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TWENTY-FOURTH REGIONAL TECHNICAL MEETING ON FISHERIES
Noumea, New Caledonia, 3-7 August 1992

REPORT

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ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
AIMS	Australian Institute of Marine Science
ASEAN	Association of South-East Asian Nations
CEA	Canadian Executing Agency
CFS	Certificate in Fisheries Studies
CIDA	Canadian International Development Agency
CPUE	Catch per unit of effort
CRGA	Committee of Representatives of Governments and Administrations
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSPODP	Canadian South Pacific Ocean Development Program
DSFDP	Deep Sea Fisheries Development Project (SPC)
DWFN	Distant Water Fishing Nation
EC	European Community
EVAAM	Etablissement pour la valorisation des activités aquacoles et maritimes
FAD	Fish Aggregation Device
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
FFC	Forum Fisheries Committee
FHPP	Fish Handling and Processing Project (SPC)
GTZ	Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation)
ICLARM	International Centre for Living Aquatic Resources Management
ICOD	International Centre for Ocean Development
IFRP	Inshore Fisheries Research Project (SPC)
IMR	Institute of Marine Resources (USP)
INTROMARC	International Tropical Marine Research Centre
JCU	James Cook University
NFC	National Fisheries Corporation (Federated States of Micronesia)
NMFS	U.S. National Marine Fisheries Service
QDPI	Queensland Department of Primary Industries
OFCF	Overseas Fisheries Cooperation Foundation (Japan)
ORSTOM	Institut français de recherche scientifique pour le développement en coopération
PIMRIS	Pacific Islands Marine Resources Information System
PIN	Pacific Island Nation
PTRP	Philippines Tuna Research Project
ROC	Republic of China
ROK	Republic of Korea
RPFC	Regional Post-harvest Fisheries Centre
RFTP	Regional Fisheries Training Project (SPC)
RTMF	Regional Technical Meeting on Fisheries (SPC)
RTPP	Regional Tuna Tagging Project (SPC)
SCTB	Standing Committee on Tuna and Billfish

SOPAC	South Pacific Applied Geoscience Commission
SPAR	South Pacific Albacore Research Group
SPADP	South Pacific Aquaculture Development Programme
SPREP	South Pacific Regional Environment Programme
SPRTRP	South Pacific Regional Tuna Research Project
STCZ	Sub-tropical Convergence Zone
TBAP	Tuna and Billfish Assessment Programme (SPC)
TPFCC	Trans-Pacific Fisheries Consultative Committee
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
USP	University of the South Pacific
WPFCC	Western Pacific Fisheries Consultative Committee
WPYRG	Western Pacific Yellowfin Research Group
WTP	Western Tropical Pacific

I. INTRODUCTION

The Fourteenth South Pacific Conference (Rarotonga, Cook Islands, 1974) approved the principle of an annual technical meeting on fisheries. The Twenty-ninth South Pacific Conference (Guam, 1989) emphasised the importance member countries attach to this meeting.

The Regional Technical Meeting on Fisheries provides the only opportunity for senior fisheries officers from all SPC member countries and territories to meet and discuss technical aspects of fisheries development, and, through the exchange of experience, ideas and information, to identify mutual needs and problems which can best be met by a regional approach. The meeting assists the work of the Commission's Fisheries Programme by reviewing and commenting on existing or proposed activities, formulating new initiatives where required, and making recommendations for Secretariat action for transmission to the Committee of Representatives of Governments and Administrations and, ultimately, the South Pacific Conference.

As a result of this regular process of review and discussion, the work of the SPC Fisheries Programme is able to retain its relevance to the evolving needs of Pacific Island countries and territories. The guidance provided over the years by successive Regional Technical Meetings on Fisheries has been an essential element in developing the wide range of activities that are undertaken by the Fisheries Programme, which is now the South Pacific Commission's largest single activity.

The Twenty-fourth Regional Technical Meeting on Fisheries was held at South Pacific Commission headquarters, Noumea, New Caledonia, from 3 to 7 August 1992.

II. AGENDA

- 1. Opening formalities**
 - 1.1 Official opening
 - 1.2 Administrative arrangements
 - 1.3 Adoption of agenda and timetable

- 2. Fisheries Programme administration**
 - 2.1 Fisheries Programme overview
 - Action taken in response to last year's recommendations
 - Staff issues
 - Financial issues

- 3. Technical session**
 - 3.1 Review of Western Pacific tuna fisheries
 - 3.2 Review of RTTP field operations

- 4. Tuna and Billfish Assessment Programme overview**
 - 4.1 Overview
 - Fisheries Statistics Project
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 - Albacore Research Project
 - 4.2 Report on Fourth SPAR
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- 5. Technical session**
 - 5.1 RTTP preliminary results
 - 5.2 Solomon Islands FAD model
 - 5.3 Albacore Research Project

- 6. Coastal Fisheries Programme overview**
 - 6.1 Overview
 - 6.2 Report of 1992 PIMRIS Steering Committee Meeting
 - 6.3 Fisheries Information Project
 - 6.4 OFCF Fishery Development Project
 - 6.5 Inshore Fisheries Research Project
 - 6.6 Fish Handling and Processing Project
 - 6.7 Regional Fisheries Training Project
 - 6.8 Deep Sea Fisheries Development Project

- 7. Collaboration in Pacific Island pearl oyster resource development**

- 8. Technical session**
 - 8.1 Inshore FADs and bait fishing techniques
 - 8.2 Design and interpretation of fisheries statistical programmes

- 9. Workshop on Fisheries Training for the Pacific Islands**

- 10. Role and future of RTMF**

- 11. Reports by other organisations**
- 12. Other business**
- 13. Closing formalities**

III. SUMMARY OF DISCUSSIONS

AGENDA ITEM 1 — OPENING FORMALITIES

1.1 Official opening

1. Mr Tuingariki Short offered a short prayer to begin the Meeting.
2. The Secretary-General, Mr Atanraoi Baiteke OBE, welcoming the delegates to the 24th RTMF, outlined the history of the South Pacific Commission's Fisheries Programme and the extensive role played by the Commission in providing assistance to fisheries development in the region. The Secretary-General emphasised the key role RTMF plays in providing guidance to the Fisheries Programme and the fact that the deliberations and recommendations of RTMF are taken seriously by the Secretariat and the South Pacific Conference. He then formally declared the Meeting open.
3. The Representative of Fiji thanked the Secretary-General for his warm welcome. He stressed the importance of marine resources to the region and the important role played by the SPC. He also thanked the Fisheries Programme staff for the assistance they had provided to Pacific Island countries.

1.2 Administrative arrangements

4. In accordance with the procedure of rotating the chairmanship alphabetically between member countries, Mr Stephen Yen of French Polynesia was appointed Chairman of the Meeting, while Mr Rufo Lujan of Guam was appointed Vice-Chairman and Chairman of the Drafting Committee.
5. The Fisheries Co-ordinator briefly outlined the administrative arrangements for the Meeting.

1.3 Adoption of agenda and timetable

6. The Chairman outlined the Draft Agenda for the Meeting which was adopted with the addition of the 1992 PIMRIS Steering Committee report.
7. The Representative of France expressed his appreciation to the Fisheries staff for the organisation of the Meeting, and thanked the translation services for ensuring that the French version of working papers was sent out with the English, thus facilitating preparation for the Meeting.
8. The Representative of the Cook Islands emphasised the importance of fisheries training, statistics, pearl oysters and human resource development for the development of marine resources in the region, and looked forward to discussions on these topics during the Meeting.

AGENDA ITEM 2 — FISHERIES PROGRAMME ADMINISTRATION

2.1 Fisheries Programme Overview

9. The Fisheries Co-ordinator outlined the activities of the Fisheries Programme and referred participants to Working Paper 1. The Fisheries Co-ordinator focused on staff issues and

the difficult budgetary situation facing the Fisheries Programme. He then outlined the action taken in response to recommendations made at the 23rd RTMF. The Fisheries Co-ordinator invited the Meeting to discuss the individual projects to be presented in more detail later in the week and emphasised the importance of this Meeting in providing guidance and support to the activities of the Fisheries Programme.

