadiwijaya, Minister of Agriculture of the Republic of Indonesia. The Session also heard addresses delivered by the Chairman of IPFC, Rear Admiral Nizam Zachman, Mr. Soesilo H. Prakoso, FAO Deputy Regional Representative for Asia and the Far East, and D. J.A. Gulland, Chief, Aquatic Resources Survey and Evaluation Service, Fishery Resources and Environment Division, FAO Department of Fisheries.

The text of the addresses are reproduced in Appendix V to this report.

ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION

3. The Council adopted the Agenda given in Appendix I to this report. The documents which were before the Council are listed in Appendix VIII.

B. TECHNICAL SCIENTIFIC MATTERS

SYMPOSIUM ON THE ECONOMIC AND SOCIAL ASPECTS OF NATIONAL FISHERIES PLANNING AND DEVELOPMENT

4. A Symposium on the Economic and Social Aspects of National Fisheries Planning and Development, organized jointly by the Indo-Pacific Fisheries Council and the Indian Ocean Fishery Commission, was held on 30 October to 1 November 1974 in conjunction with the IPFC Sixteenth Session. The report of the Symposium, as adopted by the Session, is contained in Appendix II to this report, while the Opening Address of Prof. B.J. Rothschild, the Convenor of the Symposium is given in Appendix III. The documents of the Symposium will be published as Section III of the Proceedings of the Session.

PROBLEMS PERTAINING TO SMALL-SCALE FISHERMEN IN THE IPFC REGION

5. The Council emphasized the important role of small-scale operators in the fisheries and the complexity of the problem. It was generally agreed that the problem represented an ever increasing area of difficulty and challenge. The likely changes regarding waters under national jurisdiction coupled with the altered circumstances precipitated by increasing costs for vessels, fuel and fishing gear, and other equipment necessitate an even more urgent approach than hitherto.

6. Whilst it was acknowledged that the FAO thrust at a regional and sub-regional level was the best and most expedient approach, it was stressed that, although many problems were common to all, the solutions needed to be

tailored to the requirements of individual countries. The task force concept in establishing, developing and implementing country programmes was recognised as was the undoubted value of regional seminars and workshops which should lead to an international technical conference.

7. The Council recognised the imperative need for individual governments to define their policies and determine priorities in respect of small-scale fisheries. The desirability of early FAO involvement was acknowledged.

8. In establishing programmes for the small-scale fishery sector, the necessity of viewing the problem as a segment of an integrated rural development plan was stressed. The overall approach by the international funding agencies to give increased support to integrated rural development was welcomed. Notwithstanding the need for such an approach, the Council considered that the problems of the small-scale fishermen had several unique aspects, e.g. unusual resource limitations, and the interaction between small-scale and industrial fisheries, and that special regard should be paid to the necessity for upgrading the earnings of the fishermen and their place in society.

9. Within the Council, opinions varied as to the relative emphasis to be placed on social, economic and technical considerations although all agreed the problems were interrelated and could not be looked at in isolation. The attitude must depend on the circumstances of individual countries. Nevertheless, it was unanimously agreed that whether it be the case of a country wishing to maintain the fishing population at the present level or a country wishing to diminish or relocate its fishing population, the issue was a major one and a matter of grave concern.

10. The Council discussed measures necessary to protect the small-scale fishermen whose interests could be in conflict with those of an industrial fishery. The importance of technical assistance covering all small-scale fishery activities from catching to consumption, in particular the post harvest sector, was emphasized in view of fishery resource limitations, present high wastage and spoilage levels, and nutrition needs. The role of the extension worker was stressed.

11. The need to recognise the potential and importance of inland fisheries and aquaculture development was clearly stated not only from the food production standpoint but as a means of employment. Such development could well be an integral part of rural planning.

AQUACULTURE AND ENVIRONMENT, INCLUDING ECONOMICS OF AQUACULTURE

12. Mr. G.D. Waugh, the acting Convenor of the IPFC Working Party on Aquaculture and Environment presented the report of the second session (Section II) of the Working Party held in Jakarta 26-29 October and highlighted the major recommendations of the meeting. A lively discussion ensued, in which many delegations emphasized the importance of aquaculture in the fishery development of the region and of the Council's activities in this field.

13. The Council noted with interest the progress so far made in the Cooperative Programme of Research on Aquaculture. Problems like the control of aquatic weeds, hybridization of cultivated species, bait fish culture and pen culture of fish, were suggested as additional problems for investigations under the Programme, but it was pointed out that in the current programme, high priority has to be accorded to investigations on problems that were identified by the IPFC Symposium on Coastal Aquaculture held in Bangkok in conjunction with the Fourteenth Session of the Council in 1970. Suggestions were made to enlarge the number of institutions participating in the Programme, particularly by including more institutions from the United States and Hong Kong. The observer from SEAFDEC offered the cooperation of its Aquaculture Department in undertaking aquaculture investigations and related activities.

14. In discussing the report of studies on the economics of aquaculture some of the delegations pointed out the need to compare the economics of aquaculture with that of other uses of land and water. It was noted that the case studies already undertaken and the expanded studies proposed to be carried out during the next inter-session period will provide the basis for such comparisons. The Council discussed the labour input in aquaculture and noted that this varies a great deal depending on the nature of culture operations. The limited study so far made has shown that in most cases the operations are highly labour-intensive. While there are considerable variations in profitability of

operations as in all such enterprises, the data collected so far indicate a very high ratio of profitability on operating costs. Future work needs to analyse priorities within aquaculture and between aquaculture and other related endeavours.

15. The need for detailed site surveys to determine the extent of cultivable areas was stressed during the discussions and it was suggested that great caution should be exercised in the estimation of potential areas for development. This is particularly important, when estimating areas available for ricefield fish culture. The Council noted that legislation relating to land and water use is not keeping up with the development of aquaculture in the region.

16. The recommendation for the establishment of an area research centre for pesticide pollution studies led to a discussion of possible alternate means of achieving the objectives, including the cooperation of pesticide manufacturers. In view of the fact that some countries in the region have already brought in some controls and initiated studies on the problem, it will be economical and efficient to develop regional cooperation in this field of activity. It was also recommended that all the available information on the effect of pesticides on aquaculture should be compiled.

17. There was wide support for the regional training proposed and some delegations pointed out that the main bottleneck in extension work in their countries was the lack of trained personnel. SEAFDEC ¹⁾ and the South China Sea Fishery Development and Coordinating Programme (South China Sea Programme) offered to cooperate in the organization of training in this field.

18. In discussing the aquaculture components of the proposed Asian Centre for Coastal Fisheries and Aquaculture Development and the Second Phase of the South China Sea Programme, the Council emphasized the need for action programmes mainly centred in the member countries and suggested that a strong element of aquaculture should be included in relevant regional and sub-regional programmes. The need for close cooperation between the FAO/UNDP regional/inter-regional projects operating in the region and the Aquaculture Department of SEAFDEC, was repeatedly underlined during the discussions on future activities.

19. In endorsing the report of the Working Party, the Council expressed its appreciation for the work so far carried out and approved the programme of work for the next inter-sessional period.

RESOURCES APPRAISAL AND MANAGEMENT

20. The Council noted this Summary report on the state of stocks in the IPFC region contained in the FAO's review of the world fishery resources (IPFC 74 INF 1); and also noted the more detailed studies of stocks in part of the region contained in the documents of the South China Sea Programme. An up-to-date review of the state of stocks forms an essential basis for the planning of fishery development, and for the introduction of management measures where appropriate. The provision of such a review should be a continuing task of IPFC. It was noted that while this review would be largely based on national activities, it was highly desirable to have close collaboration between countries. This was essential in respect of stocks exploited by more than one country, so that data on catches, fishing effort, etc. could be combined, but collaboration was also useful in respect of the assessment of stocks fished by only one country, since this enable good scientific criticism and analysis of the methods used. The Council was pleased to note that the two regional projects (South China Sea and Indian Ocean Programmes ²⁾ included support to these regional stock assessment activities as important elements of their work. In particular it welcomed the activities of the Workshop on Planning and Coordination of Resources Survey and Evaluation in the South China Sea, held in Manila (28 August to 4 September 1974) under the sponsorship of the South China Sea Programme and hoped this work should be continued.

1) Southeast Asian Fisheries Development Centre

2) International Indian Ocean Fishery Survey and Development Programme

21. In respect of tuna stocks, the Council heard a verbal report of the work of the IPFC/IOFC *Ad Hoc* Working Party of Scientists on Stock Assessment of Tuna which held its second session at Nantes, France from 16 to 18 September 1974. It noted that the report of this session had been delayed in transit from Rome, but would be circulated to Member Nations for their consideration. It appears that opportunities exist for the expansion of surface fishing, especially for skipjack and other small tunas, but serious concern was expressed about the state of the stocks of larger tuna exploited by the long line fisheries.

22. The activities of the Working Party were seriously inhibited by incompleteness and lack of timeliness in the statistical and other basic data made available to the Working Party. There are technical obstacles in timely reporting of statistics from the long-line fishery, in which voyages could last one and a half years, but every effort should be made to overcome these technical obstacles, and to ensure that complete data is available. It was pointed out that it should be the responsibility of any participant in a fishery to supply the basic statistical data. Without such data it was impossible for adequate assessments to be made, and hence decisions on management and development would be difficult. The observer from the World Bank pointed out that fisheries development loans could be made more readily if there was good information on the resource. Improvements on the supply of statistics are therefore to the immediate advantage of the countries concerned.

23. The Council noted that cooperative studies on the stock of southern blue-fin tuna were being carried out between Japan and Australia, and hoped that this work would continue.

24. There had been a great increase in skipjack fishing in many parts of the Western and Southern Pacific. The connection between the fish caught in the different fisheries is not known, and this knowledge is very important in determining the interaction between different fisheries and choosing management and development action. Tagging can be a very effective method of studying the movement and stock separation of skipjack. The Council therefore endorsed the proposal for a cooperative skipjack tagging programme as set out in IPFC/74/6 Supp. 1.

25. Stock assessments, to be useful, require reliable, and sufficiently detailed basic information on such things as catch statistics (including information on species composition), fishing effort, results of surveys etc. At present much of this information is lacking, e.g. statistics of national catches may sometimes not be very accurate, and often give only the total catch without breakdown by species or species groups. Consideration need to be given to determining the optimum level of detail and precision in national statistics bearing in mind the costs involved in obtaining better statistics, and the benefits gained (in terms of better planning decision, more timely introduction of management measures etc.) from improvement. However it is clear that in most cases, the detail and accuracy of presently available statistics is much less than the optimum, and considerable efforts are required to improve the present statistical systems.

26. In addition to obtaining information on the pattern of availability of fish by the use of different types of fishing gear, acoustic surveys were recognized as valuable for surveying pelagic fish. The Council was pleased to note the advanced stage of preparation for a training centre on the use of acoustic methods for stock assessment, and also the help that can be given by the South China Sea Programme for the installation of modern acoustic equipment in the research vessels of some of member countries taking part in the programmes of survey activities.

INTERNATIONAL AND REGIONAL PROGRAMMES

International Indian Ocean Fishery Survey and Development Programme

27. The Deputy Programme Leader introduced Document IPFC/74/10 which gives in brief the activities of the Indian Ocean Programme in so far as they relate to member countries of the IPFC. Special attention was drawn to the FAO/SIDA 3) Bay of Bengal Mission which *inter alia* had identified two important areas of activity namely, a Survey of the Living Resources in the Bay of Bengal, and a Regional Centre for the Development of Traditional Fishing Communities.

3) Swedish International Development Authority

28. The Council was also informed of the Programme activities in Pakistan, of the impending Arabian Sea Pelagic Fish Assessment Survey which would benefit India, Pakistan and Sri Lanka and the still undeveloped proposal for a Survey of Resources in the Seas off South Indonesian and Northwest and West Australia. The latter however was subject to the interest and approval of the two countries concerned.

29. Attention was drawn to the Programme publications and in particular to those dealing with Resource Management, and Mangrove Swamp areas.

30. In regard to future activity, the Council was informed of the studies to be undertaken in the fields of energy, institutions, the role of the Programme in the light of the expected changes resulting from the Law of the Sea Conference, etc.

31. In response to questions raised, the Council was informed that the regional activities of the Programme were those that could not be undertaken on a national scale either because of the nature of the activity or because of costs and the attitude of the donor agencies. The Programme activities were based on the plans of the participating countries and were meant to supplement or complement national activities. The Programme also undertook specific country studies on request, and the aim of the regional surveys was to provide information on the basis of which feasibility studies would be prepared for the individual countries.

32. The Programme's interest in aquaculture was limited to brackish water and coastal areas. Because of the limitation of funds, it could, at most, finance short term consultants and a few trainees.

33. The Programme's assistance was also sought for the Workshop on the Ecology of Mangrove Areas being organized by the Thai Department of Fisheries, in collaboration with the National Research Committee of Thailand to be held in late 1975.

34. The Council was informed of the Programme's efforts in obtaining bi- and multi-lateral assistance for the projects it is generating. Special attention was drawn to the assistance given by the Norwegian Agency for International Development (NORAD) and the likelihood of assistance from SIDA.

South China Sea Fisheries Development and Coordinating Programme

35. The Programme Leader gave a brief account of the activities of the Programme since its inception and invited the attention of the IPFC to Document IPFC/74/INF 2 which described Phase II of the Programme as sponsored by the eight countries and territories participating in it.

He also referred to the report of the First Session of the *Ad Hoc* Coordinating Committee of the Programme (Manila, 18-19 June 1974) and provided information on the present state of implementation of the Programme. In particular, he summed up the achievements of the Workshop on Planning and Coordination of Resources Survey and Evaluation in the South China Sea that had taken place in Manila from 28 August to 4 September 1974. Lastly, he indicated what steps had been taken to recruit the personnel required.

36. The IPFC expressed its appreciation of the activities carried out so far within the framework of the Programme and noted with approval the work plan to be implemented during its Phase II. It stressed that it was essential to maintain close cooperation with the International Indian Ocean Fishery Survey and Development Programme, so as to optimize the two Programmes could make to the development of fisheries in all the countries concerned.

37. The IPFC was informed that Brunei had given an indication of her intention to participate in the Programme.

Fishery Statistics

General

38. The Council reviewing papers IPFC/74/11, 11 (Add. A) and 12 considered the work and proposals of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics under three headings:

- (i) National Fishery Statistical Systems
- (ii) International Standardized System for Reporting Catch Statistics
- (iii) Regional Bulletins of Fishery Statistics.

National Fishery Statistical Systems

39. It was noted that national fisheries can be broken down into three main sectors:

- (i) Inland
- (ii) Marine, small-scale
- (iii) Marine, large-scale.

40. Whilst it was agreed that a national fishery statistical system should provide a comprehensive description of the national fisheries, it was felt that the optimum details of the statistics actually collected would vary from fishery to fishery. More detailed statistics might be collected from industrial fisheries, where collection of data was simpler and less costly, and it was possible to take more direct and detailed development and management action, than might be collected from small scale fisheries.

41. The problems of the adequacy of current national statistics, and the targets of detail, accuracy, and timeliness that should be aimed at in individual fisheries were also discussed under paragraphs 20 to 26 above. There is an urgent need both to improve national statistics; and to specify better the targets 4) This is mainly a matter for national action, but support on both these activities will be required from international and other sources.

42. The Council was reminded that the Indian Ocean programme was available to advise and assist member countries to develop viable fishery statistical systems capable of satisfying all national and international requirements at minimum cost. The Council was also reminded that similar assistance could be provided through national projects (as in the case of Indonesia) and that the South China Sea Programme would soon be able to offer the same sort of service to its member countries.

43. The Council was informed that a paper briefly describing the various ways statistics could be collected for both large and small-scale fisheries would be issued very shortly. The paper would also include discussion on the factors that inhibited the development of systems capable of providing reliable and adequate fishery statistics and how with international assistance these difficulties could be partially overcome. The Council recommended that such studies should include an analysis of the costs and benefits of various statistical systems. The Council was also informed that attention would be given to the issue of a more detailed practical manual devoted to the design and implementation of fishery statistical surveys and to the running of general training courses in fishery statistics.

4) See Appendix V of the Report of the First Session of the IPFC IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics, Bangkok, 1-5 December 1969.
FAO, Rome 1970 (FIES R 85)

International Standardized System for Reporting Catch Statistics

44. The Council noted that the Working Party had made detailed proposals for the boundary between Area 57 (Eastern Indian Ocean) and Area 71 (Western Central Pacific) which had been proposed in general terms in the Report of the Second Session of the Working Party. The Council further noted that the Working Party had made proposals for the boundaries of subareas constituting:

- (i) Area 51 Western Indian Ocean
- (ii) Area 57 Eastern Indian Ocean
- (iii) Area 71 Western Central Pacific
- (vi) Area 81 Southwest Pacific

but was able to propose species statistical lists for the first three of these areas only. For the three areas for which both subarea breakdown and species statistical lists now existed, the FAO Secretariat would undertake the preparation of questionnaires (and notes for their completion) which would be sent to countries fishing in any of the three areas requesting, for a selected year, details of annual catch by the standard species (or species groups), and by subarea. The FAO Secretariat would report to the Fourth Session of the Working Party on the results of the test survey.

45. With regard to the classification of species (or groups of species) for statistical purposes, the Council was informed that the existing FAO International Standard Statistical Classification of Aquatic Animals and Plants (ISSCAAP), presently consisting of 9 Divisions divided further into 51 Groups, was to be modified, probably by the sub-division of heterogeneous Groups, to make it more applicable to tropical fisheries.

46. The Council warmly welcomed the publication FAO Species Identification Sheets for Fishery Purposes (Area 57, Eastern Indian Ocean and Area 71, Western Central Pacific) and recommended that full support should be given to continue the work so far initiated (in particular by making funds available for travel by taxonomists contributing to the publication and for the drawing of the species outlines) and the extension of the programme to Area 51 (Western Indian Ocean) and Area 81 (Southwest Pacific). The Council also noted that work on the publication was preceded by an FAO/DANIDA 5) Seminar held in Phuket, Thailand, in 1972 and recommended that attempts be made to hold similar seminars for the other two areas. The Council recommended that future issues of the identification sheets should also include molluscs and crustaceans.

47. The Council noted that the International Standard Statistical Classification of Fishing Gear (ISSCFG), with certain modification to make it applicable to the IPFC/IOFC Region, had been proposed by the Working Party to replace the classification presented in its second report, so as to facilitate the use of a gear classification by countries fishing inside and outside the Region. A simple classification, by fishing method, proposed by the Working Party for vessels engaged in large scale fisheries in the region was also noted by the Council, but the Working Party was asked to consider introducing a further breakdown of these vessels by size class.

Regional Bulletins of Fishery Statistics

48. The Council's attention was drawn to bulletins which can now be published annually by FAO and had been presented as IOFC/74/INF 5,6,7,8; these publications contained annual catch by species by country and by area. The Council was informed that as soon as the International reporting system referred to immediately above was functioning properly, every attempt would be made by the FAO Secretariat to expand the current bulletins by introducing tables showing catch by species (or species groups) and by subarea.

5) Danish International Development Agency

IPFC Cooperative Programmes

49. The Council considered the ways and means of improving cooperation between participating research institutions in the Cooperative Research Programme on Aquaculture. It was suggested by some of the delegations that the cooperation of administrators and extension personnel should be enlisted in the selection of problems for research and for undertaking appropriate studies. In view of the scope of the Programme, which is restricted at present to research, and that too only on high-priority problems identified by the Council, the difficulties in establishing a mechanism for the participation of administrators and extension personnel, were noted. The possibility of including members with such expertise in the Working Party on Aquaculture and Environment, which is the coordinating body for the Cooperative Research Programme, was indicated and it was agreed that this should be explored.