10. The Representative of Fiji reaffirmed the importance of marine resources to the region. He expressed concern about the reduction made in the core budget allocation to the Coastal Fisheries Programme and enquired about the rationale behind the reduction. He expressed his Delegation's feelings that a mechanism for reinstating core funding to the programme should be found. He urged the Secretariat to make a concerted effort to secure funding from the United Kingdom Government, or alternative sources if necessary, to ensure the continued operation of the Inshore Fisheries Research Project and the Fish Handling and Processing Project.

11. The Fiji Delegation also voiced its concern that the level of funding for the Fisheries Information Project was to remain at the same level in 1993 when it was apparent that the project required additional staff and financial resources. The annual funding mechanism for the Regional Fisheries Training Project was also a concern; the delegation proposed that the Secretariat urgently seek longer-term funding for this project.

12. The Representative of Fiji noted the urgent need to identify bridging funds for the TBAP to enable the analysis of the RTTP results to continue without interruption. He further highlighted the need to investigate a mechanism to include the posts of Chief Fisheries Scientist and Coastal Fisheries Programme Manager within the core budget.

13. The Representative of France asked the Secretariat to explain why the core budget reduction to the Coastal Fisheries Programme had been made.

14. The Director of Programmes explained the current budgetary difficulties being experienced by the Commission, with deficits identified in both core budget and extra-budgetary funded programmes. The Secretariat was awaiting the results of the Management Systems Review and hoped that a report with recommendations would be ready for presentation to the next CRGA and the South Pacific Conference. The Secretariat explained that it would like to see more programmes funded from the core budget and stated that there would, in all likelihood, be a procedure introduced for prioritising core-budget funded projects.

15. The Director of Programmes reminded the meeting that funding for the RTTP would end in September 1992 and bridging funding would be needed urgently to ensure the continuation of the programme into the analytical phase.

16. The Representative of France, on the question of bridging funding for the RTTP, suggested that if requested by the Pacific Island region, EC member countries (France and the United Kingdom) would prevail upon the European Community to support such a funding request.

17. The Deputy Director of Programmes, in response to the Representative of Fiji, explained that the reduction to core budget funded programmes was necessary because of budgetary constraints and that all of SPC's programmes had been affected.

18. The Representative of New Zealand, as Chairman of the Management Systems Review Sub-Committee, stated that the aim of the Sub-Committee's recommendations was to ensure minimal disruption to the programmes. He further stated that key recommendations included

the creation of the post of a Funding Co-ordinator and a system whereby programmes are prioritised. He also emphasised that representatives attending this type of technical meeting should ensure that the importance of the Fisheries Programme to in-country and regional activities be conveyed to their country delegates to CRGA and the South Pacific Conference.

19. The Representative of Palau expressed his full support for comments made by the Representative of Fiji.

20. The Representative of Nauru also supported the comments made by the Representative of Fiji regarding the core budget cuts to the Coastal Fisheries Programme and sought clarification from the Secretariat on whether the core budget cut-back affected all SPC's programmes equally.

21. The Deputy Director of Programmes explained that he did not have the exact figures but added that changes had been made to the Coastal Fisheries Programme on the basis of removing the posts of the Masterfishermen and the Fisheries Development Officer from core funding.

22. The Coastal Fisheries Programme Manager provided additional information on the budgetary situation of the Coastal Fisheries Programme.

AGENDA ITEM 3 – TECHNICAL SESSION

3.1 Review of Western Pacific tuna fisheries

23. The Chief Fisheries Scientist presented a review of developments in Western Pacific tuna fisheries over the past decade to set the scene for the presentation of the RTTP results. The report of this session is included in Annex 1.

3.2 Review of RTTP field operations

24. Two TBAP Fisheries Scientists presented a review of the field operations of the RTTP, summarising methods developed and broad details of releases and recaptures, by species. The report of this session is included in Annex 1.

AGENDA ITEM 4 – TUNA AND BILLFISH ASSESSMENT PROGRAMME OVERVIEW

4.1 Overview

25. The Representative of Australia requested that time be set aside to discuss the future of the TBAP and other related matters. An assurance was given that this would be the case.

26. The Representative of France requested information on the subject of the future of the RTMF 25 (Item 10 of the Agenda). The Secretariat replied that a paper should have been prepared by a past Delegate in time for this Meeting. The Secretariat had been informed at the last minute that this paper would not be available and was instead preparing a summary paper that would be distributed prior to discussions on this subject.

27. The Chief Fisheries Scientist gave a summary of the important components of the TBAP, including the RTTP and Albacore Research Project.

28. He then discussed the possibility of obtaining EC Lomé IV funding for the RTTP analysis but stated that this proposal was encountering difficulties. The Chief Fisheries Scientist expressed concern for the future of all these projects, given funding uncertainties, and suggested that a statement of support from the meeting toward the continuation of these programmes would be useful.

29. The Assistant Fisheries Statistician then reviewed the work of the Statistics and Monitoring section of the TBAP as reported in Working Paper 2.

30. The Chief Fisheries Scientist provided a summary of TBAP activities as reported in Working Paper 2. He described the biological research, highlighting the work of the RTTP, and discussed the rationale and importance of tagging studies for tuna research; work on assessment and modelling of tuna populations in the region; liaison and reporting; an overview of the Albacore Research Project; and the Philippines Tuna Research Project which the TBAP was to undertake under the auspices of the WPFCC in co-operation with the Philippine Bureau of Fisheries and Aquatic Resources.

31. The Chairman thanked the Chief Fisheries Scientist and the TBAP, and expressed his support for the work of the programme.

32. The Representative of Solomon Islands expressed support and conveyed congratulations to the TBAP on the excellent work completed by the RTTP. He looked forward to the results and completion of specific studies in the Solomon Islands Declared Fisheries Zone.

33. As 70–80 per cent data coverage is required for a meaningful analysis of the tuna resources, he then asked about the data coverage by gear type that was now available and whether biological information collected so far had shown some indication of the differentiation of tuna stocks.

34. The Chief Fisheries Scientist replied that the present coverage of purse seine fleets was highly variable, from 100 per cent for the US fleet to considerably less for other fleets. It was believed that the coverage of Japanese vessels was quite good, while Taiwanese and Korean vessels were believed to be seriously under-reporting or not reporting catches. He also stressed that the time to discuss reporting deficiencies was during bilateral discussions on fishing access with these countries. He reiterated that SPC would soon receive aggregated catch data from Japan on all gear types, which would fill many of the gaps in the historical database. The response to the second question was deferred to a later session on preliminary RTTP results.

35. The Representative of Palau voiced full support and appreciation for the work of the TBAP. He noted that continued support for the Palau tuna database would be necessary, especially in light of the rapidly expanding sashimi longline fishery now based in Palau.

36. The Representative of Fiji endorsed the comments made by the Representatives of Palau and Solomon Islands and thanked the Government of Tuvalu for providing the research vessel for the RTTP. He suggested that the RTMF should send a letter of appreciation to the Government of Tuvalu. He also thanked the staff of the RTTP. He sought clarification of the status of the PTRP in relation to the RTTP and TBAP activities.

37. The Chief Fisheries Scientist reiterated that the PTRP was a completely separate project that would nevertheless complement RTTP work and results, while providing much needed finance.

38. Following complimentary remarks from the Representative of Fiji on the attachment of several Pacific Island fisheries personnel with the RTTP, the Representative of Solomon Islands

queried if training attachment opportunities would be available with the TBAP for Pacific Island fisheries personnel during the analytical phase of the RTTP.

39. The Chief Fisheries Scientist indicated that it was always the intention to provide for attachment training within the SPRTRP as proposed for funding under Lomé IV. Funding support for this activity was not presently available. He stated that one possible way in which this type of training could take place was through provision of assistance to the preparation of in-country tuna assessment projects.

40. The Representative of the Federated States of Micronesia endorsed the work of the TBAP and offered strong support for its continuation.

41. The Chairman confirmed that all countries would support this sentiment and express their appreciation for the work of the TBAP.

42. The Representative of Niue asked whether the Philippines would receive information obtained from the analysis of RTTP work.

43. The Chief Fisheries Scientist replied that the SPC member countries would benefit significantly from the work done in the Philippines, and that all usual data access restrictions would apply.

44. The Representative of Niue questioned the status of a proposed study in co-operation with AIMS on the analysis of billfish data stored in the Regional Tuna Database.

45. The Chief Fisheries Scientist indicated that the majority of TBAP work would continue to emphasise tuna research in light of the relative importance of tuna resources compared to billfish landings. The study in question was being funded by ACIAR and executed by AIMS in collaboration with TBAP. This was confirmed by the Representative of ACIAR who explained that the study started in July 1992.

46. The Representative of French Polynesia voiced support for work in neighbouring countries, i.e. the Philippines, in regional stock assessment. He then asked whether methods other than tagging could be suitable for stock assessment.

47. The Chief Fisheries Scientist indicated that most alternative stock assessment methods required detailed catch-and-effort times-series data but adequate levels of this sort of data were not presently available. Acoustic and other direct census methods were a possibility, but difficult and expensive to implement and interpret over the vast area of the region. He added that tagging was still the best option available for stock assessment.

48. The Representative of French Polynesia asked if the present level of tagging was adequate for meaningful analysis.

49. The Chief Fisheries Scientist replied that release targets of the RTTP based on initial computer simulations had been exceeded and were deemed more than adequate for data analysis.

50. The Representative of France expressed very strong support for the work of the TBAP and stressed its importance to the region. He went on to state that he would do everything in his power to convey this support to the Government of France. He sought further information about a statement in Working Paper 2 that landings of yellowfin and skipjack could withstand increases in total catch. He asked if this could be applied to other tuna species (albacore, bigeye) in the region. He also questioned the destination of funds obtained from the PTRP.

51. The Chief Fisheries Scientist stated that the status of these two species on a regional basis appeared to be good and increases in total landings were possible. However, local depletions and interaction issues would still suggest a more cautious approach to expansion. He added that little was known about bigeye tuna. However, the tagging results of the RTTP had been better than expected for bigeye tuna and useful information would become available as more returns came in. He explained that a definitive statement on the state of South Pacific albacore would be available in 1993.

52. He then provided details on the arrangements for payments from the PTRP. This funding, at the discretion of donors, would be used to erase the existing deficit of the TBAP and partially make up for withdrawals of funding by traditional donors.

53. The Chief Fisheries Scientist stated that the primary objective for the TBAP should now be the analysis of RTTP data. If funding levels were further reduced, the level of support for short-term information requests should, however, continue to have a high priority in future work plans, and longer-term funding support should still be sought, as recommended by SCTB 5.

54. The Representative of France asked if it would be possible to co-operate with ASEAN organisations to alleviate shortfalls in the TBAP deficit.

55. In reply, the Chief Fisheries Scientist stated that caution would be needed in approaching this subject due to the possibility of jeopardising services to member countries. Guidance would be sought from the Meeting on such issues.

56. The Representative of Australia complimented the TBAP staff on the quality of their work and high level of expertise, stressing the TBAP's importance for assessment of the world's largest tuna fishery; without such a broad, regionally based scientific programme, Pacific Island nations would have to turn predominantly to sources outside the region for advice, which would largely involve DWFN scientific studies on stock status. While acknowledging the impressive number of RTTP tag releases, he emphasised the greater importance of analyses of those data if RTTP's value is to be fully realised. He suggested that acquisition of funding for the completion of the analysis of RTTP results, and for TBAP's broader stock monitoring and assessment work, was vital.

57. The Meeting reiterated strong support for the five-year South Pacific Regional Tuna Research Project, currently being considered for EC funding under Lomé IV. It expressed its appreciation for the generous funding support provided by France, Australia, New Zealand and the United States of America to the TBAP, and then adopted the following recommendations:

Recommendation No. 1

Noting the world-wide peer recognition of the scientific calibre of the programme's work, RTMF 24 was unanimous in its commendation of the scope, expertise and implementation of the TBAP. Such a vigorous, scientific research programme was essential in support of what has become the world's largest tuna fishery. RTMF 24 was strong in the view that TBAP should continue to fulfill that role, and recommended that the Secretariat make all efforts to secure funding to that end.

Recommendation No. 2

The TBAP Strategic Plan, initially endorsed by RTMF 23 and reaffirmed by RTMF 24, presented a framework for the future activity of the TBAP, and a five-year operational plan was now in preparation. RTMF 24 recommended that the Secretariat seek urgent commitment by extra-budgetary donors for funding on a multiple-year basis for the TBAP.

Recommendation No. 3

Recognising the magnitude and complexity of the logistics of the RTTP RTMF 24 congratulated the TBAP on the successful implementation of the field component of the Project. However, its full benefit to Pacific Island countries would be dependent on analyses yet to be carried out. While such analyses remained of the highest priority, there had been no success to date in securing adequate funding to undertake them. In view of the urgency of the situation, RTMF 24 recommended that the Secretariat make every effort to secure funding from the EC, or other potential funding sources, so that the analyses of the RTTP results could proceed without disruption.

58. The Representative of France requested clarification as to whether a reserve fund within SPC, set aside to compensate for exchange rate fluctuations, could be used to offset the existing TBAP deficit, which apparently arose as a result of negative currency movements.

59. The Deputy Director of Programmes replied that this issue had been discussed at the last CRGA. He stated that the use of some of these funds to offset 1991 core budget deficits had been approved and further measures were being investigated.

4.2 Report on Fourth SPAR

60. The Chairman of SPAR presented a review and summary of the Fourth SPAR Workshop, held in Taipei, Republic of China on 4 – 8 November 1991. The major outcomes of the meeting were summarised in Working Paper 2.

4.3 Report on Fifth SCTB

61. The Representative of Fiji reported on the Fifth Standing Committee on Tuna and Billfish, held in Honolulu, Hawaii (June 1992, Working Paper 11). The Committee had noted the need for fishery status reports to monitor improvements in the efficiency of purse seine and longline vessels and to actively monitor transshipment activity within the SPC statistical region (Action Item 1). The Committee had also recommended that during bilateral access negotiations, SPC member countries should press Korea to submit historical catch data and accurate catch data.

62. The Committee had supported continued work on the assessment of by-catch and discard levels that result from DWFN fishing activity in the region. The Committee had asked that the study currently under way by the TBAP be completed for distribution prior to SCTB 6.

63. The Committee had recommended that efforts be made to secure long-term funding to support the statistical and monitoring programmes of the TBAP. Further, the securing of long-term funding for the TBAP had been supported. The Committee had recommended that the Strategic Plan be again considered during RTMF 24 and subsequently submitted to CRGA and the South Pacific Conference, for approval.

64. The Committee had supported the TBAP programme structure and commended the programme for work completed since SCTB 4.

4.4 Report on Second WPYRG

65. The Principal Fisheries Scientist reported on the Second Meeting of the Western Pacific Yellowfin Research Group (June 1992). The objective of the meeting was to produce a summary of yellowfin catches by size, area and month by all gear types in the region. Because of difficulties with data quality and missing data, it was decided that it would not be appropriate to distribute the data in their current form. He added that the future of the database remained unclear at this point in time.

66. Increased support from Japan and Taiwan for co-operative research projects and data submission was noted. However, the continuing lack of participation by Korea in both Standing Committee and Special Interest Working Groups remained a problem.

67. The Representative of Nauru requested information on 1) the spawning seasonality of western Pacific yellowfin, 2) movement patterns of tuna between the SPC and ASEAN regions and 3) levels of tuna recruitment in the region. He further sought clarification as to whether funds obtained from the PTRP could have a negative effect on levels of funding from traditional donor countries.

68. The Chief Fisheries Scientist replied that yellowfin and most of the tropical tunas spawn over a broad area throughout much of the year and it was not possible to define limited area or seasons of spawning for possible specific management purposes. Answers to the second and third questions were to be addressed during the afternoon technical session. A definitive reply to the last question could not be made, but he felt that traditional funding levels would not be affected.

69. The Representative of Papua New Guinea thanked the TBAP and commended the high quality and volume of work conducted by the programme. He hoped that Papua New Guinea would continue to benefit from this expertise. He stated that he would support efforts to minimise under-reporting by certain DWFN fleets by informing appropriate parties within the Papua New Guinea Government on this issue. The Representative of Papua New Guinea thanked the TBAP in advance for the confidential country report (National Fishery Assessment) on Papua New Guinea's tuna resources.

70. The Representative of Solomon Islands requested clarification on the suggestion made during SCTB by several Pacific Island countries for the establishment of a small committee to consider how scientific advisory inputs into management might proceed, whilst management regime questions were being resolved.