50. In regard to the IPFC Cooperative Research Programme on Fish Product Development, the Council heard a report from the Secretariat on the two *AD HOC* MEETINGS OF THE IPFC Liaison Group on Cooperative Research on Fish Product Development, held in Tokyo, December 1973 and in Bangkok October 1974 respectively. It was also informed that a Classified Directory of Fisheries Technological Research Institutions and programmes in the IPFC Region has been prepared by the Secretariat and considered valuable by the Liaison Group. As suggested by that Group, a Guide to the Assessment of Technical problems in the Development of Fishery Product Industries has been appended to the Directory. The Council was further informed that a FAO/DANIDA Seminar Workshop on Fish Handling, Quality Control, Fish Inspections and Plant Sanitation for the Region is being organized to be held in Thailand in 1975. It noted that the Liaison Group, in accordance with its Terms of Reference had developed and formulated the following four project ideas:

- (i) Development of Suitable Handling, Preservation and Distribution Procedures for the Marketing of Freshwater Fish
- (ii) Ensiling of Fish Processing Waste and Surplus Fish
- iii) Proposed studies for Development of National Guidelines for Handling and Preservation of Fresh Fish
- (iv) Promotion of Extension Work in Fish Product Industries.

The very great importance of this Cooperative Programme in the post harvest field was stressed and the Council considered with interest the offer of the U.K. delegation to participate and make available its experience and expertise, particularly from the Tropical Products Institute.

51. The Council noted the suggestion from the Liaison Group that the possibility of forming a regional fish technology association would be investigated and agreed that this is a matter worth consideration by its Member Nations.

52. The Council concurred with the suggestion of the Liaison Group that the topic of the Symposium of its Eighteenth Session (1978) should be "Fish Handling and Processing Technology and Marketing in the IPFC Region", and agreed that a Working Party should be established to assist in the preparation of the Symposium. It was emphasized that the Symposium should deal on both technological and economic aspects and that its recommendation should be within the capabilities of the IPFC Member Nations to implement them.

53. The Council was informed by the Secretariat of its difficulties in implementing the IPFC Cooperative Programme of Exchange of Information among Fisheries Libraries, Institutions and Scientists in the IPFC Region, caused mainly by its unsuccessful attempts to obtain the services of a librarian as recommended by the IPFC Fifteenth Session. It endorsed the proposal of the Secretariat of exploring with the Indian Ocean and the South China Sea Programme, and developed Member Countries the possibility of obtaining the assistance of a librarian. It noted that the substantial facilities of the Library and Research Information Unit of the Department of Fisheries in Rome were available to members of IPFC, and believed that steps should be taken to ensure better use of these facilities.

Technical Conferences, Seminars Workshops, Training Centres Courses sponsored by FAO/other Organizations

54. The Council heard a report by the Secretariat on the following meetings, of interest to its work, held in the Region during the inter-sessional period: FAO Technical Conference on Fishery Products, FAO/NORAD Training Centre in Acoustic Methods for Fish Detection and Abundance Estimation, Cochin, India, 1973, SEAFDEC Seminar on South China Sea Fishery Resources, SEAFDEC Sixth Council Meeting, IDRC 6) Seminar on Aquaculture, IDRC Workshop on Stable Fish Products for Human Consumption, Pacific Science Association Symposium on Marine Sciences, Ninth Session of the International Coordination Group for the Cooperative Study of the Kuroshio and Adjacent Regions ESCAP 7) Workshop on Agro-Industrial Development in the Lower Mekong Basin, UNESCO Fifth Regional Meeting of Marine Science Experts in South East Asia, and others.

55. The Council was informed that the following other meetings are scheduled to be held in the Region during the next inter-sessional period: the FAO Technical Conference on Aquaculture, Kyoto, Japan, May-June 1976, Joint Meeting of the IPFC and IOFC Tuna Committees⁸⁾ to be held in conjunction with the Fourth Session of IOFC in June July 1975 in Kenya, and the Thirteenth Pacific Science Congress to be held in 1975.

Cooperative Study of the Kuroshio and Adjacent Regions (IOC/CSK)

56. Recommendations arising from the Ninth Session of the International Coordination Group of CSK (ICG/CSK), Bangkok, Thailand, 26 May - 1 June 1973, which were of interest to the IPFC, and recent developments regarding some of these recommendations were introduced by Dr. Deb Menasveta (Thailand).

57. The Council considered a recommendation of the ICG/CSK on the proposed workshop on marine pollution to be held in the CSK area. It noted that subsequently the IOC at its Eight Session (1973) adopted a resolution endorsing the above recommendation and inviting IPFC to jointly sponsor this workshop.

58. In view of the current activities of the Council in the fields of pollution in relation to the protection of fisheries and living aquatic resources, the Council decided to endorse the recommendation of its Executive Committee, adopted at its Fifty-First Session, (Manila, 20-21 June 1974) (IPFC/74/17, p. 15) and accepted the IOC invitation. The Council accordingly instructed the Secretary to collaborate with FAO and IOC in preparations for the Workshop. The Council noted that the workshop should be held in the latter part of 1975. In this connection, the Delegate of Japan informed the Council that his Government was considering the possibility of hosting the workshop but could not commit itself at the moment.

59. With respect to the recommendation on the proposed establishment of a permanent machinery similar to the International Council for the Exploration of the Sea (ICES) in the CSK region, the Council reiterated its views given at its Fifteenth Session (1972) that a proliferation and duplication of international bodies was undesirable and that in view of the existing close collaboration between IOC and FAO there was no need for any additional machinery for marine research in the IPFC region (*Proc. IPFC, 15th Session, Section I, page 20, para. 107*).

COOPERATION WITH OTHER INTERNATIONAL OR REGIONAL ORGANIZATIONS

60. The Council was informed by the Secretariat that close working relations had been maintained by IPFC with several international, regional and sub-regional organizations, including the following:

(1) The Southeast Asian Fisheries Development Centre (SEAFDEC)

6) International Development Research Centre.

7) Economic and Social Council for Asia and the Pacific.

8) IPFC Special Committee on Management of Indo-Pacific Tuna.
IOFC Committee on the Management of Indian Ocean Tuna.

- (2) The Intergovernmental Oceanographic Commission (IOC) through the International Coordination Group for the Study of the Kuroshio and Adjacent Regions (ICG/CSK)
- (3) UNESCO and UNESCO Field Science Office for South East Asia in Jakarta, Indonesia
- (4) Association of the Southeast Asian Nations (ASEAN)
- (5) Economic and Social Council for Asia and the Pacific (ESCAP), formerly ECAFE
- (6) Indian Ocean Fishery Commission (IOFC)
- (7) International Council for the Exploration of the Sea (ICES)
- (8) United Nations Environment Programme (UNEP)
- (9) International Development Research Centre (IDRC)
- (10) International Cooperative Alliance (ICA)
- (11) Other Non-Governmental or Private Organizations, like the Ford and Rockefeller Foundations, Resources for the Future, Inc.

61. The Council endorsed the close collaboration with those organizations and suggested that collaboration should also be established with other bodies, especially those concerned with economic aspects of fisheries.

In this regard it instructed the Secretariat to seek the establishment of relations with the Asian Productivity Organization (APO), Agriculture Division and Committee of ESCAP, United Nations Conference on Trade and Development (UNCTAD) and the International Commission for the Conservation of Atlantic Tuna (ICCAT).

ESTABLISHMENT OF COORDINATING COMMITTEE FOR THE SOUTH CHINA SEA PROGRAMME

62. The IPFC endorsed the view expressed by the Executive Committee at its Fiftieth Session (Rome, 18-19 April 1973) that the IPFC should exercise, with regard to the activities of the South China Sea Fisheries Development and Coordinating Programme, a coordinating function similar to that carried out by the Indian Ocean Fishery Commission in respect of the International Indian Ocean Fishery Survey and Development Programme. It also agreed with the Executive Committee that a Coordinating Committee should be established by the IPFC to assist it in performing this function.

The IPFC, therefore adopted the following resolution:

*"Coordinating Committee for the South China Sea Fisheries Development
and Coordinating Programme*

The IPFC

Implementing

its conclusion that there should be established a subsidiary body to facilitate its task of coordination and implementation of the South China Sea Fisheries Development and Coordinating Programme.

Hereby establishes

in accordance with Article III (2) and (4) of the Agreement for the Establishment of the Indo-Pacific Fisheries Council and with Rule X (3) of its Rules of Procedure, a Coordinating Committee for the South China Sea Fisheries Development and Coordinating Programme, hereinafter referred to as the Coordinating Committee.

Terms of Reference

The functions of the Coordinating Committee shall in particular include the following:

- (a) The act for the IPFC during inter-sessional periods with respect to matters relating to the South China Sea Fisheries Development and Coordinating Programme, hereinafter referred to as the Programme.
- (b) to maintain the closest liaison between the Programme and the IPFC
- (c) to provide guidance and assistance to the Programme
- (d) to consult, as appropriate, with member countries of the IPFC that are not represented on the Coordinating Committee and with the competent international organizations
- (e) to report to the IPFC, at each session, on its activities during the preceding inter-sessional period.

Meetings

The Coordinating Committee shall meet normally once a year or at such intervals as may be necessary to carry out its responsibilities.

Membership

The membership of the Coordinating Committee shall consist of the members of the IPFC Executive Committee and of a representative of each participating country that is not already represented on the Executive Committee.

Officers

The Coordinating Committee shall elect its own officers.

Secretariat

The Secretary of the Coordinating Committee shall be designated by the Director-General of FAO."

63. The IPFC was informed by the Secretariat that Singapore, although neither a Member Nation of FAO nor a member country of the IPFC, can be a full member of the Coordinating Committee in accordance with the provisions of Rule XII-5 of the IPFC Rules of Procedure. It also heard a statement by the Programme Leader of the South China Sea Fisheries Development and Coordinating Programme regarding the travelling expenses of the representatives of the participating countries when attending meetings of the Coordinating Committee.

64. The Coordinating Committee had its first session on 6 November 1974 in Jakarta during the IPFC Sixteenth Session; the Report of the meeting is given in Appendix VII.

C. OPERATIONAL AND ADMINISTRATIVE MATTERS

APPLICATIONS FOR MEMBERSHIP

65. The Council warmly welcomed Bangladesh as a new member and noted with regret that the Netherlands had withdrawn from the IPFC.

INTER-SESSIONAL REPORT OF THE IPFC EXECUTIVE COMMITTEE

Cooperative Approaches to Fisheries Development in the Asia and Far East Region

66. At its Fifteenth Session, the Council expressed its appreciation for the document "Cooperative Approaches to Fisheries Development in the Asia and Far East Region" and agreed that when revised and completed it would be a very valuable general action plan for the future activities of IPFC.

67. The Fifty-First Session of the IPFC Executive Committee endorsed the revised document and instructed the Secretariat to refer it to Member Governments prior to the IPFC Sixteenth Session so that delegates would be given specific instructions by their respective governments on particular issues in order that some decisions could be taken at the Sixteenth Session of the Council.

68. In considering this item, the Council agreed that the document has great value for the planning of development programmes of individual countries but pointed out that it should be updated, taking account of the degree to which several programmes have already been implemented.

69. In considering the paper the matter of small-scale fisheries development, including inland fisheries, was raised and the support from multilateral and bilateral agencies to assist with this problem was considered. In this regard reference was made to the role that the Indian Ocean and South China Sea Programmes, FAO and UNDP, the World Bank and bilateral agencies might play on this matter. It was agreed that the Indian Ocean and the South China Sea Programmes might assist Member Countries on request. FAO is ready to cooperate with financing institutions, like the World Bank and regional banks, in identifying projects suitable for financing. Regarding the World Bank it was pointed out that there is a growing climate for projects to assist small-scale fisheries but it was noted that the Bank is still in the stage of developing suitable criteria for appraisal. The Bank may tend to include this sector within the overall context of rural development.

70. The UK delegation stated that their bilateral programme has no funds specifically earmarked for fisheries projects but it is expected that requests for assistance might come from Member Countries, particularly in the area of the Indian Ocean Programme.

71. The Council emphasized that, apart from funding, technical expertise is also needed to translate plans into action programmes and stressed the need for specialized consultants for small-scale fisheries development.

Abolition of Technical Committees

72. At its Fifteenth Session, the IPFC had requested its Executive Committee to examine, in consultation with the FAO Secretariat, the possibility of abolishing the two Technical Committees on (1) Hydrology and Biology, and (2) Technology, bearing in mind that new arrangements might have to be made regarding the composition of the Executive Committee in view of the provisions of Article III (1) of the Agreement establishing the Council.

73. The IPFC was informed that after careful consideration of all the legal, financial and practical aspects involved, the Executive Committee had come to the conclusion that it should limit itself to recommending the abolition of the two Technical Committees. It endorsed this conclusion and considered Document IPFC/74/28 which listed the amendments that would have to be made to the IPFC Rules of Procedure, together with Document IPFC/74/28 (Add. 1) that had been submitted by the delegation of the United Kingdom.

74. With the approval of the delegations of the twelve member countries participating in the Session, the IPFC adopted the following amendments to its Rules of Procedure:

- (i) Rule X (2) should be deleted
- (ii) The terms of reference of the Technical Committees appended to the Rules of Procedure should be deleted.
- (iii) Paragraphs 3, 4 and 5 of Rule X should be renumbered 2, 3 and 4, respectively.
- (iv) The first sentence of Rule X (3) should be deleted and replaced by the following: "The Council may establish such committees or working parties as it deems necessary for the accomplishment of its tasks".
- (v) Paragraph 4 of Rule X should be deleted and replaced by the following: "The Establishment of committees and working parties referred to in paragraph 2 above shall be subject to the provisions of Article III (3) of the Agreement".
- (vi) Paragraph 4 of Rule XII should be deleted and replaced by the following: "Notwithstanding the provisions of paragraphs 1 and 2 above, the Council and its subsidiary bodies may elect to hold meetings in private, without the attendance of observers. Except in these circumstances, observers may participate fully in the discussions of the Council and its subsidiary bodies".
- (vii) In Rule XVI (1), the reference to Rule X (2) should be deleted.
- (viii) In Rule XVI (2), the words "a two-thirds majority of the votes cast" should be replaced by the words "a two-thirds majority of the membership of the Council".

75. The IPFC noted that the last amendment referred to above was necessary to bring Rule XVI (2) into line with the provisions of Article II (7) of the Agreement establishing the Council.

Financial Affairs of the Council

76. The Council in considering the IPFC Financial Statement reproduced in Appendix 1 of Document IPFC/74/19, approved the Statements of Expenditures for 1973-1974 and the budget estimates for 1975. Regarding the estimates for 1976-77 it noted that they were subject to revision in the light of the decision to be taken by the FAO Conference late in 1975 with respect to the budget for that biennium.

Regional Voluntary Fund

77. The Council recalling the recommendation adopted at its Fifteenth Session (Wellington, 1972) inviting Member Nations to consider the possibility of the establishment of a regional voluntary fund by way of contributions from developed Member Nations and others for the purpose of undertaking appropriate projects under the auspices of IPFC within the region, endorsed the project idea for an Asian Centre for Coastal Fisheries and Aquaculture Development proposed by its Executive Committee. The Council noting that the financing of the proposed project is under consideration by two Member Nations instructed its secretary to pursue the matter with a view to initiate the Regional Voluntary Fund.

EFFECTIVENESS OF EXISTING FISHERIES MANAGEMENT MACHINERY

78. The IPFC considered this item on the basis of Document IPFC 74 26 and of the supplementary information provided orally by the Secretariat.

79. Some delegations felt that there was no need at the present time for a review of the effectiveness of the IPFC with regard to the adoption and implementation of management measures. They observed that the exploitation of most stocks in the region could still be further intensified. One of these delegations pointed out that the IPFC was not a management and enforcement body and that the geographical area it was serving was so wide that it would not be practical to formulate a uniform management policy for such an area.

80. It was also noted that in practice even if IPFC did not adopt a new role it would not act as an enforcement agency. Experience in other parts of the world showed that commissions with responsibility for management depended upon implementation of management measures by national governments who themselves act as the local enforcement agencies.

81. The Council considered that it had, in fact, carried out very considerable work in this field during the past 25 years. While realizing that it had not yet recommended any specific conservation measure so that it was not possible to assess the efficacy of the procedures presently available to it under its Rules of Procedure, it considered that the time had now come to undertake a thorough review of its functions and responsibilities. Many delegates felt that such a review should not be restricted to examining what the role of the IPFC as a management advisory body was or should be, but should cover the whole range of its scientific and technical functions. In this connection, particular emphasis was placed on the need for redefining the contribution it should make to increasing the fishing capability of member countries, improving the collection and analysis of statistics and developing action programmes. It was also stressed that consideration should be given to the desirability of providing for suitable mechanisms, within the framework of the IPFC, to deal with urgent problems in limited areas, e.g. in the South China Sea. Mention was made of the need for devoting particular attention to the relationship between the IPFC and other bodies serving the same area or adjacent areas, including the Indian Ocean Fishery Commission, the South Pacific Commission, as well as other bilateral or multilateral arrangements.

82. After a thorough debate on these matters, the IPFC decided to set up an *ad hoc* Committee to review its functions and responsibilities and defined the mandate of that Committee as follows:

- (i) to review the achievements and limitations of the IPFC during the last 25 years with a view to determining the strengths and weaknesses of the Agreement and Rules of Procedure as presently in force;
- (ii) to redefine the functions and responsibilities of the IPFC in the light of the above review and to meet new challenges;
- (iii) in the light of (i) and (ii), to restate the provisions of the Agreement and Rules of Procedure as required;
- (iv) to perform any other task entrusted to it by the IPFC under other items of the agenda.

83. In carrying out this task the *ad hoc* Committee should take account of the experiences in other regions served by treaty-based organizations.

84. The Council requested the FAO secretariat to make full adequate preparations for the work of the *ad hoc* Committee including advance consultations with member nations and timely availability of documentation.

85. The IPFC decided that the *ad hoc* Committee would be open to all member countries of the IPFC and that its meeting could be attended by observers in accordance with Rule XII of its Rules of Procedure. It agreed that the meeting could be tentatively scheduled for October 1975 at the FAO Regional Office for Asia and the Far East in

Bangkok. It further agreed that the report of the *ad hoc* Committee should be submitted to the Executive Committee before being circulated to member countries at least six months in advance of the Seventeenth Session of the IPFC.

FAO STAFF SUPPORT TO IPFC

86. The Council considered the Document (IPFC/74/20) describing the type of support received from FAO.

87. After a discussion on this matter the Council reached the conclusion that to clearly determine the types of support needed IPFC should review its responsibilities and assess its requirements to carry out its work satisfactory. It was agreed that the matter should be considered by the *ad hoc* Committee established during the Session.

88. Whilst it was acknowledged that the support of the Department of Fisheries was essential to assist the Council to develop its activities it was recognized that the strength of the fisheries staff of the FAO Regional Office should be maintained at a satisfactory level. The importance of the role played by that staff in determining the requirements of the region and as a point of contact for fishery matters was stressed. In this regard the Council was informed that a second fishery officer will be appointed as soon as funds will be made available for this purpose to the Regional Office. The need for a qualified librarian to undertake the job of cataloguing and integrating the fishery library into the library of the Regional Office was emphasized.

89. The Council noted with appreciation the support given by the staff of the Indian Ocean and South China Sea Programme to its activities.