71. The Representative of Fiji replied that the SCTB had difficulties with accessing DWFN fishing data and the proposed small committee might point the way for improved collection of data from the DWFNs' databases. Further discussion of this issue was not possible due to time constraints.

72. The Chairman then moved that the Meeting adopt the TBAP Draft Strategic Plan. This was supported by the Representative of France. The Meeting approved the following recommendation:

Recommendation No. 4

The Meeting recommended that the TBAP Draft Strategic Plan be adopted.

AGENDA ITEM 5 – TECHNICAL SESSION

5.1 RTTP preliminary results

73. The Chief Fisheries Scientist introduced the overall analysis of RTTP results and briefly reviewed broad patterns of movement recorded by the tagging data. The Principal Fisheries Scientist then presented the preliminary assessment of regional skipjack and yellowfin tuna studies based on the RTTP data. A more detailed report on this session is given in Annex 1.

5.2 Solomon Islands FAD model

74. Visiting Senior Scientist Pierre Kleiber described the results of the analysis of RTTP tag data from Solomon Islands waters where the presence of FADs and their influence on fishing and tag return patterns need to be accounted for. A fuller report is appended to this report in Annex 1.

5.3 Albacore Research Project

75. The Senior Fisheries Scientist gave a brief description of the work and results of the TBAP Albacore Tagging Project. The report of this session is appended at Annex 1.

AGENDA ITEM 6 – COASTAL FISHERIES PROGRAMME OVERVIEW

6.1 Overview

76. The Coastal Fisheries Programme Manager summarised the structure of the Coastal Fisheries Programme, as presented in Working Paper 1, and emphasised the integrated nature of the projects within the Programme.

6.2 Report of 1992 PIMRIS Steering Committee Meeting

77. The PIMRIS Co-ordinator reported on the PIMRIS Steering Committee Meeting held in Noumea on 30–31 July 1992, and referred the Meeting to Working Paper 13.

78. The Representative of Papua New Guinea expressed his appreciation for assistance provided by PIMRIS to the Department of Fisheries and Marine Resources, which has now been able to re-establish a full time post of librarian.

79. The Representatives of the Kingdom of Tonga, American Samoa and Western Samoa also expressed their appreciation for past assistance and strongly supported the work of PIMRIS.

80. The Representative of Fiji expressed his appreciation to PIMRIS for assistance and asked whether funding was available for purchasing books and other literature.

81. The PIMRIS Co-ordinator explained that under the Outreach Project funded by ICOD assistance had been available to five selected countries. It was not possible to extend this to other countries at the present time because of the closure of ICOD.

82. The Representative of Solomon Islands thanked PIMRIS for providing assistance and requested clarification on the status of the Outreach Project as a result of the closure of ICOD.

83. The PIMRIS Co-ordinator explained that funds for the Outreach Project were unaffected because Canada would honour agreements for projects running prior to ICOD's closure.

84. After further discussion the Meeting adopted the following recommendation put forward by the PIMRIS Steering Committee:

Recommendation No. 5

The Meeting recommended that the South Pacific Commission continue and expand its participation in PIMRIS, and if possible, formalise this participation through the mechanism of an inter-agency agreement with other PIMRIS participants.

6.3 Fisheries Information Project

85. The Fisheries Information Officer reported on the activities of the project as presented in Working Paper 3.

86. The Representative of New Caledonia congratulated the Fisheries Information Officer on the work of the project and emphasised the usefulness of the publications produced.

87. The Representative of Fiji expressed appreciation for the recent attachment of the Fisheries Division's Information Officer to the Fisheries Information Project.

88. The Representative of French Polynesia supported the comments of the Representative of New Caledonia and asked if it would be worth considering charging countries for these publications.

89. The Fisheries Information Officer explained that the service to those in the region was free of charge but it could be worth considering charging those outside the region receiving the publications.

90. The Meeting expressed its appreciation for the generous funding support provided by France for the Fisheries Information Project and then made the following recommendation:

Recommendation No. 6

The Meeting recognised the value of the SPC Fisheries Information Project in the collection and dissemination of information on marine resources of importance to the region, but expressed its concern that the level of financing to the project was still not sufficient to permit it to fully achieve its objectives, especially the establishment of 12 Special Interest Groups. The Meeting recommended that the Secretariat establish a position of Fisheries Information Assistant, and seek funding for this post in order to improve the capacity of the project to respond to the expressed needs of SPC member countries in the provision of fisheries information.

6.4 OFCF Fishery Development Project

91. The Fisheries Development Associate described the activities of the Project and referred the Meeting to Working Paper 3.

92. The Representative of the Federated States of Micronesia expressed his appreciation to the Commission, OFCF and the Fisheries Development Associate for the production of the Marine Resources Bibliography for the Federated States of Micronesia.

93. The Representative of the Marshall Islands expressed his gratitude for the production of the Marine Resources Bibliography for the Marshall Islands.

6.5 Inshore Fisheries Research Project

94. The Senior Inshore Fisheries Scientist outlined the aims and objectives of the IFRP.

95. The Inshore Fisheries Research Scientist described the activities of the project and referred the Meeting to Working Paper 3.

96. The Representative of the Federated States of Micronesia recognised the valuable addition of Dr Tim Adams to the IFRP and welcomed him to the new post. He expressed appreciation for work undertaken by the project in the Federated States of Micronesia and suggested that the Meeting should request the Secretariat to do its best to secure funding from the core budget and extra-budgetary sources to ensure the continuation of the project. He further noted the necessity to follow this up with member country representatives to CRGA.

97. The Representatives of Papua New Guinea, Palau, Fiji, Solomon Islands, Marshall Islands, Nauru and the Cook Islands expressed their strong support for the IFRP and their appreciation for the work undertaken in their respective countries. They supported the suggestion made by the Representative of the Federated States of Micronesia regarding the need to secure funding to ensure the continuation of the project. The Meeting expressed its appreciation to the United Kingdom for its generous funding support of the Inshore Fisheries Research Project to date and made the following recommendation:

Recommendation No. 7

The Meeting acknowledged the important role that the Inshore Fisheries Research Project (IFRP) had played in assisting and promoting the development of national fisheries research capabilities, and strongly recommended that the Secretariat make every effort to secure continued funding for the IFRP so that its activities could be continued without interruption when the present funding cycle expired in early 1993.

98. The Representative of French Polynesia asked if country reports by the IFRP were confidential.

99. The Coastal Fisheries Programme Manager replied that it was up to the country concerned to decide whether the reports were confidential or not.

100. The Representative of Palau asked if the IFRP had plans to undertake studies on aggregations of groupers or other species.

101. The Representative of Tuvalu informed the Meeting that the Government of Tuvalu had received a business proposal to export live reef fish. FFA and SPC had been informally approached to provide information. A formal proposal for assistance in stock assessment was to be submitted.

102. The Coastal Fisheries Programme Manager replied that SPC had not yet received any requests on this subject but was aware that it was becoming an important issue.

6.6 Fish Handling and Processing Project

103. The Post-harvest Fisheries Adviser outlined the aims and objectives of this project and expressed his appreciation for the valuable financial support provided by the Government of the United Kingdom. He then referred the Meeting to Working Paper 3 and provided a summary of the activities undertaken in the past year.

104. The Representative of Palau asked whether it would be possible for the FHPP to run an in-country workshop in Palau since its participant had missed the Regional Chilled Fish Sector Workshop held in Suva.

105. The Post-harvest Fisheries Adviser responded by suggesting that it might be possible to use regional workshop participants from neighbouring countries such as Guam or Northern Mariana Islands, with a visiting tutor, to organise and run an in-country workshop for Palau.

106. The Representative of Tokelau expressed his appreciation for the work of the FHPP and stated that this had been very beneficial to Tokelau.

107. The Representative of Fiji expressed his appreciation for the work of the Project, in particular, the regional workshop in Suva organised by the FHPP and the RFTP. He expressed concern about the lack of funding for the Regional Post-harvest Fisheries Centre (RPFC). He informed the Meeting that the Fiji Government had given approval for the University of South Pacific to lease land on the campus for the proposed RPFC.

108. The Representative of France explained that the difficulty SPC experienced in securing funding for the RPFC was due to an over-subscription of project proposals from the region for Lomé IV funding. There was a need for the region to set its own priorities and inform the EC which projects should be funded.

109. The Fisheries Co-ordinator added that at the EC/ACP Ministerial Meeting in June 1992, over ECU 150 million worth of projects were submitted for consideration for a total Lomé IV allocation of ECU 35 million. Marine resources had been allocated a total of ECU 5.5 million.

110. The Representative of Solomon Islands thanked the FHPP for providing valuable training to one of their staff members during the Regional Chilled Fish Sector Workshop in Fiji. He then asked whether the FHPP would be able to provide assistance on developing a selection of new giant clam products.

111. The Post-harvest Fisheries Adviser explained that initial product development work had been undertaken at the ICLARM Giant Clam Project two years earlier by the Natural Resources Institute, United Kingdom. He considered that any input from the FHPP would require careful planning and research.

112. The Meeting expressed its appreciation to the United Kingdom for its generous funding support of the project and after further discussion approved the following recommendations:

Recommendation No. 8

The Meeting recognised the important contribution being made by the SPC Fish Handling and Processing Project in support of the post-harvest sector of national fisheries. The Meeting recommended that the Secretariat make every attempt to secure continued funding for the project so that its activities could be continued without interruption when the present funding cycle expired in early 1993.

Recommendation No. 9

The Meeting expressed its concern that extra-budgetary funding for the establishment of the Regional Post-harvest Fisheries Centre had still not been secured, in spite of the best efforts of the Commission. The Meeting recommended that all possible funding avenues be pursued, including application for uncommitted funds that might still be available under the Lomé II and III programmes. The Meeting requested that country representatives of ACP member countries actively seek formal support from their Governments for such an approach.

6.7 Regional Fisheries Training Project

113. The Fisheries Education and Training Adviser described the activities of the RFTP as outlined in Working Paper 3.

114. The Representative of Niue expressed his appreciation for the work of the RFTP. He enquired what criteria were used for selecting nominees for the Nelson course, as Niue's nominee had not been selected this year.

115. The Fisheries Education and Training Adviser noted that the course was constantly over-subscribed, and explained that it was important to choose participants with an acceptable level of ability. The Coastal Fisheries Programme Manager added that when a country was not represented on the course one year, every attempt was made to include that country the following year as long as the nominee met the selection criteria.

116. The Representative of Fiji stated that he was not convinced by the reasons given for the return of the RFTP to Noumea. With the advent of PEACESAT, good communications between Fiji and New Caledonia were possible; he therefore felt that a relocation back to Suva could be justified.

117. The Fisheries Co-ordinator explained that the Project was transferred back to Noumea to improve essential interaction with the other Coastal Fisheries projects.

118. The Representative of American Samoa stated that the relocation of the Project back to Fiji needed to be looked at further because of the benefits of closer links with educational institutions based in Suva.

119. The Coastal Fisheries Programme Manager provided a brief historical perspective of the initial transfer and subsequent return of the Project to Noumea.

120. The Representative of Fiji emphasised the need for longer-term funding for the Project. The Meeting then expressed its appreciation to the Governments of Australia and France for their generous funding support of the project and made the following recommendation:

Recommendation No. 10

The Meeting expressed its concern at the uncertainty of the year-to-year funding arrangements under which the RFTP presently operates. The Meeting recommended that the Secretariat secure long-term funding for the Project to ensure continuity and forward planning of activities.

6.8 Deep Sea Fisheries Development Project

121. The Fisheries Development Officer referred the Meeting to Working Paper 3 and provided an outline of the activities of the DSFDP. He also referred to the recent UNDP funding approval for the Offshore Fisheries Development Sub-project.

122. The Representative of Nauru expressed his appreciation to the programme for providing assistance for deploying three FADs.

123. The Representative of Papua New Guinea asked if it would be possible for the DSFDP to provide assistance in deploying FADs in Wewak.

124. The Fisheries Development Officer explained that limited funds would be available through the UNDP-funded Offshore Fisheries Development Sub-project for FAD deployment and such a request would be given full consideration.

125. The Representative of Palau stated that the DSFDP was an important project for his country and asked if information on FAD use and technology had been collected from FAD users outside the Pacific region.

126. The Fisheries Development Officer responded that contact had been established by the DSFDP with FAD users in Asia and the Indian Ocean, and that efforts to broaden these contacts would be maintained and useful information disseminated.

127. The Coastal Fisheries Programme Manager, explaining the issue of general funding for the DSFDP, referred the Meeting to Working Paper 4. He also described the status of the Purse Seine Fishery Development Project.

128. The Chairman expressed the satisfaction of the Meeting at the news of authorisation by UNDP of initial funding for the Offshore Fisheries Development Project and, on behalf of the Representatives, thanked UNDP for this valued support to regional fisheries.

129. The Representative of Fiji expressed appreciation to the DSFDP and voiced concern about the removal of core funding for key DSFDP positions, and about funding in general for the Project. After further discussion the Meeting approved the following recommendations:

Recommendation No. 11

The Meeting expressed its concern at the cuts in core budget allocations to the SPC Deep Sea Fisheries Development Project that were recommended by the 16th CRGA. The Meeting reaffirmed the importance and value of the practical fisheries development assistance provided to member countries by the Deep Sea Fisheries Development Project, and strongly recommended that the Project's core budget allocation be reinstated at least to 1992 levels by fiscal year 1993/94. The Meeting urged representatives to ensure that their delegates to the forthcoming CRGA and the South Pacific Conference were fully briefed on this issue.

Recommendation No. 12

The Meeting recommended that the Secretariat seek such supplementary extra-budgetary funding as would allow the Deep Sea Fisheries Development Project to increase the range and level of its support to regional small and medium-scale fisheries, particularly in the increasingly important development of offshore fisheries and economically viable, sustainable FAD programmes.

130. The Representative of Solomon Islands enquired about the backlog of publications, such as the revised beche-de-mer handbook, and the problem of dynamite fishing.

131. The Coastal Fisheries Programme Manager explained that the work of producing publications was time-consuming, and, with priority given to undertaking assignments, the production of publications had suffered. He emphasised that higher priority would be given to clearing the backlog of publications over the next 12 months.

132. The Representative of Australia, with reference to the increased need for funding being reported by the Fisheries Programme's various projects, suggested an alternative option based on a system which had been effective in Australia. He explained that a certain portion of State licence fees collected from industry was set aside for research and development, and the Commonwealth then matched these funds on a dollar-for-dollar basis. This had two advantages:

- it set aside some State money from the fisheries sector to fund State research and development; and
- it enticed extra money from the Commonwealth for additional research and development projects.

133. He said a similar mechanism could be considered for the Pacific to encourage new funding or keep traditional donors in place.

134. The Chairman suggested that the Representative of Australia develop the idea with the Secretariat.

AGENDA ITEM 7 — COLLABORATION IN PACIFIC ISLAND PEARL OYSTER RESOURCE DEVELOPMENT

135. The SPC Fisheries Co-ordinator, introducing this topic, noted the recent increase in interest in pearl oyster development in the region, stimulated largely by the success of French Polynesia in this industry. He referred the Meeting to Working Paper 8.

136. The Representative of Cook Islands noted that the pearl oyster industry, and shell industries in general, were very important to several of the smaller Pacific Island countries. He recalled that recommendation 15 of RTMF 23 had involved an offer by French Polynesia to co-operate on a regional level with respect to the development of the black lip pearl oyster industry, and asked what actions had been taken to activate the offer.

137. The Representative of French Polynesia described at length the role of his Government and the private sector in the development of pearl oyster farming techniques. He noted that this industry had been pioneered in French Polynesia.

138. The Representative of French Polynesia further noted that collaboration in the pearl oyster industry was essential. However, it was suggested that technology provided to other Pacific Island countries by French Polynesia should remain confidential and that products should be marketed, at least during the first five-year period, through the established marketing structure in French Polynesia. After questioning, the Representative of French Polynesia explained that confidentiality was thought to be necessary to reassure the established industry in French Polynesia. He also explained that a common marketing structure was not designed to control production but to ensure that high-quality product would be maintained.

139. The Representative of ACIAR outlined that organisation's recent initiatives in pearl oyster research. ACIAR was particularly interested in the areas of disease diagnosis, health management and population genetics, and was co-operating with SPC on pearl oyster stock assessment and resource enhancement. It was currently developing a project with SPC, Kiribati and Cook Islands on developing simple but robust techniques of spat production as the basis for rehabilitation of wild stocks and to sustain possible future culture operations.