MATTERS REFERRED BY THE COUNCIL TO

Member Governments

90. The Council was informed by the Secretariat that, in accordance with instructions given by its Fifteenth Session, a list was provided to Member Nations of the types of actions recommended by Council at that Session and information on the actions taken by Governments was requested to be included in their Country Statements. The Council noted, however, that only a few countries were able to include such information in their Country Statements. It was felt that the Country Statements are useful for the Council to be informed of the progress of development of the Member Nations but that the subject headings may need some revision.

The desirability of submitting Country Statements well in advance, preferably two months before the Council's Session, was suggested to enable the Secretariat to be able to put before the Council a summary of the actions taken by Member Governments on IPFC recommendations.

FAO

91. The Council reviewed the action taken by FAO (IPFC/74/22) to implement the recommendations adopted by its Fifteenth Session (1972) and noted with satisfaction that most of the recommendations had been implemented through the FAO regular programme and the Indian Ocean and South China Sea Programmes.

MATTERS ARISING FROM THE REPORTS OF THE FAO REGIONAL CONFERENCE AND THE COMMITTEE ON FISHERIES

FAO Regional Conference

92. The Council was informed of Resolution 3/74 adopted by the recently held Twelfth FAO Regional Conference,

Tokyo, Japan, September 1974 wherein the Conference recommended to the Director-General of FAO and to the FAO Council:

- (i) that a continuing and functioning procedural link should be established between the Regional Conference and the Regional Technical Bodies;
- (ii) that through this link direct inputs from the latter bodies in regard to their sectoral priority areas and activities could be fed into the efforts of the Regional Conference in formulating a framework of overall Regional Priority Area on which FAO's Unified Programme of Work in the Region could be based;
- (iii) that the statutory Regional Technical Bodies should, therefore, as one of their main functions, concentrate on the selection of the priority activities within these areas;
- (iv) that the Regional Conference through the Technical Committee would synthesize these sectoral Priority Areas and activities into a framework of overall Regional Priority Areas for guidance of the Director-General of FAO in the formulation of his programme of Work and Budget in the Region;
- (v) that in this way, there will be set in motion a process of mutual and fruitful inter-action between the Regional Conference and Regional Technical Bodies which would ensure the purposeful involvement and participation of member nations - in all relevant sectors and at all appropriate levels - in a programming exercise that will result in the building of FAO Programmes in the Region which as far as possible should be structured from the bottom upwards;
- (vi) that this functional linkage between Regional Conference and Regional Technical Bodies should be recognized and put into effect; and
- (vii) that the Regional Office should be a focal point and as far as practicable and appropriate the servicing unit for the implementation of programmes as determined by the FAO Conference.

93. In this regard the question was raised by the Council as to how far IPFC recommendations reach the highest level of FAO for implementation and how IPFC recommendations can be effectively considered. The Council was informed that the Regional Conference has a purely advisory role within the FAO structure and that the IPFC as a regional body set up by international agreement concluded under the FAO Constitution has access to the governing bodies of the Organization and also to the Committee on Fisheries (COFI) as a Committee of the FAO Council. The Council agreed that it should take advantage of all possible avenues or channels of communication to ensure effective follow up action of its recommendations.

94. The sectoral Priority Area in Fisheries as adopted by the FAO Regional Conference is on the "Promotion of Fisheries Development through Cooperative Programmes, with emphasis on Aquaculture". Furthermore, the Conference agreed that the main focus of Agricultural development in the Region should be the small farmers, which includes also the small fishermen.

95. The Council felt that it should look at the economic and social aspects of planning and development and on the cost/benefit factors particularly on the relation of aquaculture with various alternative endeavours to enable fishery planners and administrators to make better decisions.

Committee on Fisheries

96. The IPFC was informed that at its Ninth Session held in Rome on 15-22 October 1974, the FAO Committee on Fisheries had agreed that, in the absence of any suitable machinery for international cooperation, there was an urgent need to set up a regional body within the framework of FAO to deal with inland fisheries in the Near East, Asia and

the Far East. The Committee on Fisheries had therefore decided to recommend to the Council of FAO that it should authorize the Director-General to consult with Governments of all FAO Member Nations in these regions and, in the light of this consultation, take the necessary steps towards the expeditious establishment of the proposed body.

97. After a discussion on this matter, during which two delegations indicated that they were in favour of the body being set up, the IPFC reached the conclusion that it could not support this proposal since in the last few years it had been devoting increasing attention to inland fisheries and aquaculture and would continue to do so. In its view, it was highly desirable to avoid the duplication of efforts and the proliferation of specialized bodies. However, the IPFC realized that its own membership and the membership of the proposed body would not be identical. It therefore decided to request the *ad hoc* Committee established under paragraph 82 above, to consider this question and to formulate proposals for practical arrangements.

98. The IPFC agreed to invite the Director-General to bring its views on this matter to the attention of the Council of FAO when it will consider the report of the Ninth Session of the Committee on Fisheries.

PREPARATIONS FOR SYMPOSIA OF FUTURE SESSIONS

99. The Council heard a report from the Convenor of the Working Party on Development and Utilization of Inland Fisheries Resources, and noted that a Prospectus laying down the objectives and organization of the Symposium for its Seventeenth Session (1976) had been prepared by the Working Party. The Symposium will be organized in four sessions as follows:

I. National perspective of inland fisheries.

II. Development and management of:

a) Riverine and estuarine fisheries.

b) Fisheries of natural lakes and man-made reservoirs.

c) Culture fisheries of freshwater ponds and tanks and those of swamps and marshes.

III. Marketing and utilization of inland fish catches including economics of capture and culture fishery operations.

iv. Conclusions and recommendations.

100. Specialists within and outside the Region, will be invited to participate in the Symposium.

101. The Council pointed out that the Prospectus should indicate that discussions will also be held on alternative approaches, e.g. aquaculture and inland fisheries, and on criteria for these alternatives.

102. The Council agreed that the topic for the Symposium of its Eighteenth Session (1978) should be "Fish Handling and Processing Technology and Marketing in the IPFC Region", and that a Working Party should be established to plan, prepare and organize the Symposium.

SUBSIDIARY BODIES OF IPFC

103. The Council noted that, in accordance with the instructions of its Fifteenth Session, the Secretariat has prepared and made available to the Council a Directory of Subsidiary Bodies of IPFC which contains information on date of establishment, session, membership, terms of reference, convenor and secretaries.

ANY OTHER MATTERS

IPFC Special Silver Anniversary Publication

104. The Council was informed that its Executive Committee had endorsed the issue of a publication to commemorate the twenty-fifth anniversary of IPFC and that the Indonesian Government has kindly offered to publish it.

105. The manuscript of a paper "Twenty-Five Years of IPFC" was presented to the Council and it was suggested that members of the Council should send their comments and amendments within one month after the Sixteenth Session to enable the Indonesian Government to print the book within their current budget period.

Relations with SEAMEO

106. The observer from the Southeast Asian Ministers of Education Organization (SEAMEO) gave a statement to the Council on the activities of the SEAMEO Regional Centre for Tropical Biology (BIOTROP) and called the attention of the Council that BIOTROP has several projects related to fisheries, e.g. workshop on aquatic weeds, effect of pesticides on fish and fish production and on training of research and extension workers on fish breeding. In his statement he indicated that SEAMEO would be willing to cooperate with IPFC.

D. CONCLUDING MATTERS

ELECTION OF OFFICERS

107. Mr. A.S. Mendis of Sri Lanka and Mr. F.R. Gonzales of the Philippines were elected unanimously as Chairman and Vice-Chairman respectively.

DATE AND VENUE OF NEXT SESSION

108. The Council accepted with deep appreciation the kind offer of Sri Lanka to host its Seventeenth Session in October/November 1976 at Colombo.

AGENDA

A. INTRODUCTORY AND PROCEDURAL MATTERS

1. Opening of the Session
2. Adoption of the Agenda and arrangements for the Session

B. TECHNICAL/SCIENTIFIC MATTERS

3. Symposium on the Economic and Social Aspects of National Fisheries Planning and Development
4. Problems pertaining to small-scale fishermen in the IPFC Region
5. Aquaculture and environment, including economics of aquaculture
6. Resources appraisal and management
 - (a) Tuna and tuna-like fish stocks
 - (b) Demersal fish stocks
 - (c) Pelagic Fish stocks (excluding tunas and tuna-like fishes)
7. International and regional programmes
 - (a) South China Sea Fisheries Development and Coordinating Programme (i) Report of First *Ad Hoc* (Coordinating Committee Meeting)
 - (b) International Indian Ocean Fishery Survey and Development Programme
 - (c) Fishery Statistics
 - (d) IPFC cooperative programmes
 - (e) Technical conferences, seminars/workshops, training centres/courses sponsored by FAO other organizations
 - (f) IOC/CSK
8. Effectiveness of existing fisheries management machinery
9. Cooperation with other international or regional organizations
10. Proposed establishment of Coordinating Committee for the South China Sea Programme

C. OPERATIONAL AND ADMINISTRATIVE MATTERS

11. Applications for membership
12. Inter-sessional report of the IPFC Executive Committee
 - (a) Cooperative approaches to fisheries development in the Asia and Far East Region
 - (b) Abolition of Technical Committee
 - (c) Financial affairs of the Council
 - (d) Regional voluntary fund
 - (e) Other matters referred by the Executive Committee to the Council
13. FAO staff support to IPFC
14. Matters referred by the Council to
 - (a) Member governments
 - (b) FAO
15. Matters arising from the Reports of the FAO Regional Conference and the Committee on Fisheries
16. Preparations for symposia of future sessions
17. Subsidiary bodies of IPFC
18. Any other matters

D. CONCLUDING MATTERS

19. Election of officers
20. Date and venue of next session
21. Adoption of the Report

SUMMARY REPORT
OF THE
SYMPOSIUM ON THE ECONOMIC AND SOCIAL ASPECTS OF
NATIONAL FISHERIES PLANNING AND DEVELOPMENT
FISHERIES DEVELOPMENT PERSPECTIVES TO 1985 IN THE INDO-PACIFIC REGION

Discussion Leader : Arporna Sribhibhadh
Rapporteur : G.D. Waugh

Principal Papers : IPFC/74/SYM 3-7
Related Papers : IPFC/74/SYM 12 and 22

1. The Symposium had before it long range perspective studies covering five sub-divisions of the Indo-Pacific and Indian Ocean region viz. - East Africa and West Asia, N.W. Pacific, South China Sea, Bay of Bengal, and Australia and Oceania.
2. Each of these studies gives a brief statement of the resource potential in the area together with an estimate of future domestic demand for fish on the assumption of a continuation of present trends in population and income growth. The conclusion in the case of every sub-region except the N.W. Pacific was that in general there remained considerable unexploited potential and the main constraint on the further growth and development of fisheries in the region as a whole was the lack of infrastructure and the need to expand the market and improve distribution facilities.
3. In introducing the subject the Discussion Leader summarized the regional reviews and pointed out that in dealing with perspectives it was inevitable that there had to be some reference to constraints on development. However, as constraints would be dealt with in more detail in subsequent sessions, discussion should be confined to the perspectives themselves, to their value for planning purposes and to their accuracy.
4. One of the basic assumptions of the studies was that there would be no change in the relative price of fish and other forms of protein and it was mentioned that prices and values in this respect could in fact change over the period under review. There was therefore a very clear requirement to consider development of protein and the technology of production in total and to forecast, if possible, what part fish will play in national diets of the future. In other words in any planning by member governments there needs to be an integrated approach to the question of food production.
5. It was also noted that fish is not universally acceptable as a food. For example though fish is the principal source of protein in the South China Sea area and is highly regarded as a food, the same does not apply to some of the countries of West Asia and East Africa where, though fish protein is readily available, relatively little is consumed. In such situations it may be necessary to find ways of making fish more acceptable to consumers.
6. It was also pointed out that the resource is heterogeneous and that abundance varies very much from area to area, and while there were in general abundant resources some species and some areas were already heavily exploited. This could mean that not all national aspirations will necessarily be achieved if several nations are fishing the same stocks. The assessment of the potential production of some of the African lakes was discussed and it was also recognized that at this stage the assessment had to be based largely on preliminary data. On the demand side it was re-emphasized that the projections were not meant to be forecasts but were extrapolation of present trends and merely indicated the situation which would obtain if population and income growth continued into the future as it had

in the recent part. However, it was recognized that the projections could be significantly altered by the development of training and for new fishing technologies in the developing countries.

7. There was some divergence into constraints and it was pointed out that, for example in East Africa, the pattern of development even in so short a period as 10 years could be materially altered by adequate training and equipping of fishermen in some developing countries.

8. It was felt that even though presented at a high level of species and commodity aggregation perspective studies of the type now before the meeting were of value as a background for national and regional planning.

A less highly aggregated approach would make the studies of greater value, for as a background to national plans but it would be necessary to strike balance between the extra resources required to produce such studies and the benefits to be denied from disaggregation. However, it was agreed that further discussion of the studies and any future work that may be desirable should be deferred to the final session of the Symposium.

REVIEW OF OBJECTIVES AND CONSTRAINTS TO FISHERIES DEVELOPMENT IN THE INDO-PACIFIC REGION

Discussion Leader : J. Marr

Rapporteur : E.H. Nichols

Principal Papers : IPFC/74 SYM 16

Related Papers : IPFC/74/SYM 8, 25 and 29

9. In discussion of this item cognizance was taken of comments arising from discussion of the previous item on perspective and potential discussion areas arising under the following item on National Policies and Planning procedures. In introducing the agenda item the Discussion Leader requested that discussion be focussed on a) analysis made in the papers, b) whether this analysis was endorsed in principle or whether exceptions needed to be noted, and c) what remedial action, if any, was called for.

10. The first general comments to be noted were that Paper 16 was based on the analysis of a questionnaire sent to member Governments, and that the nature of the questions posed, and the fact that the questionnaire had been addressed to Fisheries Departments, tended to pre-empt the response. In this connection it was mentioned that Fisheries Departments do not normally make policy, national priorities generally being decided in the light of wider political and socio-economic considerations. It was suggested that the analysis of the questionnaires might be recycled to other national fishery interests and form the basis of a further questionnaire to be addressed to fisheries and national economic development planning authorities.

11. It was noted that objectives had to take cognizance of wider economic policy and planning requirements, and that fisheries objectives - per se - would in many cases need to be subordinated to wider policy considerations concerning the economy as a whole. Whilst conflict between objectives could arise it was considered that a fair measure of compromise could be attained. There was general agreement that the most satisfactory approach was to determine the best "mix" of objectives to meet particular national or regional circumstances rather than rely exclusively upon a single priority approach. Furthermore it was also important to distinguish between short and long term objectives as well as between policies and programmes.

12. The main constraints revealed by the questionnaire listed in order of priority were lack of trained manpower, lack of entrepreneurial ability or poor management, lack of information about resources, or resources not available to existing

fleet, fishing industry not attractive to capital inadequate marketing, processing and storage facilities, deficient demand. The meeting recognized that these were in fact major constraints but other factors inhibiting growth and development could also be identified. These included: "outside" events of which a country had no control, lack of cooperation between Government and the private sector, wastage, problems associated with "Middlemen" and the political difficulties of enforcing management.

13. The lack of suitable in-depth data, needed for obtaining financial support whether national or international for fisheries development, was seen as a constraint of considerable magnitude and a serious omission from the list. It was strongly recommended that more feasibility studies, especially of a cost/benefits nature, were called for to bridge this gap in the development planning process. Likewise it was considered that insufficient attention and stress had been placed upon marketing constraints.

There was need for more pre-development studies in marketing as successful marketing was a *since qua non* for successful fisheries development. The impact, or potential impact, of international trade restrictions was noted as a further constraint, which could inhibit development of specific fisheries. The need for closer examination of this particular constraint was recommended as an area for action.

14. Paucity of business management advisory services was seen to be a further impediment to growth, and an area of neglect in extension and development services to fisheries industries. Likewise absence of known definitive policies and programmes was seen to present an often unrecognized or overlooked constraint to active development. It was recognized that increases in fuel prices involved serious direct and indirect constraints for fisheries development.

15. The relative importance of the education and training constraint came in for considerable debate. On balance opinion stressed the importance of this factor, whilst recognizing that there will be national variations and that it was unhelpful to generalise the problem too much, nevertheless it was felt that there was a danger of overemphasizing the constraint that lack of training imposed on growth and development in fisheries. Clarification of definitions for training and education, including requirements at various levels, was called for; and the necessity for adequate extension services especially as a means to up-grading the artisanal fisheries. Participants from both Korea and the U.K. offered assistance in the training and educational sphere.

16. A valuable contribution to the discussion was a timely reminder of the need to work within constraint parameters while at the same time attempting to ameliorate their effects.

17. The possibility of historic constraints such as obsolete legislation and outdated administrative structures influencing development was also referred to and attention drawn to the need for periodic structural review and re-organization to ensure that the best possible use is made of available expertise. The need to minimize time lag in technology transfer was also mentioned.

18. Perhaps the most important issue to arise from discussion, however, was the recommendation that IPFC establish Working Groups to examine certain specific constraint areas in more detail with a view to formulating action oriented recommendations. The detailed recommendations in respect of such Working Groups were referred to the Steering Committee for further consideration.

NATIONAL FISHERY POLICIES AND PLANNING PROCEDURES

NATIONAL FISHERY POLICIES AND PLANNING PROCEDURES

Discussion Leader : F.R. Gonzales

Rapporteur : L.I.J. Silva

Principal Papers : IPFC/74 SYM 10, 11, 13, 14, 19, 20

Related Papers : IPFC/74 SYM 24, 25, 29

19. In introducing the subject, attention was drawn to the principal papers mentioned above which relate to the situations in New Zealand, Hong Kong, Indonesia, Sri Lanka, Kenya and the Philippines. It was pointed out that a common thread of all these papers indicated that the formulation of fishery policies and the preparation of plans was very much tied up with the overall national development plans.

20. The opinion was expressed that the papers were mostly status papers, national in scope and character, and dealt with widely varying situations. It was therefore difficult to comment constructively on any particular aspect. A request was made to the Secretariat, to extract these aspects and concepts of a regional character which could then be a basis of discussion. On the other hand, it was pointed out that the preparation of these status papers was a useful exercise in that it had a salutary effect on fisheries administration and gave a useful insight into the fishery situation in the countries concerned.

21. The need for clearly thought out and clearly articulated policies was stressed and the comment was made that the existence of such well-defined policies made it less difficult to obtain government support within overall national development plan. In this connection it was agreed that UNDP, FAO and regional programmes should be tuned in with national plans. The work of the two regional programmes in the South China Seas and in the Indian Ocean in this connection was commented upon. Particular attention was drawn to the Fisheries Policy Study undertaken by the Indian Ocean Programme in Pakistan and the possibility of the usefulness of this study being publicised so that similar efforts could be undertaken in other countries. The usefulness of regional programmes in resolving conflicts in objectives as between countries was also noted and in this connection reference was made to the work of the South China Sea Fisheries Development and Coordinating Programme and the Indian Ocean Programme.

22. Attention was drawn to discussions in the previous session to objectives and constraints and the need to relate them to policy and planning. Some countries do not have plans at all. Is it good or bad? Is there a need for planning? In this connection it was also pointed out that perhaps due to lack of clear objectives a clear fisheries policy is hardly discernible in some countries. The possibility of the existence of conflicts in objectives as between states and the centre in a federal type of government, and the interruption of, or radical changes in policy caused by political change were also noted.