140. The Representative of the Cook Islands expressed a wish for shell industry research to become part of the work programme of SPC, subject to the availability of funding. The co-ordination of research on resource enhancement, farm management and control and marketing were suggested as key areas of SPC involvement. It was further suggested that the development of a regional marketing strategy might be an appropriate starting point. After further discussion on this topic the following recommendation was approved by the Meeting:

Recommendation No. 13

The Meeting commended the Secretariat on its efforts to promote a collaborative regional approach to the development of pearl oyster culture in the Pacific Islands. Delegates noted with considerable interest the offer by French Polynesia to play an active role in furthering such arrangements, as well as the research initiative under development by ACIAR, in collaboration with SPC and several Pacific Island countries. The Meeting reiterated the economic importance of pearl oysters and other shell resources to some countries, especially those without substantial tuna fisheries, and recommended that support to the development of shellfish resources be given a high profile within SPC's Fisheries Programme. As a first initiative, the Secretariat should establish a working group on the economic development of pearl oyster resources, consisting of nominees from interested pearl-producing member countries.

The Meeting noted the absence of readily available data on the pearl market and recommended that the Commission undertake, as a matter of urgency, a pearl market study which would address the following issues:

- describe the present world market for pearls and identify potential new market opportunities that should be investigated;
- assess the potential of existing and new markets to absorb increased production from the region;
- explore the various options and alternatives for a co-ordinated regional marketing arrangement for pearls.

141. Recognising FFA's mandate in the field of marketing, the Meeting encouraged the Secretariat to seek FFA's active involvement in the study.

AGENDA ITEM NO. 8 — TECHNICAL SESSION

8.1 Inshore FADs and bait fishing techniques

142. The Fisheries Development Officer introduced discussions on inshore FADs and bait fishing techniques. Two SPC Masterfishermen gave reports on different types of FADs deployed and the results obtained. A report on this session is included in Annex 1.

8.2 Design and interpretation of fisheries statistical programmes

143. The Inshore Fisheries Scientist presented Working Paper 9 which described the need for reliable coastal fisheries statistical data and the need to improve the current level of reporting. A report on the session is included in Annex 1.

AGENDA ITEM 9 – WORKSHOP ON FISHERIES TRAINING FOR THE PACIFIC ISLANDS

144. The Workshop on Fisheries Training for Pacific Islands was held and a summary of the technical discussions that took place is given in Annex 2. Following the Workshop the Meeting approved the following recommendations:

Recommendation No. 14

The Meeting, acknowledging the importance of the SPC Fisheries Training Directory as a tool for the identification and planning of appropriate fisheries training programmes, recommended wide distribution of the directory and ongoing attention to the updating of relevant information.

Recommendation No. 15

The Meeting reaffirmed its support for the proposed WPFCC study tour of ASEAN fisheries training and education institutions to be held in October 1992 and recommended that a representative of the University of the South Pacific be included in the tour.

Recommendation No. 16

The Meeting recommended that:

- **the SPC/Nelson course not be upgraded to a Certificate programme, but continue in its present form;**
- **the institution of the proposed Certificate programme be postponed pending the re-establishment of IMR in the Solomon Islands. Once IMR is functional, the concept of the Certificate as a multi-institutional course involving modules at IMR, Nelson Polytechnic, and possibly other institutions, be re-examined;**
- **in the interim, the SPC RFTP make a concerted effort to canvass each SPC member country with the aim of further documenting the vocational fisheries sector training requirements of the region and the likely future demand for both a Certificate programme, and the present SPC/ Nelson course;**
- **the SPC RFTP consult extensively with training institutions in the region in order to determine the extent to which they could participate in a CFS programme, with a view to moving towards standardisation of appropriate certificate-level curricula.**

Recommendation No. 17

In acknowledgement of the potential for the increased employment of Pacific Island nationals in the industrial fisheries sector, the Meeting recommended that SPC undertake a study of the feasibility of introducing standardised fishing deckhand certification in the region, with the proviso that such a study should not take priority over existing SPC training-related activities.

Recommendation No. 18

While recognising the need to establish a new position within the Regional Fisheries Training Project to meet the increasing country requirements for training co-ordination, the Meeting, in its concern to meet immediate needs without the financial burden of hiring additional staff, recommended that:

- **the newly proposed Fisheries Information Project staff position endorsed by the Meeting be utilised on a shared basis by the Regional Fisheries Training Project in the enhanced dissemination of information relating to fisheries training and education;**
- **the Regional Fisheries Training Project seek funding to allow for the attachment of national officers to the project, with a view to developing the capabilities of both parties to undertake the dissemination of information relating to fisheries training and education.**

Recommendation No. 19

The Meeting noted an on-going need for management training within fisheries administrations and recommended that SPC continue to provide assistance in the implementation of appropriate management training.

AGENDA ITEM 10 — THE ROLE AND FUTURE OF THE RTMF

145. The SPC Fisheries Co-ordinator introduced Working Paper 16 on the role and future of the RTMF and sought guidance from the Meeting on the options listed in the working paper.

146. The Representative of Palau referred to the option of combining the RTMF and FFC Technical Meeting and asked whether a one-week period would be sufficient for the work programmes of both organisations to be considered.

147. The Representative of American Samoa believed that the option of holding the RTMF biennially had merit, and suggested that a biennial meeting might be held over a two-week period, with the first week devoted to the consideration of technical aspects of the work programme and the second week used to consider financial and policy matters. The Representative sought clarification as to whether RTMF was empowered to make such a decision.

148. The Deputy Director of Programmes explained that RTMF could recommend a biennial meeting, and that CRGA and the South Pacific Conference would be likely to accept any such recommendation.

149. The Representative of French Polynesia sought clarification as to whether the current financial problems of the SPC were temporary or of a more long-term nature.

150. The Representative of France provided the Meeting with some clarification of SPC's financial situation. He noted that the situation was serious and that the Thirty-first South Pacific Conference had established a sub-committee to try to resolve the problems. With respect to the SPC fisheries programmes, he felt that, given that funding was limited, some prioritisation of individual projects by RTMF would be useful. Such prioritisation might also be usefully applied to other SPC programmes.

151. The Representative of France suggested that, given the value of fisheries in the SPC region, it would seem reasonable that a small proportion of the income generated from these fisheries be earmarked for research. If this were to occur, the concept of matching funds, as suggested earlier by the Representative of Australia, might be attractive to donors.

152. The Representative of Solomon Islands suggested that fisheries projects needed reviewing on an annual basis, but understood the financial difficulties. If the Meeting agreed to biennial holding of the RTMF, provision should be made to hold special meetings as the need arises. He stated that holding FFC and RTMF back-to-back had merits, and suggested that country representatives could cover attendance costs from Tuna Treaty funds.

153. The Representative of Fiji said he preferred the idea of a biennial RTMF and suggested that the intervening year could be used for targeting special interest groups. He added that SPC and FFA could discuss the idea of holding alternate technical meetings with non-members applying for observer status. He further suggested that the annual core budget allocation to RTMF should be carried forward to pay for biennial RTMFs.

154. The Representative of the Forum Fisheries Agency explained that the two organisations had not discussed this formally; he would report the Meeting's sentiments on this issue to his organisation.

155. The Representative of Palau expressed his support for a biennial RTMF.

156. The Representative of Australia explained that his country had no formal position on this issue because the working paper was not available before the meeting. He expressed some caution about changing the frequency of RTMF due to its important role in reviewing programmes and endorsing new initiatives.

157. The Fisheries Co-ordinator explained that the Loyalty Islands had offered to host the 1992 RTMF in Lifou, but the appropriate facilities could not be arranged in time. This offer might be available next year and this could provide countries the time to consider this matter.

158. The Representative of New Caledonia spoke of the option of having the RTMF and FFA held concurrently and having non-FFA territories attend the FFA Technical Meeting as observers. He asked if observers could make substantive recommendations or comments.

159. The Representative of Fiji subsequently advised that, during FFC Technical Meetings, inputs from members and observers had equal status.

160. The Representative of New Zealand supported increased consultation between SPC and FFA on policy and technical planning issues. He also supported a reduction in the number of meetings.

161. The Representative of Vanuatu pointed out that the progress of the Deck Hand Training Certificate was to be discussed at RTMF in 1993. He asked whether, if no RTMF was held in 1993, a special meeting should be held to accommodate this subject. He further stated that an RTMF meeting every two years was too infrequent.

162. The Representative of Cook Islands supported the suggestion for a biennial meeting. She requested clarification on the degree of funding that SPC would be willing to commit toward a biennial meeting of one or two weeks.

163. The Deputy Director of Programmes outlined the pre-1988 arrangement for half funding versus the option for full funding of a biennial meeting. He stated that core funding could support half the cost of the present meeting. If this amount were carried forward, full funding for a one-week, biennial meeting could be provided.

164. The Fisheries Co-ordinator stated that a biennial RTMF meeting would have ramifications affecting other meetings and projects, in particular the annual SCTB which provides recommendations on the work plan of the TBAP to the RTMF on an annual basis.

165. The Representative of Australia suggested that the extensive discussion on this complex issue was an indication that the Meeting needed additional time to come to a decision. He suggested that the issue be discussed in-country by individual governments.

166. The Representative of Vanuatu suggested that the RTMF should continue on an annual basis.

167. The Coastal Fisheries Programme Manager suggested that more time might be necessary to allow SPC and FFA to meet and for each government to discuss the issue. He felt that there should be an understanding that an RTMF would be held in 1993.

168. The Deputy Director of Programmes stated that from a management perspective, it would be preferable to hold the RTMF on a biennial basis. However, he would defer to the technical needs of the meeting.

169. The Representative of France supported the wisdom of making a recommendation that could then be discussed in-country and debated in CRGA. The Representative of Fiji fully supported this suggestion, and also asked that a paper outlining these issues be prepared by SPC for distribution two months prior to CRGA. After further discussions the Meeting made the following recommendation:

Recommendation No. 20

The Meeting, while noting the preference of some countries to hold the RTMF annually, recommended that it be held on a biennial basis while finance remained a constraint, with the proviso that extraordinary meetings be convened to deal with issues of major concern to the region when they arose. Such meetings should only be convened after adequate consultation between countries and the Secretariat. The meeting also recommended that the Secretariat secure funding for such meetings.

AGENDA ITEM NO. 11 — REPORTS BY OTHER ORGANISATIONS

(i) United Nations Development Programme (UNDP)

170. The SPC Fisheries Co-ordinator, on behalf of the UNDP Resident Representative, read a statement concerning the implementation of the fifth cycle of UNDP regional funding. Amongst other policy directives, UNDP was committed to moving towards national/regional execution of projects, where there existed institutions with a demonstrated technical and management capacity in the area of the proposed programme. UNDP had decided to proceed with the following allocation of fifth cycle funding in the fisheries sector:

- (1) The Offshore Fisheries Development Project for SPC execution at the level of US\$ 700,000 beginning August 1992;
- (2) Completion of activities of the Regional Fishery Support Programme by the end of August 1992;

- (3) Consultation with FAO and regional fisheries institutions to programme the remaining US\$ 2.3 million.

171. The Meeting expressed its appreciation to UNDP for its generous funding support for the SPC Offshore Fisheries Development Project and, following a suggestion by the Representative of Fiji, made the following recommendation:

Recommendation No. 21

The Meeting recommended that SPC, FFA and the FAO/UNDP Regional Fishery Support Programme meet with UNDP as soon as possible to re-programme the US\$ 2.3 million available from the fifth cycle of UNDP regional funding for fisheries projects.

(ii) Australian Centre for International Agricultural Research (ACIAR)

172. Mr B.R. Smith, ACIAR Fisheries Research Co-ordinator, summarised the Centre's activities and described the major on-going projects. The Australian Centre for International Agricultural Research (ACIAR) was funded under Australia's overseas aid programme as an effective means of utilising Australian research capacity to assist developing countries to solve key problems constraining agricultural and fisheries production. Central to this approach of using scientific collaboration as a means of giving aid was the idea of partnership and mutual benefit.

173. The ACIAR Fisheries Program had been active in the Pacific Islands since 1984, with activities directed principally at several key inshore resources of importance throughout the region, as both local food and cash earning commodities for rural populations. Emphasis had been given to the enhancement of national capacity within partner institutions to assess and monitor exploited stocks and to develop appropriate management advice for the consideration of policy makers.

174. Information Paper No. 22 briefly outlined the aims and outputs of ongoing or recently concluded ACIAR activities in the Pacific, and commented on several new initiatives which would be of interest to SPC member countries.

175. Most notable of these were three projects, two of which terminated early in 1992, namely the Giant Clam Mariculture Project, co-ordinated through JCU and involving five Pacific Island countries, and the Underwater Visual Census Project which involved collaboration between QDPI and the Fiji Fisheries Division. The Tuna Baitfish study undertaken by CSIRO working with Fisheries Divisions in Kiribati, Fiji and Solomon Islands was on-going and was currently working in Fiji.

176. ACIAR was actively investigating new areas for research involvement in the fisheries sector, and fully recognised the advantages of working closely with SPC and other such regional bodies with an involvement or interest in fisheries. In pursuit of this, pilot-scale studies had recently been initiated, involving SPC (tuna products, trochus study in Aitutaki), to investigate promising areas for further research intervention. Similarly a major new project which would focus on pearl oyster resource enhancement was under development in collaboration with SPC and several Pacific Island countries.

177. The Representatives of Solomon Islands, Papua New Guinea, Fiji and the Cook Islands thanked ACIAR for assistance in various research projects in their respective countries.

(iii) Forum Fisheries Agency

178. Mr Andrew Richards, Research Co-ordinator, presented a summary of the activities of the Forum Fisheries Agency. Since the last RTMF, FFA had provided assistance to member countries in economic and resource management matters by continued development of data processing facilities and the enhancement of regional communications through the on-going installation of PEACESAT and INMARSAT satellite terminals, the latter in support of the Marine Satellite Communications System (MSCN). Development had also continued in the areas of research coordination, surveillance and information dissemination. Phase II of the Research Coordination Unit, again funded by ICOD, commenced in April 1992 for a period of three years.

179. Member countries were supported during access negotiations with DWFNs and through the administration of the Multilateral Treaty on Fisheries. Legal assistance continued to be available to assist with issues relating to the United Nations Convention on the Law of the Sea (UNCLOS) and on EEZ and high sea fisheries issues including boundary delimitation.

180. Continued development of mechanisms for the regulation of purse-seine fisheries in the region led to a draft management arrangement being considered at Ministerial level. In May 1992, the Forum Fisheries Committee adopted the revised draft text of what was now known as the Niue Treaty on Fisheries Surveillance and Law Enforcement in the South Pacific Region. It was presented to the South Pacific Forum Meeting at Honiara in July 1992 for signature.

181. In May, FFA member countries and the United States of America agreed on the terms for an extension to the Treaty on Fisheries. The extension would follow the expiration of the current agreement in June 1993. The Pacific Island Parties met in Nadi, Fiji to determine the internal arrangements for the administration of the Treaty.

182. The fourth Consultation on the Development of a Management Regime for South Pacific Albacore was convened in Suva in December 1991. Although significant differences were noted between some DWFNs and South Pacific countries on what such a regime should encompass, Taiwan and the United States of America agreed to continue informal consultations with FFA member countries.

183. In order to effectively provide its various services, FFA had been working up to full staff strength in the past twelve months, with seven new staff joining the Agency between June and August. One of the positions to be filled in August was that of Project Economist which would considerably strengthen FFA's expertise in the field of marketing. The SPC/FFA colloquium held in Port Vila, Vanuatu in March reinforced the co-operative and collaborative arrangements in regional fisheries matters between the two organisations.

184. The Representatives of Niue and the Federated States of Micronesia expressed their appreciation for the assistance FFA had provided.

(iv) South Pacific Aquaculture Development Programme (SPADP)

185. The Project Manager briefed the Meeting on the conclusion of SPADP. The project had been successful and several aquaculture practices had begun to thrive. He suggested that it would be useful to set up a regional aquaculture supporting system, to collaborate with Asian countries, and to develop basic research on reef organisms.

186. The project was to have ended in August 1992, but the Japanese Government had agreed to fund a second-phase project which would start in May 1993.