23. The Symposium heard a brief review of Korea's fishery development plans and an account of its attempts to mobilize the masses in fishery development. While it was recognized that the IPFC as such, could not initiate specific actions in particular countries, it was agreed that the IPFC could serve as a forum and as a centre where information would be exchanged and country policy studies could be discussed and experience gained, disseminated throughout the region.

ad hoc or continuing working groups, formed of national scientists supplemented as necessary by outside expertise.

31. It was pointed out that management objectives had been detailed in other sessions and no further comment was necessary except to add that it was necessary to protect stocks from extinction so as not to reduce the options of future managers. Management measures themselves can be directed at altering the quality of the catch or the quantity, and by banning certain methods entirely. An interesting possibility is indirect management by fiscal control. A simple measure is subsidy to get a fishery underway, with its subsequent withdrawal as production reaches desired levels. Control over loans is another method and can be effective, but not in high profit, high unit value fisheries or in situations where non-institutional finance is available.

32. Traditional management measures run a wide gamut and need not be detailed here as they are well-known. Some of them such as closures are more for the convenience of the industry than protection of stocks. In applying traditional measures care must be taken that they are not contradictory and are easily enforced and it was noted that the design of management measures was a multi-disciplinary matter. Limited licensing is an obvious approach but often runs into political and social difficulties, especially when traditional fisheries and modern fisheries are involved in exploiting the same resource.

33. Throughout there was concern over the source of fishery scientists. The consensus was that a soundly trained biologist, ecologist, mathematician physicist, relatively trained scientists was the best starting point. But, because of the nature of the academic process these people had to be further trained before they can operate effectively. In larger institutes this can be done in-house but some sort of regional training devices might be needed to serve the smaller countries as well as to promote standardized methods.

34. In summary it was noted that certain problems had emerged during the discussion that might require action. Those noted were:-

- (1) Statistics - already the subject of a continuing working group.
- (2) Stock assessment - which should be primarily in-country except where multinational fisheries and or very specialized disciplines are involved.
- (3) Catch allocation - a difficult problem requiring at least cooperative working parties.
- (4) Problems of regulation and enforcement in multinational fisheries - including the problem of reducing excess effort.

35. In view of these some actions such as the following might be contemplated.

- (1) Establish regular stock assessment workshops.
- (2) Strengthen arrangements for supplying specialist expertise to the region.
- (3) Establish a training centre, perhaps integrated with stock assessment workshops.
- (4) Consider a working group on enforcement.

PRINCIPLES OF PROJECT PREPARATION

Discussion Leader : Sidarto
Rapporteur : R.H. Baird

Principal Papers : IPFC/74/SYM 18, 26

36. Both of the above papers were presented by their authors. The Discussion Leader opened the discussion by pointing out the need for proper project preparation in order to attract funding, and sought the views and ideas of other countries in the Region.

37. In discussion it was pointed out that a great difference existed in preparing a project to expand an existing fishery and in preparing a project for developing a new fishery where little or no data exists. Consideration of economic returns were essential but the social effects, good and bad, were also important factors. IPFC should establish a link with agricultural development where a considerable amount of experience is being gained in the preparation of projects having interacting economic and social benefits. It was also pointed out that a reasonable proportion of funding should be allowed for contingencies in new projects, although it was also mentioned that an excessive contingency loading could lead to the return of the proposal by funding agencies.

38. Some countries considered that the social benefits, difficult to quantify had higher priority than immediate economic benefits. It was also indicated that indirect costs could result from *not* implementing a project, i.e. increased urbanization with perhaps increased urban housing costs, increased crime rates etc.

39. The technical difficulties of quantifying the hidden benefits of various projects arose frequently and there was general agreement that in many cases a multidisciplinary approach was desirable.

40. It was suggested that IPFC could provide models of various types of projects, with particular reference to small scale operators, and the project preparation required for each type of project. There was strong support for an IPFC sponsored workshop on Project preparation and it was requested that such a workshop should have, as one of its primary objectives, the preparation of a handbook, written in *plain words*, on examples of project preparation at the large, medium and small scale levels.

41. The loss of time incurred in detailed project preparation was discussed, but it was generally agreed that this time spent on careful preparation was a necessary evil and perhaps could save time in the long run.

RECOMMENDATIONS FOR FURTHER ACTION

42. The Symposium discussed the ways in which the broad consideration given to the problems of the region during the Symposium could be continued. There is a need for maintaining the impetus of IPFC activities during the inter-session periods; there is also a need to stimulate action for formulating the various problem areas and identifying constraints and to recommend and facilitate action to eliminate or bypass constraints. All these objectives might be attained by the establishment of small groups or working parties to consider specific problems. The formation of small working groups should fulfill the following criteria

- a) the members of groups should be limited in number
- b) they should be given very specific and well defined tasks which should be completed within the inter-session period, and report, and proposals circulated in advance of the next session.
- c) the leader or convenor of each group should be someone able to maintain the momentum of the work.

43. The suggested areas of the work within which specific tasks for working groups for the 1974-76 inter-sessional period should be selected, are given below. It was noted that additional support to these groups could be given by the Regional Projects (SCSP and IOP):

- (1) Infrastructure
- (2) Education, research and extension
- (3) Resource assessment
- (4) Resource management
- (5) Planning methodology, Perspective studies and Project Preparation
- (6) Processing, marketing and distribution
- (7) Cooperatives and associations
- (8) Business management and Credit

44. The Council set up a small *ad hoc* group to make more detailed proposals for these action plans. The report of this group is attached as Appendix VI.

45. In addition to work in these broad problem areas a number of specific proposals for further action were made during the course of the Symposium viz.:

- (1) Recycling the questionnaire.
- (2) An examination at the effect of trade restrictions on the growth and development of national fishing industries.
- (3) Action in the field of stock assessment and management
 - (a) Establishment of regular stock assessment workshops.
 - (b) Strengthen arrangements for supplying specialist expertise to the region.
 - (c) Establishment of a training centre perhaps integrated with stock assessment workshops.
 - (d) Consider a working group on enforcement, i.e. to identify the practical problems of implementing specific management measures either nationally, or in part or whole of the region.
- (4) Workshop on Project Preparation.

46. The above recommendations might be implemented where appropriate through the proposed working groups. As to the proposal for a Workshop on project preparation it was particularly suggested that this might receive support from the regional projects in the area.

OPENING ADDRESS

of

B.J. Rothschild, Convenor,
Indo-Pacific Fisheries Council-
Indian Ocean Fishery Commission Symposium on the
Economic and Social Aspects of National Fisheries
Planning and Development

Four years ago in Bangkok we decided that the IPFC, as a Council needed to focus greater attention upon specific actions that would stimulate fishery development in the Region. We were hopeful that by focusing the symposium of this session, the 16th of the Council, upon the question of the Economic and Social Aspects of Fisheries Planning and Development that we would go a *step beyond* merely describing the current status of fishery developments in the Region. Indeed, we were hopeful that as a result of this Symposium we could specify positive actions which could facilitate material improvement in the development of the fishery resources of the region, both through enhanced regional cooperation and a greater pooling of expertise in the areas of national fisheries planning and development.

With important foresight it was also recognized during the early stages of the Symposium planning that those countries of the Indian Ocean Fishery Commission who were not members of the IPFC shared common fishery development problems with IPFC and that this symposium might also, at the same time, include discussions relating to the entire IPFC/IOFC Region.

The call to develop specific actions should not, of course, be taken to mean that we have been standing still. There have been dramatic improvements in fishery development possibilities in the region both through actions of individual governments and by the development of multinational programs such as the Indian Ocean Programme and the South China Sea Programme. Yet at the same time there is much to be done in developing statistical systems; in investing in the human resources of the region through fishery education; in developing infrastructure; in creating a planning base so that we can more effectively move toward mutually satisfactory goals; in dealing with the knotty problems of making better fishery decisions through management; and in developing fishery research programs that are responsive and relevant to the needs of regional fishery development.

There is, I believe, a climate of urgency regarding this work in a world of accelerating concern for both our human and natural resources. In this climate, we must talk about actions for the future. These actions will not of course simply happen of themselves. They need to be stimulated and encouraged. New actions in the Region will require the backing, the stimulation, and the support of decision makers like yourselves. At the same time, it is essential that we do not in our zeal to act, act imprudently. We need to minimize our chances of taking the wrong action. We must be able to perceive the costs and benefit of any particular action not only in terms of its primary effects, but also in terms of what may initially be subtle secondary effects which have lasting harmful consequences. We can minimize our risk by careful planning and analysis.

As a first stage in this process of planning and analysis we have attempted to tie together some views of fishery problems of the Region to identify elements of common concern.

In terms of perceiving the nature of the problems that confront the Region we can see some quite common threads in the regional perspectives (IPFC/74/SYM 34). These common threads relate to two observations:

1. The resource base with some exception appears to be adequate for material expansion of the catch.

2. There are serious deficiencies in marketing, processing, storage, distribution, and in the regional institutional framework.

In a way these common threads revealed in the perspectives were not surprising since they are typical of most fishery development problems.

Yet the perception of fishery development in the region according to the questionnaires analyzed by Dr. Lawson (IPFC/74/SYM 16) seems to have a somewhat different focus.

In this analysis the objectives of governments are, most typically to provide food for domestic requirements and to develop exports. While the constraints against achieving these objectives appears to be perceived in what would appear to be a priority order, as:

- i. Insufficient well-trained manpower and entrepreneurial ability.
- ii. Uncertainty about the resource.
- iii. Infrastructure and including marketing.

These problems all relate of course to uncertainty with respect to investment but more importantly the expression of these problem-areas in the questionnaire analysis tends to demonstrate a gap between the problems as they are perceived in the countries and the problem indicated in the country perspectives. It is noteworthy that:

- i. Infrastructure seems to be a rather important constraints on fishery development in the region, yet the subject of infrastructure does not appear to be of as serious concern in the questionnaire as the subject of well-trained man-power.
- ii. The country perspectives relate some optimism with respect to resource potential yet the questionnaires exhibit a concern for the resource potential.

If we just look at these two observations and assume that the questionnaires are indeed representative we can already see some questions that need to be developed.

1. Is there a regional focus on infrastructure development and can such regional focus implement and pave the way for greatly accelerated fishery development in the region? How can we develop this regional focus - Is there an infrastructure problem? If so, what's its nature? How do we pool all of our talents to get something done about it, or is the development of infrastructure so closely tied to general economic development that the fishery infrastructure cannot surpass that of the economy in general?
2. Apparently we are not making the best uses of human resources in the region. Despite a number of international assistance programs, training centers, and other establishments for transferring knowledge, there is still a perception of a need for skilled workers in fishing, in fish processing, and in fishing management. Are we doing something wrong, and if so how can we go about changing it?
3. There appears to be a difference in perception regarding the magnitude of the resources as seen by stock assessment specialists and by investors. It is likely that this difference arises from insufficient information on particular fish stocks identifying whether a) they are abundant in profitable quantities, b) the appropriate methodology for the profitable taking of these stocks. How can we close this information gap and by closing it reduce investment risk and encourage further fishery development?

While answers to these questions will, I am sure, be developed during the course of the symposium, we can think of a number of action areas. All of these are, of course, not independent.

1. *Fishery Education.* Given the general state of economic development many of the problem areas listed relate in some way to the need to apply much greater quantities of talent to the fishery development problem. We need, in the Region, a much greater number of skilled individuals in the development of harbour facilities, in marine engineering, in boat building, in processing, in marketing, in business administration and in fishery research and management. Do these individuals presently exist? Or do they need to be "created"? In thinking about this problem we have to ask to what extent the development of regional expertise is correlated with fishery development. If the development of regional expertise is positively related to fishery development then perhaps we need a regional institution that will greatly accelerate training on a broad and cooperative scale throughout the region. I am thinking of a regional educational institution that could concentrate on explicit fishery subjects such as business administration skills, fishery planning, population dynamics, marine engineering, etc. It would be distinct from many programs in that it would develop middle and high level skills and through the development of these skills there will emerge a cadre of fishery expertise in the Region.
2. *Fishery Statistics.* Better fishery decision making and fishery management requires good fish statistics. In many instances fishery statistics are inadequate and this problem is recognized and being worked on in the region as is in evidence from the meeting documentation and the work of our Working Group on fishery statistics.

This problem was discussed in some detail at the ICCAT workshop on tuna population dynamics that was held in Nantes France in September. Basically there are two kinds of problem-areas in fishery statistics. The first involves the need for all members of the fishery community to be responsible for and to be motivated towards supplying good fishery statistics. The second involves the technical problems of supplying adequate statistics; (for example, what is the best way to record catches and effort in tropical fisheries that take several hundred species). In the statistical area we need a common understanding of the kinds of motivational forces that will generate, in the community, more responsibility toward statistics collection, a better appreciation of kinds of statistics that are required, and expert advice on the use of modern computer-oriented information systems in the fishery statistics area. And last but not least we need to better appreciate the costs and benefits of the fishery statistical system. I am hopeful that IPFC can examine the fishery statistics problem in this full scope of the motivation problems, the nature of statistics, and information systems as a Region.

3. Finally if IPFC is going to move ahead as an Institution it will have to do some institution building of its own. It will have to examine research programs of its members to achieve better coordination and a higher relevance avoiding the absurdity of, as Duncan Waugh notes, (IPFC/74/SYM 15), separating research from management.

It will have to develop explicit mechanism to deal with the education problem. It will need to face the infrastructure problem by first formulating it as a regional problem and then determining if there are methods of solution. It will also have to enter the area of improving the resource decision making capabilities in the Region and in this regard the subject of fishery management is already being discussed.

If IPFC is to deal with the question of fishery management as an institution then it will have to be extremely careful that management methodology is not entered into in a vacuum without considering the need for fishery statistics; the economic waste of fixed fishery quotas; the seemingly inevitable changes in fishery jurisdiction; and the relation of IPFC to other fishery entities whose boundaries overlap those of the IPFC Region.

Developing these accelerated programs of action and seeing that they are adequately funded will require enhanced regional capabilities in development, planning, management, and research.

In these areas we also need to rely more heavily on traditional funding sources to generate action-oriented programs at critical-mass levels.

Hopefully this symposium can help us formulate the nature of an expanded and responsive regional program.

LIST OF PARTICIPANTS

MEMBERS OF THE COUNCIL

	Name	Designation	Address
AUSTRALIA	Mr. E.A. Purnell-Webb (Delegate)	Assistant Secretary Operations Branch	Fisheries Division Dept. of Agriculture Canberra, ACT. 2600 Australia
	Mr. M.A. Sturman (Alternate)	Director, Research and Statistics Section	Fisheries Division Dept. of Agriculture Canberra, ACT. 260 Australia
	Dr. G.I. Murphy (Adviser)	Research Scientist	Division of Fisheries and Oceanography CSIRO, P.O. Box 21 Cronulla, N.S.W. 2230 Australia
BANGLADESH	Mr. K.K. Panni (Delegate)	H.E. the Ambassador	Embassy of Bangladesh 7, Jl. Mendut, Jakarta Indonesia
	Mr. H. Bashal (Alternate)	First Secretary	Embassy of Bangladesh 7, Jl. Mendut, Jakarta Indonesia
INDIA	Prof. P.C. George (Delegate)	Joint Commissioner (Fisheries)	Ministry of Agriculture C.D. and Cooperation Dept. of Agriculture Krishi Bhavan New Delhi 1, India
	Dr. V.G. Jhingran	Director	Central Inland Fisheries Research Institute Barrackpore via Calcutta West Bengal, India
INDONESIA	Mr. Hadi Atmowasono (Delegate)	Director of Planning	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia

Mr. Vicentius Soesanto (Alternate)	Director of Resources	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Hasanuddin Saanin (Adviser)	Assistant to the Minister of Agriculture	Dept. of Agriculture Jalan Cut Mutiah 11 Jakarta, Indonesia
Dr. A.T. Birowo (Adviser)	Chief, Bureau of Planning	Dept. of Agriculture Jalan Imam Bonjol 29 Jakarta, Indonesia
Mr. Soerjadi (Adviser)	Senior Officer Directorate for Multilateral and Economic Cooperation	Dept. of Foreign Affairs Jalan Singamangaraja Kebayoran Jakarta, Indonesia
Mr. Sidarto Amal Abadi (Adviser)	Director of Enterprise Development	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Latief Hasjim (Adviser)	Director of Extension	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. R. Slamet Prayitno (Adviser)	Director of Production	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Sofjan Iljas (Adviser)	Director	Institute of Fisheries Technology Jalan Satsuitubun Pal Merah Jakarta, Indonesia
Mr. Mohammad Unar (Adviser)	Director	Institute of Marine Fisheries Research Jalan Kerapu 12 Jakarta, Indonesia
Mr. R. Roestami Djajadiredja (Adviser)	Director	Institute of Inland Fisheries Research Jalan Sempur Bogor Bogor
Mr. Roestam Boediono (Adviser)	Director	Fisheries Academy Pasar Minggu Jakarta, Indonesia

Mr. Patoppoi Passau (Adviser)	Assistant to the Director General of Fisheries	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Mangara Mulia (Adviser)	President Director	P.T. Perikanan Samodra Besar Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. B. Luhut Hutapea (Adviser)	President Director	P.T. Karya Mina P.T. Usaha Mina Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Soebagyo (Adviser)	Director	P.N. Perikani Barat Jalan Kerapu 12 Jakarta, Indonesia
Mr. Soedarsono (Adviser)	Director	P.N. Perikani Timur Aertembaga, Manado Sulawesi Utara Indonesia
Lieut.Colonel Oge Suroyo (Adviser)	Chairman	Indonesian Fisheries Club Hotel Kartika Plaza Jalan Thamrin Jakarta, Indonesia
Dr. S.P. Napitupulu (Adviser)	Director	Surya Sakti Ltd. Jalan Binjai Km. 10-8 Medan, Sumatera Indonesia
Prof. Dr. Sumardi Sastrakusumah (Adviser)	Dean, Fisheries Faculty	Institute of Agriculture Baranangsiang, Bogor Indonesia
Mr. Ondara (Expert)	Chief, Branch of the Inland Fisheries Institute	Jalan Kapten A. Sastro No. 40 Palembang Sumatra, Indonesia
Mr. Sunyoto Darmoredjo (Expert)	Chief, Planning & Programming Division	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
Mr. Ali Poernomo (Expert)	Project Co-Manager UNDP/FAO, Brackish Water Shrimp & Milkfish Culture Applied Research and Training	Jalan Taman Kartini P.O. Box 1 Jepara Central Java Indonesia

	Mr. Kusno Rahardjo (Expert)	Chief, Statistics Division	Directorate General of Fisheries Jalan Salemba Raya 16 Jakarta, Indonesia
	Mr. Soegito (Expert)	Director, Bureau II Central Bureau of Statistics	Jalan Dr. Soetomo Jakarta, Indonesia
JAPAN	Mr. K. Shima (Delegate)	Senior Research Planning Officer	International Affairs Division Fishery Agency Ministry of Agriculture and Forestry 2-1, 1-Chome, Kasumi- gaseki, Chiyoda-ku Tokyo, Japan
	Mr. A. Suda (Alternate)	Third Secretary	Japanese Embassy 24 Jalan Thamrin Jakarta, Indonesia
KOREA REPUBLIC OF	Mr. Kim, Kyun Hyun (Delegate)	Chief, International Coperation Division	Office of Fisheries of the Government of the Rep. of Korea 235-11 Soobinggo-Dong Yongsan-Ku Seoul Republic of Korea
MALAYSIA	Y.M. Tengku Ubaidillah bin Abdul Kadir (Delegate)	Director-General	Fisheries Division Ministry of Agriculture and Rural Development Jalan Swettenham Kuala Lumpur West Malaysia
	Tan Cheng Kiat (Alternate)	Acting Senior Fisheries Officer	Fisheries Division Ministry of Agriculture and Rural Development Jalan Swettenham Kuala Lumpur West Malaysia
	Lee Chan Lui (Adviser)	Research Coordinator	Freshwater Fishery Research Station (MARDI), Malacca West Malaysia

	Mr. Sabri bin Ahmad (Adviser)	Acting Director of Implementation	Fisheries Development Authority UMBC Building Kuala Lumpur West Malaysia
	Mr. Chin Phui Kong (Adviser)	State Fisheries Officer (Sabah)	Dept. of Fisheries Kota Kinabalu P.O. Box 1064 Sabah, East Malaysia
	Mr. Ong Kee Bian (Adviser)	Senior Fisheries Officer (Inland Fisheries Div. Sarawak)	Dept. of Agriculture Kuching, Sarawak East Malaysia
	Miss J. Pang (Adviser)	Fisheries Officer (Research)	Dept. of Agriculture Inland Fisheries Branch Kuching, Sarawak East Malaysia
NEW ZEALAND	Mr. G.D. Waugh (Delegate)	Director of Fisheries Research	Fisheries Research Division Ministry of Agriculture and Fisheries The Terrace P.O. Box 19062 Wellington, New Zealand
	Mr. J. S. Campbell (Alternate)	General Manager	Fishing Industry Board P.O. Box 9232 Wellington, New Zealand
PHILIPPINES	Mr. F.R. Gonzales (Delegate)	Director of Fisheries	Bureau of Fisheries and Aquatic Resources P.O. Box 623 Intramuros Manila, Philippines
	Mr. C.M. Ramos	Officer-in-Charge Fishery Statistics Section	Bureau of Fisheries and Aquatic Resources P.O. Box 623 Intramuros Manila, Philippines
SRI LANKA	Mr. A.S. Mendis (Delegate)	Deputy Director Fishery (Research)	Department of Fisheries P.O. Box 531 Colombo, Sri Lanka Republic

THAILAND	Mr. Tuanthai Bamrajarinpai (Delegate)	Deputy Director-General	Department of Fisheries Ministry of Agriculture and Cooperatives Rajadamnern Avenue Bangkok, Thailand
	Dr. Deb Menasveta (Alternate)	Chief Marine Fisheries Branch	Department of Fisheries Ministry of Agriculture and Cooperatives Rajadamnern Avenue Bangkok, Thailand
UNITED KINGDOM	Dr. D.N.F. Hall (Delegate)	Principal Fisheries Adviser	Ministry of Overseas Development Eland House Stag Place London SW1E 5DH United Kingdom
	Mr. E.H. Nichols (Alternate)	Director of Agriculture and Fisheries	Agriculture and Fisheries and Fisheries Canton Road Government Offices 393 Canton Road 12th floor Kowloon, Hong Kong
	Mr. R.C. Cole (Adviser)	Principal Scientific Officer	Tropical Products Institute Ministry of Overseas Development 56/62 Gray's Inn Road London WC1X 8LU United Kingdom
	Prof. R.H. Barback (Adviser)	Head	Department of Economics and Commerce University of Hull Kingston upon Hull United Kingdom
U.S.A.	Prof. B.J. Rothschild (Delegate)	Centre Director	U.S. Department of Commerce National Oceanic and Atmospheric Administration National Marine Fisheries Service Southwest Fisheries Centre Honolulu and La Jolla Laboratories P.O. Box 271, La Jolla California, U.S.A. 92037

Mr. R.S. Shomura
(Alternate)

Director

Honolulu Laboratory
National Marine Fisheries
Service
P.O. Box 3830
Honolulu, Hawaii 96812
U.S.A.

OBSERVERS FROM MEMBER NATIONS NOT MEMBERS OF THE COUNCIL

	Name	Designation	Address
CANADA	Dr. I.W. Dickson	Team Leader	National Inland Fisheries Institute P.O. Box 9-28 Bangkok 9, Thailand
	Mr. J.W. Whitaker	Fisheries Expert CIDA	National Inland Fisheries Institute P.O. Box 9-28 Bangkok 9, Thailand
KENYA	Mr. P.N. Kamande	Assistant Director of Fisheries	Fisheries Department P.O. Box 90423 Mombasa, Kenya
NETHERLANDS	Prof. P. Korringa	Director	Netherland Institute for Fisheries Investigation P.O. Box 68 Ijmuiden Netherlands
OMAN	Mr. J.C. Marr	Chairman	Mardela Fisheries Ltd. P.O. Box 393 Honolulu, Hawaii U.S.A. 96809

OBSERVERS FROM NON-MEMBER STATES

	Name	Designation	Address
UNION OF SOVIET SOCIALIST REPUBLIC	Mr. O. Matveev	Economist	Office for Economic Cooperation USSR Embassy Jalan Daksa 1 Kebayoran Baru Jakarta, Indonesia

REPRESENTATIVES OF UNITED NATIONS AND SPECIALIZED AGENCIES

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)	Mr. A. Carcia	Resident Representative of UNDP in Indonesia	UNDP, Jl. M.H. Thamrin 14 P.O. Box 2338 Jakarta, Indonesia
	Mr. A.G. Denton- Thompson	Senior Agriculture Adviser FAO Country Representative	UNDP, Jl. M.H. Thamrin 14 P.O. Box 2338 Jakarta, Indonesia
INTERNATIONAL BANK FOR RECON- STRUCTION AND DEVELOPMENT (IBRD)	Mr. L.M. Sprague		IBRD Agricultural and Rural Development Dept. Central Projects Staff 1818 H. Street, N.W. Washington, D.C. 20433 U.S.A.
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC)	Dr. M. Angot	Regional Expert for Marine Science, South East Asia	UNESCO Field Science Office for SEA United Nations Bld. 2nd floor M.L. Jalan Thamrin 14 P.O. Box 273 Jakarta, Indonesia
UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGA- NIZATION (UNESCO)	Dr. M. Angot	Regional Expert for Marine Science, South East Asia	UNESCO Field Science Office for SEA United Nations Bld. 2nd floor M.L. Jalan Thamrin 14 P.O. Box 273 Jakarta, Indonesia

OBSERVERS FROM INTERGOVERNMENTAL ORGANIZATIONS

GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN (GFCM)	Mr. H. Rosa, Jr.	Senior Fishery Liaison Officer	Fishery Liaison Unit Department of Fisheries FAO, Via delle Terme di Caracalla Rome, Italy
INDIAN OCEAN FISHERIES COM- MISSION (IOFC)	Mr. H. Rosa, Jr.	Senior Fishery Liaison Officer	Fishery Liaison Unit Department of Fisheries FAO, Via delle Terme di Caracalla Rome, Italy

SOUTHEAST ASIAN FISHERIES DEVELOP- MENT CENTRE (SEAFDEC)	Dr. Arporna Sribhibhadh	Secretary General and Chief Training Dept.	Southeast Asian Fisheries Department Centre P.O. Box 4 Phrapradaeng Samut Prakarn, Thailand
	Dean D.K. Villaluz	Chief, Aquaculture Department	Southeast Asian Fisheries Department Centre Iloilo City Philippines
	Dr. Q.F. Miravite	Director, General Affairs Aquaculture Department	Southeast Asian Fisheries Development Centre Kalayaan Bld., Sakedo ST Makati, Rizal Philippines
	Mr. P.S. Manacop	Research Coordinator Aquaculture Department	Southeast Asian Fisheries Development Centre Kalayaan Bld., Sakedo ST. Makati, Rizal Philippines
SOUTHEAST ASIAN MINISTERS OF EDUCATION ORGA- NIZATION (SEAMEO)	Mr. P. Soewignyo	Programme Manager Tropical Aquatic Biology	SEAMEO Regional Centre for Tropical Biology (BIOTROP) Kebun Raya P.O. Box 17 Bogor, Indonesia

Name	Designation	Address
SOUTH PACIFIC COMMISSION	Mr. R.H. Baird (SPC)	Fishery Adviser SPC P.O. Box D.5 Noumea Cedex New Caledonia

OBSERVERS FROM NON-GOVERNMENTAL ORGANIZATIONS

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC)	Dr. F.B. Davy	Programme Officer	International Development Research Centre Room 312 314, Duke Hall University of British Columbia Vancouver 8 D.C. Canada
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VISITORS

Directorate General of Fisheries, Jakarta, Indonesia

Name	Address
Mr. Soehardi	Chief, Resource Management Division
Mr. Soewito	Chief, Resource Preservation Division
Mr. Slamet Soeseno	Chief, Extension Division
Mr. Soekirno	Chief, Cooperative Division
Mr. Muranto	Chief, Fishing Technique Division
Mr. Hoediono	Chief, Marketing Division
Mr. Imam Sutrisno	Chief, Law & Regulation Division
Mr. Soemarno	Senior Officer, Law & Regulation Division
Mr. Martono	Chief, Foreign Investment Division
Mr. Sihar Siregar	Act. Chief, Credit Division
Mr. Burhanuddin Lubis	Senior Officer, Directorate of Production Directorate General of Fisheries
Mr. D. Soekirno	Chief, Administrative Division Institute of Fisheries Technology
Mr. Sujuti Nasran	Chief, Traditional Processing Division, Institute of Fisheries Technology
Mr. Abdurrahman	Chief, Quality Control and Development Division, Institute of Fisheries Technology
Mr. Yunizal	Chief, Research Laboratories, Institute of Fisheries Technology
Mr. Dwiponggo	Chief, Oceanography Research Division, Institute of Marine Fisheries Research
Mr. Walujo Subani	Chief, Biological Research Division Institute of Marine Fisheries Research
Mr. J. Uktolseya	Chief, Catching Technique Division, Institute of Marine Fisheries Research
Mr. Soeratno	Chief, Research Division, Institute of Marine Fisheries Research
Mr. Atmadja Hardjamulja	Chief, Biological Research Division, Institute of Inland Fisheries Research
Mr. Soetardjo Natawirja	Chief, Aquaculture Division, Institute of Inland Fisheries Research
Mr. Rachmatun Soejanto	Chief, Branch, Inland Fisheries Research Pasar Minggu, Jakarta, Indonesia

Mr. Dicky Mudhanu	Chief, Water Pollution Division, Directorate of Resources, Directorate General of Fisheries
Mr. Soemarto	Chief, Education Division, Academy of Fisheries, Pasar Minggu, Jakarta, Indonesia
Mr. Tatang Sudjastani	Technical Officer, Institute of Marine Fisheries Research, Jalan Kerapu No. 12, Jakarta, Indonesia
Mr. Purwito	Technical Officer, Institute of Marine Fisheries Research, Jalan Kerapu No. 12, Jakarta, Indonesia
Mr. M.Fatuchri	Technical Officer, Institute of Marine Fisheries Research, Jalan Kerapu No. 12, Jakarta, Indonesia
Mr. Bambang Soebagyo	Technical Officer, Institute of Marine Fisheries Research, Jalan Kerapu No. 12, Jakarta, Indonesia
Mr. Alex Rawung	Technical Officer, Institute of Marine Fisheries Research, Jalan Kerapu No. 12, Jakarta, Indonesia
Mr. Soetik Moehadi	Chief, Regional Fisheries Service of Jakarta Municipality, Jakarta, Indonesia
Mr. P. Harsono	Chief, Regional Fisheries Service of West Sumatera, Padang
Mr. Max Wibisono	Chief, Regional Fisheries Service of Riau, Pekanbaru
Mr. Sumarjo W.	Senior Officer, Regional Fisheries Service of Jakarta Municipality, Jakarta, Indonesia
Mr. R. Soekarno	Senior Officer, Directorate General of Fisheries, Jakarta, Indonesia
Mr. H.G.M. Charidjie Kasuma	Jalan Banyuwangi No. 1, Jakarta, Indonesia

Others

Prof. Dr. Ir. Ahmad Satari	Bogor Agriculture University (IPB) Baranangsiang, Bogor, Indonesia
Prof. Dr. Soehadji	Gajah Mada University, Yogyakarta, Indonesia
Marshall Soewoto Soekendar	Indonesian Chamber of Commerce (KADIN) Jakarta Fair Complex, Jakarta, Indonesia
Prof. Dr. Ir. Bachtiar Rifai	Indonesian Institute of Sciences, Jalan Teuku Tjilik Diring 43, Jakarta, Indonesia
Mr. Aprilani	Marine Research Institute (LPI), Pasar Ikan, Jakarta, Indonesia
Mr. W.E. Siyapauw	Meteorological Institute, Jalan Arief Rachman Hakim, Jakarta, Indonesia

Prof. Dr. Ir. Toyib Hadiwijaya	National FAO Committee, Jalan Imam Bonjol 29, Jakarta, Indonesia
Prof. Drs. Hendarsyah	Pajajaran University, Jalan Dipati Ukur, Bandung, Indonesia
Mr. Nakahira	Tofico Ltd., Jalan R.E. Martadinata, Jakarta, Indonesia
Prof. Dr. Mahar Mardjono	University of Indonesia (U.I.), Salemba Raya, Jakarta, Indonesia
Mr. Soekirjo	West Irian Fishing Industries, Ltd., Jalan Hang Tuah 11, Jakarta, Indonesia
Mr. Sujatin	Bonecom Ltd., Jalan Kebon Sirih 40 15, Jakarta, Indonesia
Mrs. Evi Thanos	Hasikin Ltd., Jalan Tanah Abang II 52, Jakarta, Indonesia
Mr. Djamsu Papan	Pumar Ltd., Jalan Lautze 34 87, Jakarta, Indonesia
Dr. A. Soerojo	Diponegoro University, Semarang, Indonesia
Drs. Lachmudin Sachroni	Diponegoro University, Semarang, Indonesia
Mr. Harjono	Semarang Cold Storage Ltd., Jalan Mpu Tantular 94, Semarang, Indonesia
Mr. Ridwan Sutjiamidjaja	Dharma Mulia Ltd., Jalan Kalibesar Barat 2, Jakarta, Indonesia
Mr. Sunarwoto	Indra Deli Ltd., Pintu Kecil 30, Jakarta, Indonesia
Mr. Haji Ibrahim	Irian Marine Products Ltd., Jalan Mendawai III 2, Jakarta, Indonesia
Mr. Radja Bauw	Irian Marine Products Ltd., Jalan Mendawai III 2, Jakarta, Indonesia
Mr. Haris Nasution	Nusantara Fisheries Ltd., Nusantara Building 21st Floor, Jalan Thamrin, Jakarta, Indonesia
Mr. Soenarno Wijoto	Perikanan Samodra Besar Ltd., Jalan Salemba Raya 16, Jakarta, Indonesia
Mr. Iskandar	Perikanan Samodra Besar Ltd., Jalan Salemba Raya 16, Jakarta, Indonesia
Mr. Soebono	Karya Mina Ltd., Jalan Salemba Raya 16, Jakarta, Indonesia
Mr. Hilaluddin Ibrahim	Usaha Mina Ltd., Jalan Salemba Raya 16, Jakarta, Indonesia
Mr. Rabul Bahari	Federation of Fishermen's Cooperatives, Jalan Ir. H. Juanda 2, Jakarta, Indonesia
Mr. Muth H.P.	Private Development Finance Co. Jakarta, Indonesia
Mr. Hammad T.	Private Development Finance Co., Jakarta, Indonesia
Mr. J. Bardach	Director, Fisheries Research, University of Hawaii, Honolulu, Hawaii, U.S.A.
Mr. C. Best	14140 Edmore Dr. Detroit, Michigan 48205, U.S.A.

Dr. A.J. Hanson	Ford Foundation, Taman Kebon Sirih I-4, P.O. Box 2030, Jakarta, Indonesia
Mr. J.C. Allen	Technical Director, Boral Consulting Ltd., Jalan Subang 3, Menteng, Jakarta, Indonesia
Mr. J.J. Reilly	Economic-Commercial Officer, American Embassy, Medan Merdeka Selatan, Jakarta Indonesia
Mr. P.C. Pownall	Editor "Australian Fisheries", Fisheries Division, Australian Department of Agriculture, Canberra, ACT. 2600, Australia
Dr. J. Avault	Fisheries 249 Ag. Centre, Louisiana State University, Baton Rouge, Louisiana, U.S.A. 70803
Dr. C.E. Nash	Director, Oceanic Foundation, Makapuu Oceanic Centre, Makapuu Point, Maimanalo, Hawaii 96795, U.S.A.
Miss F. Nagagawa	R.R.I., Box 95, Haiku, Maui, Hawai, U.S.A. 96708
Dr. H.R. Schmittou	USAID, c/o American Embassy, Manila, Philippines
Mr. M. Akai	Chief, Advisory Team, Overseas Technical Cooperation Agency (OTCA), c/o Direktorat Jenderal Perikanan, Salemba Raya 16, Jakarta, Indonesia
Mr. H. Miura	Fisheries Statistician, Overseas, Technical Cooperation Agency (OTCA) c/o Bureau of Fisheries and Aquatic Resources, Manila, Philippines
Dr. J. Saeger	Fisheries Biologist, Demersal Fisheries Development Project (German Technical Assistance), c/o Lembaga Penelitian Perikanan Laut, Jalan Kerapu 12, Jakarta, Indonesia
Mr. D. de Boer	Representative, GRESCO, P.T. Lindeteves, Indonesia, Jl. Ir. H. Juanda 22, 2nd Floor P.O. Box 2561, Jakarta, Indonesia

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

1. Headquarters

Name	Designation	Address
Mr. F.E. Popper	Assistant Director-General (Fisheries)	Office of the Assistant Director-General Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
² Dr. T.V.R. Pillay	Senior Fishery Resources Officer	Aquatic Resources Improvement and Environment Service Fishery Resources and Environment Division Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
³ Mr. L. Butler	Fishery Statistician	Fishery Statistics Unit Policy and Planning Service Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
Mr. M.A. Robinson	Senior Fishery Planning Officer	Perspective Studies and Fishery Policies Unit Policy and Planning Service Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
Dr. J.A. Gulland	Chief	Aquatic Resources Survey and Evaluation Service Fishery Resources and Environment Division Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
Mr. J.E. Carroz	Principal Legal Officer (International Fisheries)	Policy and Planning Service Fisheries Department FAO Via delle Terme di Caracalla Rome, Italy

Mr. J. Engstrom	Fishery Industry Officer	Fishery Industries Development Service Fishery Industries Division Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
-----------------	--------------------------	---

Mr. W.P. Appleyard	Chief	Fishery Industries Development Service Fishery Industries Division Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
--------------------	-------	---

2. *FAO Regional Office, Bangkok*

Mr. S.H. Prakoso	FAO Deputy Regional Representative for Asia and the Far East	FAO Regional Office for Asia and the Far East Maliwan Mansion Phra Atit Road Bangkok 2, Thailand
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3. *Field Projects*

UNDP/FAO Fisheries Development and Training Project, Jakarta, Indonesia

Mr. E.R. Kvaran	Project Manager	UNDP/FAO Fisheries Development and Training Project P.O. Box 2238 Jakarta, Indonesia
-----------------	-----------------	--

UNDP/FAO Fisheries Development and Management Project, Jakarta, Indonesia

Name	Designation	Address
Mr. J.L. Dibbs	Project Manager	UNDP/FAO Fisheries Development and Management Project P.O. Box 2238 Jakarta, Indonesia
Dr. T. Yamamoto	Fishery Statistician	ditto
Mr. M.K. Magnusson	Fisheries Marketing Expert	ditto
Mr. A.E. Jones	Fisheries Biologist	ditto
Mr. Z. Kawakami	Live Bait Expert	ditto

Mr. G. Fiastri	Administrative Officer	ditto
Mr. v. Zalingen	Fisheries Biologist	ditto

UNDP/FAO Brackish Water Shrimp and Milkfish Culture Applied Research and Training

Mr. K.H. Alikunhi	Project Manager	P.O. Box 1, Jepara, Indonesia
-------------------	-----------------	----------------------------------

*UNDP/FAO South China Sea Fisheries Development and Coordinating Programme
Manila, Philippines*

Mr. A.G. Woodland	Programme Leader	South China Sea Fisheries Development and Co- ordinating Programme UNDP Office P.O. Box 1864 Manila, Philippines
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Dr. H.R. Rabanal	Fishery Officer (Aquaculture Development)	South China Sea Fisheries Development and Co ordinating Programme UNDP Office P.O. Box 1864 Manila, Philippines
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Mr. A.R. Tussing	Consultant	Committee on Interior Insular Affairs U.S. Senate Washington D.C. U.S.A. 20510
------------------	------------	--

*UNDP/FAO International Indian Ocean Fishery Survey and Development Programme,
FAO, Rome, Italy*

9 Mr. L.I.J. Silva	Deputy Programme Leader	International Indian Ocean Fishery Survey and Development Programme Operations Service Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
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10 Mr. S. Banerji	Senior Fishery Officer (Stock Assessment and Statistics)	International Indian Ocean Fishery Survey and Development Programme Operation Service Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
-------------------	--	---

IDONESIAN GOVERNMENT ORGANIZING COMMITTEE

Name	Designation
Col. A. Tjipto Wignjoprajitno	Chairman
Mr. Amidjono	Vice Chairman
Mr. Sigit Soenarto	Secretary
Mr. Soetarto	Member
Mr. Djanuzir	Member
Mr. Aroeman	Member
Mr. Soeseno	Member
Mrs. Boediningsih Soenyoto	Member/Liaison Officer
Mr. Alwi Noer	Member
Mr. Zainudin Nasution	Member
<i>SECRETARIAT</i>	Member

Name	Designation	Address
Mr. H. Rosa, Jr.	Headquarters Secretary of IPFC	Senior Fishery Liaison Officer Fishery Liaison Unit Policy and Planning Service Fisheries Department FAO, Via delle Terme di Caracalla Rome, Italy
Mr. D.D. Tapiador	Regional Secretary of IPFC	Regional Fisheries Officer FAO Regional Office for Asia and the Far East Maliwan Mansion Phra Atit Road Bangkok 2, Thailand
Dr. R.M. Lawson	Consultant for Symposium	Senior Lecturer in S.E. Asia Economics Department of Economics and Commerce University of Hull Hull, Yorkshire England, U.K.

Miss A. Jiannee	Conference Officer	Technical Assistant (Fisheries) FAO Regional Office for Asia and the Far East Maliwan Mansion Phra Atit Road Bangkok 2, Thailand
Mr. P.A. Bosman-Delzons	Interpreter	Viale Asia 9 Rome, 00144 Italy
Mr. R. Sartin	Interpreter	c/o Interpretation Section Conference, Council Division Protocol Affairs Division FAO, Rome Italy
Mr. Phinit Suphasindhu	Secretary	Secretary FAO Regional Officer for Asia and the Far East Maliwan Mansion Phra Atit Road Bangkok 2, Thailand

ADDRESS OF
THE MINISTER OF AGRICULTURE, DR. TOYIB HADIWIJAYA,
OF THE REPUBLIC OF INDONESIA

Distinguished Guests and Delegates, ladies and gentlemen,

It is a pleasure indeed for me to welcome you on behalf of the Government of Indonesia, to the opening ceremony of the Sixteenth session of the Indo-Pacific Fisheries Council.

The Indonesian Government has the honor to host again a session of the Indo-Pacific Fisheries Council having done so far the first time in 1957 for the seventh session. While the seventh session was held in Bandung, the provincial capital of West Java, for the site of this session Jakarta, the nation's capital was selected, and not without reasons.

Those delegates who had attended the seventh session of the IPFC in 1957 would certainly observe the big change in the city of Jakarta, not only in its physical appearance but also in the atmosphere and in the appearance and attitude of its citizens. And in all these matters Jakarta symbolises the whole country.

I wish you all a pleasant stay in Jakarta and in Indonesia and I hope you take back to your respective countries pleasant memories of our country and our people.

It pleases me to notice that the actual deliberation of the IPFC will be preceded by a joint session of the IPFC and the Indian Ocean Fisheries Commission. A wise and just decision indeed, as fish-stocks do not recognize state and regional boundaries and not even ocean boundaries. So this joint session should result in a beneficent way to all countries of the Indian and Pacific Oceans, your wish and conviction, to which I would like to add mine and that of my government.

The world has been facing serious problems in the last few years in regard to food supply; not only inadequacy of food supply in certain countries and certain regions created a lot of problems, but inadequacy in the world food supply and thus the increase of world food prices made all things worse. Price increases for energy and raw material for fertilizers made the price of fertilizers sky-high, however, combined with lower production, while the need for fertilizer is ever increasing. The results of all these will be shortage of fertilizers, and more difficulties in eliminating food shortages. This is a very serious problem, a very serious world problem indeed, and as you all know the world will tackle this at the World Food Conference, which will commence next week in Rome. We all hope this conference will produce proper measures and good results.

The world fisheries production, having showed a trend of increase in the last two decades, showed in the last few years, however, a trend of decrease, notably by the enormous decrease of the anchovette catch of Peru which had an effect in the decrease of fish meal supply for livestock farming.

This instance should be a red light for the IPFC, a warning of what could happen with certain stocks. In the IPFC region where the biggest part of the catch consists of pelagic species which are vulnerable to overfishing, pollution of the marine environment and other human activities, intensive studies should be carried out in order to gain sufficient knowledge in regard to the biology and the conditions, of the pelagic species concerned.

The IPFC had accomplished fruitful work up till now, and has been of assistance to the member countries; at least we in Indonesia have felt the benefit of the existence of the IPFC and on the other hand, we have contributed to the beneficial existence of the IPFC.

However, being a developing country like many other members of the IPFC, we are rather impatient; we would like to have seen more progress and much more work accomplished.

We would like to see the IPFC as a more active consultant to member countries in regard to national fisheries programmes, and an activator of regional and international cooperation and programmes which are of major importance to this region.

The aspirations of nations already expressed at the meetings of the U.N. Seabed Committee and at the Caracas session of the U.N. Conference of the Law of the Sea, in regard to the concept of economic zone, at least in regard to the concept of exclusive fishing right in the economic zone, gave an indication that the IPFC in the future should have to play a more important role in improving national programmes and in fostering regional and international cooperation and research in the field of fisheries. To this end it might be necessary to review the organization and structure of the IPFC.

A post-session tour to West and Central Java has been planned by the organizing Committee to show the participants some aspects of the Indonesian fisheries activities. What you will see may give you inspiration of what you can do in your own country; however, you might also see things being carried out by us not in a proper way and thus could be improved. We will be very grateful to any body, who will show us our shortcomings so we should be able to bring along improvement, which will give more appropriate and satisfactory results.

In conclusion I would like to wish you all a pleasant gathering and most success with your deliberations.

It is a great honour and privilege indeed for me as Minister of Agriculture of the Republic of Indonesia to declare open this 16th Session of the Indo-Pacific Fisheries Council.

Thank you.

ADDRESS

BY

MR. SOESILO H. PRAKOSO, FAO DEPUTY REGIONAL REPRESENTATIVE

FOR ASIA AND THE FAR EAST

Mr. Chairman,
Your Excellency, Minister of Agriculture,
Distinguished Delegates, ladies and gentlemen,

I have the privilege to convey the warmest greetings from Dr. Addeke H. Boerma, Director-General of the Food and Agriculture Organization of the United Nations, to you, and his highest appreciation on behalf of FAO to the Government of the Republic of Indonesia through you, Excellency Prof. Dr. Toyib Hadiwijaya, for the excellent arrangements made for the 16th Session of the Indo-Pacific Fisheries Council in this fast progressing City of Jakarta.

Dr. Dioscoro L. Umali, Assistant Director-General and Regional Representative of FAO for Asia and the Far East, deeply regrets that he is unable to attend this very important Session of the IPFC due to pressure of other urgent duties, and asked me therefore to convey to you his best wishes for the success of this Conference.

Mr. Chairman

I consider this particular Session of the IPFC of especial importance because it is the first assembly of a major Regional Technical Body that is meeting in the light of certain very significant decisions made at the 12th FAC Regional Conference for Asia and the Far East in Tokyo last September, which is the highest level instrument of FAC in the Region for policy guidance of the Organization's work in Asia and the Far East.

These decisions of major significance that I refer to are:

- (1) A reaffirmation that one of the Priority Areas for FAO's work in the Region should be the "Promotion of Fisheries Development through Cooperative Programmes *with emphasis on Aquaculture*". I wish to draw your attention to the reformulation of the description of this Priority Area which now lays a special emphasis on Aquaculture. This emphasis itself derives from the one basic theme and principal thrust of FAO's work in the Region as determined earlier by the 11th Regional Conference in New Delhi in 1972 - the Small Farmer and Small Fisherman.
- (2) That there should be an effective functional and continuing procedural link between the Regional Conference and the Regional Technical Bodies which, in the case of fisheries, is the IPFC.
- (3) That the Regional Technical Bodies - again in your case the IPFC - at their regular biennial sessions should select priority programmes and activities within the overall Priority Area and provide guidance and support in implementing these activities at Regional and National levels.
- (4) That the Regional Conference itself through its Technical Committee (now established as a regular component of the Conference) should synthesize the sectoral Priority Activities and Programmes within a framework of overall Regional Priority Areas, for guidance of the Director-General of FAO in the formulation of his proposals for the Biennial Programme of Work and Budget in the Region, which are to be approved by Governing Bodies of the Organization.

The Significance of this Session of the IPFC now becomes apparent. Meeting as it does soon after the 12th FAO

Regional Conference, it would naturally wish to review afresh the current orientation, prospects, and state of development of the Fisheries Sector in this Region in the light of the decisions made at the Regional Conference. In such a review four questions will confront you:

- (1) In what ways can the Fisheries Sector contribute its full share to the promotion of the overall growth and welfare of the people of the Region?
- (2) To what extent are the nature and orientation of development in the Region's Fisheries Sector now designed to make this contribution in accordance with the authentic needs of the people of the Region in the field of food and agriculture as determined by the main body responsible for providing guidance on Policy and Priority in the Region, viz. the FAO Regional Conference?
- (3) In what manner, if at all, should the development of the Region's Fisheries Sector be re-oriented and restructured to satisfy the authentic needs of the Region?
- (4) What programmes and activities would, therefore, fall appropriately and specifically within the province of the collective and cooperative efforts of the IPFC as an integral and functional component of the Regional Mechanism of FAO, at Regional, Sub-regional and National levels?

No dispute exists over the crucial role of the Fisheries Sector in the overall agricultural development of the Region. Its value is basically fourfold:

- (1) It exploits for human use a unique and renewable natural source of food for the people of the Region, viz. the water resources of the countries and continent;
- (2) The food garnered from this source contains the vital nutritional protein components essential to human beings, to a comparatively higher degree and in relatively more accessible and economic forms than most other sources of food;
- (3) Fishing provides a primary source of livelihood, income, and employment for a vast category of people, at least 90% of this category of people are directly engaged in fishing and are among the poorest and neglected of the Region's population. It also has the potential to supplement substantially the income and employment opportunities of many millions more in the agricultural sector;
- (4) Fisheries can provide an important means for both earning and saving scarce foreign exchange urgently needed for other development sectors in the developing economies of countries in the Region.

Recognition of these substantial benefits to be derived from the Fisheries Sector is indeed now widespread and uncontested. Nevertheless, it remains true that in a quarter century of development it is still perhaps the most neglected sector in the whole field of development in Asia. Certainly it has brought the least benefits to the vast majority of the poor and underprivileged now solely dependent on fishing as a mode of livelihood. For the small fishermen there has not even been the equivalent of the limited and marginal benefits that the Small Farmer has gleaned from the "Green Revolution" in Agriculture.

To a large extent this stagnation has to be attributed to the fact that fishing still remains - and continues to be conceived principally as - a hunting occupation and not a farming occupation. It is plausible to argue that this must necessarily and always be so. The main source for fish is still regarded as the vast and teeming waters of the oceans, which can only yield their fruit to the skilled, organized, highly equipped, and heavily capitalized fish hunter. It is not surprising, therefore, that the main trends and orientations in the Fisheries sector have been in the development of marine commercial fishing enterprises. It is estimated that annual production in the Region mainly derived from the latter totals 25 million tons or 40% of the world's total catch and worth over US \$ 3 billion a year. To this must be added another few billions of dollars in infra-structural investment in boat-building, refrigeration, processing and

marketing industries. In Korea and the Philippines, 1.5% to 2% of the big or capitalist fishermen produce 50% of the total catch while the other 98% of those dependent on fishing for their livelihood produce the other 50%. "Enterprise" fishing in Thailand produces 65% of the total catch with "household fisheries" responsible for the balance 35%. Yet the implications of current trends and orientations in the Fisheries Sector in the Region are inimical to the interests both of the consumer and the vastly preponderant small scale fishermen. The consumer suffers because commercial marine fisheries tend to produce for the foreign export market where profit on their heavy capitalization are greatest, thus depriving home markets of a badly needed and vital source of animal protein food. The small fish producer suffers for lack of capital and expertise to produce little more than the barest minimum for his subsistence. Because of their weak bargaining position he is condemned to lose the battle against the strong economic forces working in the areas of free competition. It is argued that large scale commercial marine fisheries earn valuable foreign exchange in exports. But this is a small consolation, to the vast masses of poor consumers and small producers. Experience over the years has witnessed little direct benefit accruing to either group from such foreign exchange earnings. Nor can it be shown that International Aid has been forthcoming to compensate for this patently and grossly lopsided nature of development in the Fisheries Sector. Development loans to Asian Fisheries in the Region from such institutions as the World Bank and the Asian Development Bank have amounted to a very small fraction of their total loans to the Agricultural Sector. From other sources and in other forms, development assistance to the Fisheries Sector has been minimal.

As this is not to decry the role and value of large scale commercial marine fisheries. These are undeniable in any rational planning within the Fisheries Sector. The picture that emerges from an objective assessment of this Sector, however, is that of a grossly unbalanced development heavily weighted in favour of the marine and big entrepreneurial commercial aspects to the neglect of those areas of development which vitally affect the vast masses of consumers and producers in the Region. The potential yield from marine fisheries (artisanal and commercial, coastal and offshore) is estimated at 33 million to 40 million tons. Of this potential, 25 million tons is currently exploited mainly by large scale commercial operators. Yet 95% of the people directly engaged in fishing constitute one of the most impoverished and depressed sectors of the Region's population. Aquacultural and fish farming modes of development suited to the needs of this sector command a potential area of 22 million hectares, only 2 million of which are now exploited, and even these at low levels of technology and at yield rates estimated to be to of the optimum. In addition, other potential extents exist (estimated at between 10 and 50 million hectares) for fish pens and fish cages (such as rivers, lakes, reservoirs, canals, lagoons, etc.) in both rural and coastal areas of which less than 1.000 hectares are now exploited in these forms: Similarly at the consumer's end, malnutrition and protein deficiency are on the increase - the calorie intake of the average - Asian being 5% below prescribed minimum levels and the average protein intake 7% below these levels.

Statistics such as these speak for themselves in their exposure of the gross imbalances in Fisheries Development in the Region. Together they constitute yet another unhappy lesson in the distortions that can occur from development orientations that are obsessed with economic growth oblivious of the needs, interests and potential of the people whom such growth purports to benefit. Against this background, the decisions of the last two Regional Conference of FAO for Asia and the Far East (including the Western Pacific) (in 1972 and 1974) now provide opportunity and direction for the IPFC both to redress past imbalances through the adoption of new orientations for its efforts, as well as to play a more significant programming and supportive role within an integrated Regional Programming Mechanism through full participation by all Member Nations in the Region.

The new orientation now called for by the 11th FAO Regional Conference requires that development effort in the Fisheries Sector be focussed on the small rural producer's needs and problems, and therefore mainly on that area of meaningful and productive employment most likely to be hospitable to his situation and capabilities. The 12th FAO Regional Conference last month went further and endorsed the recommendation of its Technical Committee that this area should be the hitherto generally neglected sub-sector of Aquaculture. I have already referred to the extent of the potential latent in this sub-sector, and the degree to which its development has been neglected in the interests of commercial marine fisheries in the past. 90% of a potential area of 22 millions hectares suited directly for aquaculture still remains untapped. Based on current rates of yield (i.e. with low technology and expertise) the exploitation of this potential could provide an additional 40 million tons of fish. With improved technology, this yield it is estimated, could be raised to 120 million tons. In addition, there are secondary potential areas (of at least another 10 million hectares)

awaiting development in rural and coastal areas for fish farming in fish pens and fish cages. Meanwhile, as a first phase, production in the Region from the existing aquaculture are alone could easily be increased by 100% through polyculture or fish stock manipulation; and by 300% to 1,000% with application of inputs such as fertilizer, pesticides and supplemental feeds. Aquaculture provides equally good opportunities for the small agricultural farmer to diversify his crop production, for example, paddy and fish, poultry and fish, ducks and fish, pigs and fish, vegetables and fish etc. Of special significance to the farmer is the fact that aquaculture allows him also to make use of what is unusable land when it is flooded or partially flooded during the monsoon or rainy season period. Some 35 million hectares of land in the Region get under water from one to five meters deep for four or five months each year during the monsoon period. Although part, less than 30%, of this huge flooded area in the Region is used for floating or deepwater rice by farmers, an even bigger potential exists for "floodland" fish farming.

I would like to conclude with a reference to the final question that will confront you at this Session of the IPFC. What programmes and activities fall specifically and appropriately within the competence of the cooperative efforts of the IPFC as a major Regional Technical Body now integrated as a fully functional component of FAO's Regional Mechanism? It is not part of my business nor within my competence to detail answers to this question in the presence of the collective technical wisdom and expertise of the IPFC. I need only say that to my mind the task of the IPFC for the first time can be seen in the clear light of the direction and opportunities provided by the ministerial level Regional Conference of FAO. It was the decision of the latter that the tasks of the Regional Technical Bodies should be conceived in terms of *Priority Activities* within the road scope of the Priority Areas as defined by the Regional Conference. It would seem to me, therefore, that these Activities would comprise the identification of research and action projects, and the formulation of programmes for training and organization of small fishing communities designed to promote and support Fisheries Development in forms relevant to the situation of the small producer. Let us, in the process, be mindful of the great misadventure that befell the Green Revolution. Meant for the Small Farmer, it fell into the hands of the Big Farmer for want to due attention to the sociological and psychological factors in Small Farmer development.

By the way, the Green Revolution has, in some respect, even brought a disaster to fish farming in irrigated fields under rice cultivation because of the increased use of pesticides, toxic to fish. It is my hope that in the formulation of such a Priority Programme of Activities, the IPFC would launch an Aquacultural Revolution in Fisheries of even wider and more durable impact than that of the Green Revolution in Agriculture.

I wish you all the best of success.

I thank you.

ADDRESS

BY

DR. J.A. GULLAND,

CHIEF, AQUATIC RESOURCES SURVEY AND EVALUATION SERVICE

FISHERY RESOURCES AND ENVIRONMENT DIVISION

FAO DEPARTMENT OF FISHERIES

ROME, ITALY

Mr. Chairman, Honorable Minister, Excellencies, Distinguished Delegates and Guests, ladies and gentlemen,

It is with pleasure that I address, on behalf of the Assistant Director-General (Fisheries), this Sixteenth Session of the Indo-Pacific Fisheries Council, Mr. Popper has been detained in Rome to attend to other very important matters but he will be arriving next week to take part in the work of this session of the Council.

I wish, first of all, to express our sincere gratitude for the generosity of the Government of Indonesia for hosting this meeting and for making such effective preparations for the Council's work on the occasion.

IPFC is celebrating at the session its twenty-fifth anniversary. The passage of a quarter-century is a good moment to review progress and to consider the direction in which IPFC should now be going. There are other good reasons for doing this. First, though the precise outcome of the UN Conference on the Law of the Sea is still uncertain, it is clear that increased responsibilities as well as increased opportunities, will fall to the coastal states. In an area such as yours, and especially in the South China Sea this must involve a high degree of cooperation between countries adjacent to the same sea area.

Second, the development of fisheries in this region have reached a stage in the utilization of the resources that although further expansion is still possible especially for pelagic fish, more consideration must be given to the management of the resources. This requires close regional cooperation. Development can be done by each country independently (though of course cooperation helps). Management can only be done if all countries harvesting the same stock cooperates.

It is with this background that FOA's Committee on Fisheries discussed the work of the regional bodies at its recent session. It stressed their importance, and the fact that they should not only provide opportunities for discussion, but should be action-oriented, so that the results of each session should be of direct and immediate assistance to member governments.

A very important mechanism for providing the increased support to regional bodies that is now necessary is the increasing number of required projects financed by UNDP.

During this session you will be discussing the implementation of the operational phase of the South China Sea Programme which was conceived by this Council. This phase of the Programme, to be developed for a period of five years, provides a broad basis on which many regional activities can be developed and implemented. Specifically, it will provide a focal point for fishery development to stimulate investment in fisheries, to introduce management systems and methods to increase protein supplies required to meet national requirements. It will also help to coordinate national activities in research, as has already been started through the workshop on planning and coordination of resources survey held in Manila last month.

One of the objectives of the Programme is to mobilize and coordinate other external sources of funding besides the UNDP. Here I would like to express our gratitude to Canada for its generous contribution to one of the sectors of the Programme concerning the development of the pelagic fisheries.

I would like also to make special reference to the valuable assistance given by UNDP to the Programme, without which it would have been impossible to initiate this venture.

I do not intend to refer further to this important topic as Mr. Woodland, the Programme Leader, will be reporting to you at the appropriate time on the development of the Programme and on the proposal for the establishment of a subsidiary body of this Council to facilitate its task of coordinating and implementing it.

I would like to say also a few words regarding the International Indian Ocean Fishery Survey and Development Programme. Although this Programme is coordinated by the Indian Ocean Fishery Commission, seven member nations of the IPFC are participating in its operational phase. Close collaboration is maintained between this and the South China Sea Programme including the exchange of staff. Some of the Programme activities which are relevant to this Council is listed in one of the documents available to the session.

Another item of your agenda to which I would like to refer concerns the appraisal and management of fishery resources. This must be a major responsibility of your council. Already some stocks are heavily fished, but equally important is the need for good knowledge of the resources in planning development of fisheries on resources that are still lightly exploited. Regional cooperation is essential in these matters and your Council is becoming more active in promoting cooperation but this must be based on national work, particularly on supply of basic data. I would draw your attention to the work of your working group on statistics, which, like many other similar groups, has emphasized the need for a very great improvement in national statistics if proper utilization of the resource is to be achieved. At the same time it appears that some stocks are already heavily fished and action to manage them should not be delayed while better data are collected and analysed. In connection with possible management, I hope that the Council will carefully consider the suggestions made by your Executive Committee at its Fifty-First session regarding the strengthening of the role of the IPFC as a management body.

The Agreement establishing your Council was drawn up in 1948 and there seems to be no doubt that it would be formulated differently today. There is a need for more effective and better enforced conservation and management measures, and this need, I would say, is a matter which, to a larger extent, is independent of the question of limits of national jurisdiction still under consideration by the Third United Nations Conference on the Law of the Sea. The twenty-fifth anniversary of the Council provides perhaps a good opportunity to review the situation and to initiate action that will make the Council more adjusted to modern requirements.

I would like now to say a few words on the item of your agenda concerning the problems of small-scale fisheries.

As you may recall, Mr. Chairman, you yourself at the Fiftieth Session of the IPFC Executive Committee held in April 1973 pointed out the need for raising artisanal fisheries to a level where they can cooperate with industrial fisheries. As a result of the discussions of this matter, the Executive Committee at that session recommended that the question should be brought to the Committee on Fisheries' attention at its Ninth Session.

The problems of small-scale fisheries were discussed by COFI at that session held in Rome a few days ago. The Committee fully recognized the complexity of the problems, and agreed that their solution not only requires technological and scientific inputs but called for an overall approach with due regard for social, economic, cultural and political aspects which are frequently of overwhelming importance.

The Committee appreciated the new emphasis FAO was giving to small-scale fisheries and unanimously endorsed the proposed approach outlined in the documents available to you.

I have not mentioned the Symposium of this session in detail since this will be introduced by its chairman later this

morning. It is to be hoped that the Symposium by bringing more clearly into focus the problems and, hopefully, some of the solutions faced in the management and development of the fisheries in the region will be an effective start to your second, more action-oriented, twenty five years of the Council's life.

Mr. Chairman, in completing my remarks, I would like to wish all the success to this Session of the Council.

ADDRESS OF WELCOME

BY

ADMIRAL N. ZACHMAN, CHAIRMAN OF THE
INDO-PACIFIC FISHERIES COUNCIL

Honourable Minister,

Your Excellencies, Distinguished Delegates, Observers and Visitors,

As the Chairman for this 16th Session of the Indo-Pacific Fisheries Council, it gives me very great pleasure to welcome you to this meeting, and particularly as it is being held here, in Jakarta, the Capital City of the Republic of Indonesia.

I am deeply honoured by the trust placed in me by the Council in electing me Chairman of the Executive Committee for the biennium between the 15th and 16th Sessions of the Council, which culminates in this meeting of the Distinguished Delegates of the Member Countries from the Indo-Pacific Region, the Delegation from FAO, Observers and our very welcome visitors. It has been a great pleasure for me to work with the members of the Executive Committee during the past two years. I believe our deliberations have made fruitful contribution to the rational development of our fisheries resources and, in the course of our discussions, you will learn more of the details of the progress made.

All my personal efforts, and those of my staff, will be directed towards the successful outcome of this session over the next nine days.

Taking this opportunity I would like to pay special tribute to those who have had the major responsibility for the preparations for the 16th Session of the Council. Mr. Domingo Tapiador of the FAO as the Regional Secretary for the IPFC and his staff at the FAO Regional Office for Asia and the Far East have made assiduous efforts in organizing this meeting and producing necessary documents which you have and will have received. Behind these efforts is the able support of the Department of Fisheries, FAO, Rome from which a number of staff members are here with us to witness the results of this magnificent concerted action.

Let me speak briefly now on Fisheries with particular reference to South East Asia.

The impetus in development is steadily accelerating. In every country fisheries has increasingly become important in the national economy. Export earnings from fishery products are assuming significant proportions and the development of fisheries can no longer be overlooked by the national planners.

Export in many instances has meant the introduction of new large scale industrial type fishing operations with the related shore facilities for handling, processing and marketing. We in the Region are progressively developing the skills and techniques for improved and greater exploitation as the export markets expand.

The greatest challenge now is for concentrated efforts in the modernization of our inshore and open water fisheries, or the artisanal fisheries as they are frequently referred to. It is this fishery which is the mainstay of our domestic markets, involving hundreds of thousands of fishermen, traders and processors throughout Asia, who are in the very lowest income brackets of our societies.

It is a herculean task for our national fishery department to tackle. In most instances you are first confronted with mistrust, ignorance and deep-rooted prejudices and traditions. These can only be overcome by a well-trained and dedicated fisheries extension staff.

Income must be raised through higher productivity and improved handling and marketing of catches. This requires substantial financing for directly productive and infrastructure facilities.

There is an ever increasing need for more high protein foods in Asia and this can be well supplied by harnessing the manpower of our traditional artisanal fisheries. It is an objective worthy of our most dedicated efforts with a view to not only improving the economic status of our fishermen but also providing essential protein food for our people.

In Indonesia the Second Five-Year Development Plan or Pelita II began on April 1, 1974.

The First Five Year Plan emphasized the introduction of an industrial type fishery to develop new resources and export markets. The nucleus of this development has been established through national fishing enterprises and joint venture. This effort will be continued and consolidated in the next five years. We are beginners in the exports business and our markets must be expanded and the products must be improved. In this respect the greatest attention will be paid to quality control and inspection.

In Pelita II we will devote our major efforts towards increasing fish supplies for domestic markets. The Island of Java which has over 60% of the total population of Indonesia will be given a high priority. Our attention will be directed to the development of artisanal fisheries around Java, by establishing a second supply line to Java from the nearest islands which border the Java Sea. This will in fact establish a market for all grades of fish in areas where at present only a limited market exists. It will include a credit scheme for the small fishermen and fishfarmers, provide fishing bases with all facilities, and a comprehensive marketing chain in Java for distribution of fresh fish and other fish products.

Fish culture in both brackish and fresh water will receive high priority through establishing research training extension service and expansion of fishfarming.

We hope to benefit from the experience and research in countries of the Indo-Pacific Region and in turn, will share our experience and acquired knowledge with other developing countries in the Region.

Turning briefly to the Agenda prepared for this 16th Session of the Council, commencing this morning there will be three days Symposium on the Economic and Social Aspects of National Fisheries Planning and Development. In this aspect we also hope to learn from the experience of other countries the bottleneck likely to be encountered and how to overcome the constraints which could effect our national plans and development.

Following the Symposium we will deal with a wide range of subjects including:

The problems pertaining to the small scale fishermen in the region; aquaculture including its economic aspects, resources and management of demersal and pelagic fish stocks.

We will then consider the progress and plans of our International and Regional Programmes, including the South China Sea and Indian Ocean Programmes. Following this we will move on to the cooperation within the Region through the various international and regional organizations and to include management and coordination of fisheries development. In later sessions we will deal with administrative matters pertaining to IPFC.

Altogether it is an action-oriented Agenda, which I sincerely hope will prove beneficial to all participating countries and strengthen the Indo-Pacific Fisheries Council as an International Fisheries Coordinating Organization.

This year marks the 25th Anniversary of the Indo-Pacific Fisheries Council, and therefore our 16th Session has particular significance. The Council was the first of its kind to be set up under the Constitution of the Food and Agriculture Organization of the United Nations and was the forerunner of what has become an almost world wide coverage of oceans and seas of the world by voluntary regional organizations.

The original conception of such regional groupings of countries with shared or available fishery resources

far-sighted and, in the Indo-Pacific Region it has linked us all by a most valuable and rewarding personal contract with our counterparts in member countries.

Let us in this anniversary year, make new resolutions to achieve our national inspirations by coordinated effort in every field, and make the next 25 years of the Indo-Pacific Fisheries Council one of determination to fulfill all our objectives.

We have a very full programme ahead but there is an old saying "Too much work and no play makes Jack a dull boy" - so I hope you have time to enjoy something of Indonesia and visit some of the many places of scenic beauty and historical interest.

It has been my pleasure to welcome you here this morning and I wish you all a very enjoyable, interesting and productive stay in Jakarta.

Thank you.

REPORT OF THE
AD HOC GROUP TO GENERATE ACTION PLANS
ARISING FROM THE SYMPOSIUM ON ECONOMIC AND
SOCIAL ASPECTS OF NATIONAL FISHERIES PLANNING AND DEVELOPMENT

INTRODUCTION

The symposium highlighted the need for action programmes, and specified certain broad areas within which action should be directed. Time did not permit a detailed examination during the Symposium of the particular actions that received priority attention. Therefore the Council appointed the following *ad hoc* group to consider further actions

B.J. Rothschild	U.S.A. (Convenor of symposium)
Arporna Sribhibhadh	SEAFDEC
Tengku Ubaidillah	MALAYSIA
E.A. Purnell Webb	AUSTRALIA
J.A. Gulland	F.A.O.
H. Rosa	(Secretary)

The group recommended the following action programmes in each general area of concern, to be carried out during the inter-sessional period. For convenience much of the programme has been framed on the forms of question to be answered by the person (or persons) given responsibility for each action programme. The strategy in drawing up these programmes has been to improve the dialogue between different groups concerned with fisheries in the region and to focus attention on the areas where action would be most productive.

1. INFRASTRUCTURE

It is generally recognized that an important constraint on development in the region is an inadequate infrastructure. This inadequacy needs to be identified in terms of present and future requirements to determine the feasibility of reducing the infrastructure constraints in the short or medium terms. The relation of the fisheries infrastructure to the general economic development of the region also needs to be determined in order to detect whether solutions are to be found in the area of fisheries, or in the area of general rural development. The study of infrastructure needs should not be based on economic factors only, but should also take account of social benefits. The main focus of this work needs to be on the development of action plans that not only describe the infrastructure problems, but also provide scenarios for their solutions. These scenarios must include the identification of possible national and international sources of funds to meet the infrastructure requirements.

2. EDUCATION AND EXTENSION

What are the needs, in terms of number to be trained, and subject matter, type of training, for training and education:

- a) at the primary level, of fishermen (especially small-scale fishermen), and shore workers;
- b) at the middle and higher technical level, in specialized fields including processing, marketing, business management, economics, catching technology and biological research;
- c) at the highest level, to provide senior administrators with a good grasp of the many aspects involved in decision taking in fisheries.

What programme can be formulated for early action possibly by a series of short courses dealing with fishery decision making in such areas as infrastructure, extension, resource assessment, resource management, marketing, business management, etc., or otherwise, to provide senior administrators with increased skills in these fields? How might such a programme be supported?

What continuing programme can be established of, for example, a longer term programme of graduate education for young people in these subject areas, to build up a cadre of middle and high level expertise? What should be the details of national extension work? How can the expertise in extension work in agriculture be used to improve extension work in fisheries (including aquaculture)?

In answering these questions, the aim should be to draw up a 10-year programme to build up a cadre of middle and high level expertise.

3. RESOURCES ASSESSMENT

What basic information (catch and effort statistics, survey data etc.) relevant to resources assessment is currently available in member countries? (This might be done by a consultant visiting member countries). What detail and precision of resources assessment is required for investment planning, or deciding on management measures? (This might be done within FAO on the basis of past experience of World Bank Loans, management decisions of regional Commissions such as ICNAF, NFAFC, etc.) What details are needed (especially regarding individual species) in respect of catch statistics, and resources assessment, when taking management or development decision in a multi-species fishery? (This might be done by FAO staff or consultant through examination of literature, and exchange of views with individual scientists.) How do the present basic information and assessment results measure up to requirements, and how might any necessary improvements be achieved?

4. RESOURCES MANAGEMENT

What are current management problems in the region, and what problems are likely to arise on the next five to ten years?

What are the specific obstacles likely to be met in the various fisheries in the region with respect to the introduction and enforcement of each of the main management methods (e.g. Mesh size, closed season, etc.)? What constraints against effective implementation of management measures are particularly applicable in multi-national fisheries? The various possibilities for resources management should be explored in a manner that will lead to the formulation of action oriented guidelines for the consideration of the Council.

5. PLANNING METHODOLOGY AND RESPECTIVE STUDIES, PROJECT PREPARATION

During the symposium it was pointed out that a major constraints on fishery development in the region was unevenness in the planning area. Strengthened planning will come from an understanding by all administrators in the region of the planning machinery in each country. This understanding can be achieved by a review of national plans with regard to:

- i. identification of aspects and concepts of a regional character with a view to developing regional or sub-regional plans and policies;
- ii. development of planning methodology.

In addition each country's planning will be aided by continued preparation of perspectives on both regional and on a selected fishery basis.

The transfer of information on the technical aspects of planning shall be encouraged through a planning workshop and related follow-up activities.

6. PROCESSING, MARKETING AND DISTRIBUTION

What are the chief constraints to improved processing and distribution of fish in the region? What actions could be taken by countries to relieve the constraints, and what action requires outside support, particularly the large international funding agencies.

7. BUSINESS MANAGEMENT AND CREDIT

What are present levels of business management skills in the fisheries of the region? Is there a need for improvements in theoretical or practical training? How should the needs of the private sector be taken care of? How can business management of fisheries projects benefit from methods used and experience gained in other sectors of the economy. What proposed actions for improvement lend themselves to a common IPFC approach?

Investigate what are main sources of finance for fishery development. What are the constraints to increase in fundings? Propose actions and measures to increase credits to the small-scale fisheries sector and the industrial sector.

8. METHODS OF ACTION

The group believed that the Council should request the FAO Secretariat to identify the method or methods of action that would be most appropriate for carrying out each task (e.g. by a study by existing staff, consultant work, correspondence with individuals or groups in member countries, working group meetings, etc.), and where necessary should mobilize the necessary funds from regular programme, regional projects, etc. The Secretariat should also as far as possible identify an individual (who might be on the staff of FAO or member governments) for each task, with direct responsibility for ensuring that the task is done. Action to carry out each task should be initiated as soon as possible, and a progress report in respect of each task should be presented at the mid-term meeting of the IPFC Executive Committee. A final report on each of these inter-sessional activities should be prepared and circulated to member Governments at least three months in advance of the 17th Session. Each report, as well as describing the progress achieved during the inter-session period, should contain specific suggestions for action that might a) be carried out by individual member governments; b) be the subject of cooperative action by two or more governments; c) be carried out by the Secretariat of IPFC; d) be supported by various international or bilateral or other funding agencies or e) need further study during the next inter-sessional period.

It was suggested that the Secretary should keep the members of the *ad hoc* group informed of the action being taken to carry out these proposals.

REPORT OF
COORDINATING COMMITTEE OF THE SOUTH CHINA SEA
FISHERIES DEVELOPMENT AND COORDINATING PROGRAMME

First Meeting

Jakarta, 6 November 1974

INTRODUCTION

1. The Coordinating Committee of the South China Sea Fisheries Development and Coordinating Programme, established by the IPFC on 5 November 1974, held its First Meeting on 6 November 1974 in Jakarta, Indonesia. Five of the eight countries and territories participating in the Programme attended the meeting. Staff members of FAO were also present. A list of participants is given in Annex A to this report.

ADOPTION OF THE AGENDA

2. The Committee adopted the agenda reproduced in Annex B to this Report.

ELECTION OF CHAIRMAN

3. The Committee unanimously elected Tengku Ubaidillah (Malaysia) as Chairman for the Meeting.

REPORT OF PRESENT STATE OF IMPLEMENTATION OF THE PROGRAMME

4. The Committee agreed that there was no need for the Programme Leader to report on the present state of implementation of the Programme since he had already done so on 5 November 1974 before the 16th Session of the IPFC, under item 7(a) of its Agenda. All participants in this Meeting were present on that occasion.

ANY OTHER MATTERS

5. Reference was made to the report of the First Session of the *Ad Hoc* Coordinating Committee of the South China Sea Fisheries Development and Coordinating Programme (Document SCSP.74/1 REP, June 1974). It was observed that the description of the responsibilities of the programme in the first sentence of paragraph 6 to that report was not adequate. The Committee agreed that the sentence should be redrafted as follows: "The Programme should accommodate and foster national fisheries development in the region."

DATE AND PLACE OF NEXT MEETING

6. The Committee agreed that its next meeting should be convened in conjunction with the meeting of the *Ad Hoc* Committee set up by the IPFC to consider its future. That Committee was tentatively scheduled to meet in Bangkok in October 1975.

ADOPTION OF REPORT

7. The Committee adopted this report for submission to participating countries and territories, to the IPFC and to the agencies concerned.

LIST OF PARTICIPANTS

PARTICIPATING COUNTRIES AND TERRITORIES

Hong Kong (United Kingdom)

Mr. E.H. Nichols
 Director of Agriculture and Fisheries
 Agriculture and Fisheries Department
 Canton Road Government Offices
 393 Canton Road, 12th floor
 Kowloon, Hong Kong

Indonesia

Admiral N. Zachman
 Director-General of Fisheries
 Department of Agriculture
 Jl. Salemba Raya 16
 Jakarta, Indonesia

Mr. Hadi Atmowasono
 Director of Planning
 Directorate General of Fisheries
 Jl. Salemba Raya 16
 Jakarta, Indonesia

Malaysia

Y.M. Tengku Ubaidillah bin Abdul Kadir
 Director-General
 Fisheries Division
 Ministry of Agriculture & Rural Development
 Jalan Swettenham
 Kuala Lumpur, Malaysia

Mr. Tan Cheng Kiat
 Acting Senior Fisheries Officer
 Fisheries Division
 Ministry of Agriculture & Rural Development
 Jalan Swettenham
 Kuala Lumpur, Malaysia

Philippines

Mr. F.R. Gonzales
 Director of Fisheries
 Bureau of Fisheries and Aquatic Resources
 P.O. Box 623
 Intramuros, Manila
 Philippines

Thailand

Dr. Deb Menasveta
 Chief, Marine Fisheries Branch
 Division of Research and Investigation
 Department of Fisheries
 Ministry of Agriculture and Cooperative
 Bangkok, Thailand

FAO

Mr. F.E. Popper
 Assistant Director-General (Fisheries)
 Office of the Assistant Director-General
 Fisheries Department
 FAO, Via delle Terme di Caracalla
 Rome, Italy

Mr. J.E. Carroz
 Principal Legal Officer
 (International Fisheries)
 Policy and Planning Service
 Fisheries Department
 FAO, Via delle Terme di Caracalla
 Rome, Italy

Mr. W.P. Appleyard
 Chief
 Fishery Industries Development Service
 Fishery Industries Division
 Fisheries Department
 FAO, Via delle Terme di Caracalla
 Rome, Italy

Dr. J.A. Gulland
 Chief
 Aquatic Resources Survey and
 Evaluation Service
 Fishery Resources and Environment Division
 Fisheries Department
 FAO, Via delle Terme di Caracalla
 Rome, Italy

Mr. L.I.J. Silva
 Deputy Programme Leader
 International Indian Ocean Fishery Survey
 and Development Programme
 Operations Service
 Fisheries Department
 FAO, Via delle Terme di Caracalla
 Rome, Italy

Secretariat

Mr. A.G. Woodland
 Programme Leader
 South China Sea Fisheries Development
 and Coordinating Programme
 UNDP Office
 P.O. Box 1864
 Manila, Philippines

AGENDA

1. Adoption of Agenda
2. Election of Chairman
3. Report on Present State of Implementation of the Programme
4. Any Other Matters
5. Date and Place of Next Meeting
6. Adoption of Report

LIST OF DOCUMENTS

WORKING PAPERS:

IPFC/74/ 1	Provisional Agenda
1 (Fr.)	Ordre du Jour Provisoire
2	Annotated Provisional Agenda
2 (Fr.)	Ordre du Jour Provisoire annote
3	Provisional Timetable
3 (Fr.)	Calendrier Provisoire
4	Small-Scale Fisheries
4 (Supp.1)	ditto
5	Report of the Second Session of the IPFC Working Party on Aquaculture and Environment, Jakarta, Indonesia, 26-29 October 1974
6 1)	Report of the Second Session of the IPFC/IOFC Ad Hoc Working Party of Scientists on Stocks Assessment of Tuna, Nantes, France, 16-18 September 1974
6 (Supp.1)	Report of the Ad Hoc Group on Pacific Skipjack
7	Status of Stocks in the IPFC Area
8	South China Sea Fisheries Development and Coordinating Programme - Progress Report (Verbal Presentation by Programme Leader)
9 2)	Report of the First Session of the Ad Hoc Coordinating Committee of the South China Sea Fisheries Development and Coordinating Programme, UNDP, Manila, Philippines, 18-19 June 1974
10	Report on the Activities of the Indian Ocean Fishery Survey and Development Programme in the IPFC Region
11	Report of the Third Session of the IPFC/IOFC Joint Working Party of Experts on Indian Ocean and Western Pacific Fishery Statistics, Jakarta, Indonesia, 25-30 October 1974
11 (Add.A)	Appendices (6-9 and 11-14)
12	Fishery Statistics in the Indo-Pacific Fisheries Council - IPFC Region
13	Progress Report of the FAO/IPFC Cooperative Programme of Research on Aquaculture
14	Cooperative Research on Fish product Development - Progress Report

1) Due to unforeseen circumstances this document was not available during the meeting.

2) Limited supply.

IPFC/74/15

- 16 Report on Cooperation with the Cooperative Study of the Kuroshio and Adjacent Regions (CSK)
- 17 Report of the 51st Session of the IPFC Executive Committee, Manila, Philippines, 20-21 June 1974
- 18 Development of Cooperation with other International Organizations
- 19 Inter-Sessional Report of the IPFC Executive Committee
- 20 FAO Staff Support to IPFC
- 21 Country Statements (A-Sri Lanka; B-France; C-Pakistan; D-Thailand; E-Hong Kong; F-Indonesia; G-Malaysia; H-New Zealand; I-USA; J-Korea; L-Philippines; M-Australia)
- 22 Report on the Implementation of Recommendations Adopted by the 15th Session of IPFC (Wellington, 1972) requiring Action by FAO
- 23A Matters rising from the Report of the 12th FAO Regional Conference Tokyo, Japan, 17-27 September 1974
- 24 Report of the First Session of the IPFC Working Party on Development and Utilization of Inland Fishery Resources, Jakarta, Indonesia, 5-6 November 1974
- 25 Directory of Subsidiary Bodies of the Indo-Pacific Fisheries Council (during the Inter-Sessional period 1972-74)
- 25 (Rev.1) Ditto revised
- 26 Effectiveness of Existing Fisheries Management Machinery
- 27 Proposed Establishment of a Coordinating Committee for the South China Sea Fisheries Development and Coordinating Programme
- 28 • Proposed Abolition of the Technical Committees
- 29 Twenty Five Years of IPFC

•)Addendum 1 submitted by the Delegation of the United Kingdom.

SYMPOSIUM PAPERS: Indo-Pacific Fisheries Council - Indian Ocean Fishery Commission Symposium on the Economic and Social Aspects of National Fisheries Planning and Development

IPFC/74/SYM/1

Provisional Agenda

- 2 (Rev.1) Provisional Timetable
 - 3 Fishery Development Perspectives - Sub-Region 1: West Asia and East Africa
by The Secretariat
 - 3 (Suppl.1) Symposium - Discussion Leader - Rapporteur
 - 3-7 (Add.1) Fishery Development Perspectives Methodological and Statistical Appendix to Sub-Regional Studies
by The Secretariat
 - 4 Fishery Development Perspectives - Sub-Region 2: Bay of Bengal
by The Secretariat
 - 5 Fishery Development Perspectives - Sub-Region 3: Australasia and Oceania
 - 6 Fishery Development Perspectives - Sub-Region 4: Northwest Pacific
 - 7 Fishery Development Perspectives - Sub-Region 5: South China Sea
by A.R. Tussing
 - 8 Fisheries as a Source of Protein, Income and Development (Policies in the Second Five-Year Development Plan)
by S. Darmoredjo
 - 9 A Review of Fish Stocks in the IOFC/IPFC Region with Current or Potential Management Problems
by J.A. Gulland
 - 10 National Fishing Policies and Planning Procedures in New Zealand
by R.T.C. de Lambert
 - 11 Fishery Development Planning in Hong Kong
by E.H. Nichols
 - 12 Potential for the Development of Aquaculture in the Indo-Pacific Region
by C.E. Nash
 - 13 Fisheries Development Planning in Indonesia
by H. Atmowasono
- Fisheries Planning and Development in Sri Lanka
by V. Pandita

- IPFC/74/SYM/15 The Scientist's Role in Determining Management and Development Policies - The New Zealand Experience
by G.D. Waugh
- 16 Fisheries Development and Planning in the Indo-Pacific Region - Its Objectives and Constraints
by R.M. Lawson
- 17 A Note on Marine Fisheries Management in Indonesia
by M. Unar
- 18 Project Preparation with Special Reference to Indonesian Fisheries
by Sidarto
- 19 National Fishery Policies and Planning Procedures - Kenya
by P.N. Kamande
- 20 National Policies and Support to the Philippine Fishing Industry
by F.R. Gonzales and A.B. Reyes
- 21 Fish Stock Management Policies - The Situation in Malaysia
by D. Pathansali and A.A. Jothy
- 22 A Perspective Plan for the Development of the Malaysian Fishing Industry
by Tan Cheng Keat
- 23 The Regulation of Fishing effort in IPFC/IOFC Member Countries
by the Secretariat
- 24 Some Economic and Social Aspects of Fisheries Development in South Thailand
by G.V. Everett
- 25 Risk Capital in West
by R.H. Barback
- 26 Preparation of Fish
by J.E. Engstrom
- 27 Some Consideration of Fisheries Management Systems in the Pacific Island Areas
by R.S. Shomura
- 28 Guidelines for Fishery Management
by J.A. Gulland
- 29 Strategy and Policy in Fisheries Development, Development of the Artisanal Fisheries
by Directorate General of Fisheries, Department of Fisheries, Indonesia
Emphasis on the Asia
- 30 Manpower planning and Fisheries Education in Indonesia
by Latief Hasyim
- 31 Evaluating Tropical Pelagic Fish Stocks
by G.I. Murphy

- IPFC/74/SYM/ 32 Philippine Fisheries and Policy Formulation for Conservation and Development
by F.R. Gonzales
- 33 Some Thoughts on Problems of Future Tuna Management in the Indian and Western
Pacific Oceans
by J. Joseph
- 34 Opening Address of B.J. Rothschild, Convenor, IPFC/IOFC Symposium on the Economic
and Social Aspects of National Fisheries Planning and Development
- 35 National Fishery Policies and Planning Procedures of the Republic of Korea
by K.H. Kim
- 36 Draft Report of the IPFC/IOFC Symposium on the Economic and Social Aspects of
National Fisheries Planning and Development
- 36 (Rev. 1) Ditto (revised)
- 37 Fisheries Planning and Development in India
by Prof. P.C. George (N.B. This document was submitted late and could not be
distributed during the Symposium)

INCIDENTAL PAPERS:

IPFC/74/INC/1	List of Documents
2	Provisional List of Participants
2 (Rev.1)	List of Participants
3	Administrative Correspondents (for period between 16th and 17th Session October 1974-1976)
4	Jakarta City Tour 27 October 1974 (repeated 3 November 1974)
5	Post Session Tour (Jakarta-Cirebon-Semarang-Yogyakarta) 9-12 November 1974
6	Reconfirmation of outward air bookings and transport requirements for departure
7	Mailing of documents
8	Order of the Day 30 October 1974
9	Order of the Day 31 October 1974
10	Order of the Day 1 November 1974
11	Order of the Day 4 November 1974
12	Order of the Day 5 November 1974
13	Order of the Day 6 November 1974
14	Order of the Day 7 November 1974

INFORMATION PAPERS: The following publications have been made available in limited supply to the Council. These have been distributed as widely as possible. When number of copies has been small, distribution has been limited to Heads of Delegations only.

- IPFC/74/INF. 1 Review of the Status of Exploitation of the World Fish Resources (COFI/74/4)
- 2 Project Sponsored by the Governments of Indonesia, Khmer Republic, Malaysia, Philippines, Singapore, Thailand, Hong Kong (United Kingdom) and Republic of Vietnam
- The South China Sea Fisheries Development and Coordinating Programme (Phase II)
- 3 FAO Basic Texts Vol. III Section II, Indo-Pacific Fisheries Council: Agreement and Rules of Procedure, (with attachment in English and French of Amendment to the Rules of Procedure as adopted at IPFC 12th Session, Honolulu, Hawaii, 3-16 October 1966)
- 4 Proceedings of the 15th Session of the Indo-Pacific Fisheries Council - Section I
IPFC Procs., 15(I): 76 pp
- 5 Indian Ocean, Eastern (Fishing area 57) Nominal Catches by Species and by Countries, 1965-72, Prepared by Fishery Statistics Unit Department of Fisheries, FAO.
FAO Fish. Circ., 1974, 621: 29 pp.
- 6 Pacific, Northwest (Fishing Area 61) Nominal Catches by Species and by Countries, 1965-72, Prepared by Fishery Statistics Unit Department of Fisheries, FAO.
FAO Fish. Circ., 1974, 622: 42 pp.
- 7 Pacific, Western Central (Fishing Area 71) Nominal Catches by Species and by Countries, 1965-72, Prepared by Fishery Statistics Unit, Department of Fisheries, FAO.
FAO Fish. Circ., 1974, 624: 36 pp.
- 8 Pacific, Southwest (Fishing Area 81) Nominal Catches by Species and by Countries, 1965-72, Prepared by Fishery Statistics Unit, Department of Fisheries, FAO.
FAO Fish. Circ., 1974, 626: 28 pp.
- 9 (Withdrawn)
- 10 The South China Sea Fisheries, Statistical Systems.
IPFC South China Sea Fisheries Development and Coordinating Programme, SCS/DEV/73/2, Rome, 1973, 46 pp.
- 11 The South China Sea Fisheries, Demersal Resources.
IPFC South China Sea Fisheries Development and Coordinating Programme, SCS/DEV/73/3, Rome, 1973, 80 pp.
- 12 The South China Sea Fisheries, Tuna Resources.
IPFC South China Sea Fisheries Development and Coordinating Programme, SCS/DEV/74, Rome, 1973, 18 pp.
- 13 The South China Sea Fisheries, Pelagic Resources.
IPFC South China Sea Fisheries Development and Coordinating Programme, SCS/DEV/73/6, Rome, 1973, 68 pp.

- IPFC/74/INF.14 The South China Sea Fisheries, Crustacean Resources.
IPFC South China Sea Fisheries Development and Coordinating Programme, SCS/DEV/73/7, Rome, 1973, 39 pp.
- 15 (Withdrawn)
- 16 (Withdrawn)
- 17 Classified Directory of Fisheries Technological Research Institutions and programmes in the IPFC Region compiled by R. Kreuzer and D.D. Tapiador
- 18 The Potentials of Aquaculture Development in the Indo-Pacific Region
 by H.R. Rabanal
- 19 Pictorial Korean Fishery

SPEECHES

- IPFC/74/P 1 Address of welcome by the Chairman of the Sixteenth Session of the Indo-Pacific Fisheries Council, Jakarta, 30 October 1974
- 2 Address by Mr. Soesilo H. Prakoso, FAO Deputy Regional Representative for Asia and the Far East
- 3 Address by Dr. J.A. Gulland, Chief, Aquatic Resources Survey and Evaluation Service, Fishery Resources and Environment Division, FAO department of Fisheries, Rome, Italy
- 4 Address of the Minister of Agriculture of the Republic of Indonesia on the Occasion of the opening of the IPFC 16th Session

IPFC ADMINISTRATIVE CORRESPONDENTS

(for period between IPFC 16th and 17th Session October 1974-1976)

AUSTRALIA	Mr. A.G. Bollen First Assistant Secretary Fisheries Division Australian Department of Agriculture Canberra, A.C.T. 2600 Australia
BANGLADESH	Mr. Shamsul Haq Director of Fisheries 81 Kakrail Road Dacca-2, Bangladesh
BURMA	Mr. Maung Maung Head of Office Ministry of Agriculture and Forests Office of the Ministers Rangoon, Socialist Republic of the Union of Burma
FRANCE	Monsieur M. Legand Directeur du Laboratoire d'Océanographie ORSTOM, B.P. No. 45 Noumea, New Caledonia
INDIA	Prof. P.C. George Joint Commissioner (Fisheries) Ministry of Agriculture Irrigation (Department of Agriculture) Krishi Bhavan, New Delhi - 110001 India
INDONESIA	Mrs. Budiningsih Sunyoto Chief, Division for Foreign Relation and Cooperation Multilateral Desk Directorate-General of Fisheries Department of Agriculture Jl. Salemba Raya 16 Jakarta, Indonesia
JAPAN	Head, Specialized Agencies Division United Nations Bureau Ministry of Foreign Affairs 2-1, 2-chome, Kasumigaseki Chiyoda-ku, Tokyo Japan

KHMER	Mr. Sva Kret Directeur du Service des Peches Direction du Service des Peches P.O. Box 46 Phnom-Penh, Republique Khmere
KOREA	Mr. Kim, Kyun Hyun Chief, International Cooperation Division Office of Fisheries of the Government of the Republic of Korea 235-11 Seobinggo-Dong, Yongsan-Ku Seoul, Republic of Korea
MALAYSIA	Mr. Abdul Wahab bin Haji Mohd. Johar Principal Assistant Secretary c/o Ministry of Agriculture and Rural De- velopment Jalan Swettenham Kuala Lumpur, Malaysia
NEW ZEALAND	Mr. B.T. Cunningham Director of Fisheries Management Ministry of Agriculture and Fisheries P.O. Box 2298 Wellington, New Zealand
PAKISTAN	Mr. S. Qadir Mohiuddin Assistant Director Federal Marine Fisheries Department Fish Harbour, West Wharf Karachi-2, Pakistan
PHILIPPINES	Miss Natividad Macalincag Chief, Planning Division Bureau of Fisheries and Aquatic Resources P.O. Box 623 Intramuros, Manila Philippines
SRI LANKA	Mr. E.G. Goonewardene Secretary to the Ministry of Fisheries Ministry of Fisheries P.O. Box 1707 Galle Face Colombo-3, Republic of Sri Lanka
THAILAND	Dr. Deb Menasveta Chief, Marine Fisheries Branch Division of Research and Investigation Department of Fisheries Ministry of Agriculture and Cooperatives Rajadamnern Avenue Bangkok, Thailand

U.K. (For Hong Kong)

Director of Agriculture and Fisheries
(Attn.: Mr. E.H. Nichols)
Agriculture and Fisheries Department
Canton Road Government Offices
393, Canton Road
12th floor
Kowloon, Hong Kong

U.K. (For London)

U.K. Liaison Officer with U.N. Organizations
(Attn.: Dr. R.W. Phillips)

U.K. (For London)

U.K. Liaison Officer with U.N. Organizations
(Attn.: Mr. B.A. Thorpe)
British Embassy
Ploenchit Road
Bangkok, Thailand

U.S.A.

Director, International Organizations Staff
(attn.: Dr. R.W. Phillips)
Office of Assistant Secretary for International Affairs and Commodity Programmes
U.S. Department of Agriculture
Washington, D.C. 20250
U.S.A.

VIETNAM

Mr. Tran van Tri
Director of Fisheries
B.P. 340
Saigon, Vietnam