187. SPC had been asked to develop a strategy for backstopping aquaculture elements during the eight-months gap. Bridging funds would be available through UNDP Suva.

188. The Coastal Fisheries Programme Manager clarified that SPC was reluctant to assume the duties of SPADP as it did not have a mandate from member countries to enter into aquaculture activities.

189. The Representative of the Federated States of Micronesia expressed his gratitude for the efforts of SPADP in his country.

190. The Fisheries Co-ordinator requested direction from the Meeting as to whether SPC should temporarily assume the duties of SPADP, using up to \$50,000 that had been set aside by UNDP for this purpose.

191. The Coastal Fisheries Programme Manager clarified that this money would be supplied without additional personnel, which could impinge on the busy work load of the Fisheries Programme. He stated that SPC procedures, some of which might conflict with those of FAO, needed to be followed. He added that FFA could possibly assist with this task as it had recently recruited an officer with expertise in aquaculture.

192. The Representatives of Palau, the Federated States of Micronesia, French Polynesia and the Cook Islands endorsed SPC's involvement in this project activity and further suggested a collaborative forum between SPC and FFA in the interim administration of the aquaculture project.

193. The Representative of Guam stated that he would not support SPC involvement in this project as he felt that \$50,000 might not be a sufficient amount to initiate new aquaculture projects, since start-up costs of such projects are high.

194. The Coastal Fisheries Programme Manager stated that the \$50,000 would be used only to maintain existing projects and there was a possibility that this amount could be increased.

195. The Meeting endorsed a suggestion that SPC and FFA, while discussing the programming of the remaining UNDP funds, develop a strategy for co-operating in the field of aquaculture until the FAO project could re-assume these duties.

(v) Western Pacific Fisheries Consultative Committee

196. The Chairman of WPFCC referred the meeting to Information Paper 7, which provided a summary update of the work programme and activities of WPFCC.

(vi) New Zealand School of Fisheries

197. Captain A. Robertson presented a summary of the activities of the New Zealand School of Fisheries, which operated in conjunction with the Nelson Polytechnic situated in Nelson, New Zealand. The School had been involved in training Pacific Island students since 1979 when the first SPC Pacific Island Fisheries Officers training course was run.

198. The key principle of all New Zealand School of Fisheries' programmes was that courses were tailored to provide skills that could be directly applied in the students' work situation. From this base, the New Zealand School of Fisheries had been able to develop and run other programmes for Pacific Island students including:

- an echo-sounder workshop in Noumea using the school's 'Simrad' echo-sounder simulator;
- the echo-sounder section of a two-week SPC FAD workshop in Kiribati;
- attachment of Pacific Island training personnel to the school to study teaching methods;
- an intensive 12-week business development training programme in Nelson for Papua New Guinea Fisheries Officers as part of the Morobe Coastal Development Project sponsored by GTZ;
- attendance by Pacific Island students at a one-year Operational Fisheries Management Programme;
- attendance by several Pacific Island students at standard New Zealand courses such as the New Zealand Fishing Cadet Statutory Certificate Courses.

199. Because it was situated in New Zealand's major fishing port, the school was able to organise practical attachments in a wide range of industry situations. It could draw on personnel from within the industry to complement the school's permanent staff.

200. The school had the ability to develop 'one-off' courses in a wide range of fishery-related subjects including computers, electronic aids, fisheries business development, fisheries operational management, general business management to degree level (in association with the Polytechnic Commerce programme) and industry attachments.

201. The school would be prepared to bring its fully integrated fishing-boat bridge simulator to Pacific Island situations if this was considered desirable. This simulator was used to teach electronic fish finding (sounder, sonar, net sondes) and electronic navigation (radar, GPS, track plotter).

(viii) Canadian Cooperation Office

202. The Canadian Field Representative noted that, in an attempt to reduce the cost of some of its operations, the Canadian Government had decided in February 1992 to disband the International Centre for Ocean Development (ICOD) in Halifax and bring its current programmes directly under the auspices of CIDA. The Canadian Government had given the assurance that all approved current projects of ICOD would continue to be funded, and would be maintained by a small group of former ICOD employees for an interim period. CIDA would undertake to identify a new Canadian Executing Agency (CEA) to carry on the administration of the ICOD programmes and projects in the future. It was anticipated that this process would be completed by 31 March 1993.

203. The Canadian Cooperation Office in Suva would remain open and staffed until the end of 1992 at which time a decision on its future would be maintained by the newly identified CEA.

204. CIDA had completed an evaluation of its Canadian South Pacific Ocean Development Program (CSPODP), a five-year C\$ 10 million project in the South Pacific. On the basis of this evaluation, CIDA was considering the approval of a second phase of funding for CSPODP, to be administered by the new CEA.

205. It was noted that the Canadian Delegate (the Hon. Flora MacDonald) to the recent South Pacific Forum Meeting in Honiara had stated that 'Canada remains a committed development partner for the South Pacific region and there will be no reduction in its programme of spending in the region.

206. In light of this and recent statements of support for world fisheries by the Prime Minister of Canada at the UNCED Conference in Brazil, regional agencies and independent member countries were encouraged to continue to develop funding proposals for potential Canadian support in the areas of fisheries and ocean development. These should be submitted to CIDA and appropriate Canadian High Commissions in New Zealand or Australia.

(ix) James Cook University

207. The Meeting learnt that INTROMARC, the International Tropical Marine Research Centre, was a consortium between James Cook University, the Australian Institute of Marine Science, and the Great Barrier Reef Marine Park Authority, all in Townsville, Australia. Its central goal was research into and education concerning the sustainable development of tropical marine populations and habitats.

208. At James Cook University, the Department of Marine Biology and Centre for Environmental Studies were responsible for the education programme. This consisted of:

i) Undergraduate programme (half-yearly courses)

Courses in fisheries science, coastal management, coral reef ecology, marine conservation biology and environmental impact assessment. These courses form part of a B.Sc. (Bachelor of Science) degree.

ii) Graduate programme (two-week intensive courses)

Courses in tropical fisheries biology, fisheries science for developing nations, marine population modelling, sampling and experimental design, coastal zone management and others. These courses may be taken as part of a Postgraduate Diploma – a one-year course – or a Master's degree in Tropical Fisheries and Marine Ecology – a two-year course.

iii) Certificate courses

Two six-week courses leading to certificates in tropical fisheries biology and environmental impact assessment are being planned. These are stand-alone courses that do not require participants to have a B.Sc. or lead to a higher degree. They are primarily aimed at people working within fisheries or environmental institutions who wish to further their education.

209. Some 30 per cent of the students enrolled in 1992 were Asians. The University therefore had some mechanisms in place for accommodating language and cultural differences. It was now looking to expand its teaching base into the Pacific. A proposed link between INTROMARC and USP might serve to increase opportunities for fisheries training in the South Pacific region.

(x) Overseas Fishery Cooperation Foundation (OFCF)

210. The SPC Fisheries Development Associate presented the activities of OFCF as outlined in Information Paper 11. OFCF was established in 1973 with the full support of the Japanese Government and operated several coastal fisheries development projects in Marshall Islands, Kiribati, Solomon Islands and the Federated States of Micronesia (FSM). The OFCF Suva office, opened in September 1990, ran a programme designed to repair and reactivate existing fisheries-related facilities in Kiribati, Solomon Islands, FSM, Tuvalu, Marshall Islands and Palau.

211. For the further development of fisheries relations between the island countries and Japan, the OFCF attached Japanese fisheries advisers to organisations such as NFC in the FSM, FFA and the SPC.

(xi) USAID

212. The Meeting noted that USAID continued to support fisheries development activities in ten Pacific Island countries. All projects financed under USAID's South Pacific Fisheries Project (US\$5.45 million over six years, 1986–1992) would be completed prior to the project termination date of 31 December 1992. During this period and in the next three years, the main activities would include the implementation of all components under the Pacific Islands Marine Resources Project (US\$ 13.7 million over five years) in Cook Islands, Kiribati, Tonga, Tuvalu, Papua New Guinea and Fiji. Under the current Fisheries Treaty, the mission also continued to oversee the development projects under the final year of the Fisheries Treaty Program (US\$6 million over five years) under the current Fisheries Treaty.

(xii) University of the South Pacific (USP)

213. The USP Marine Studies Programme's five-year plan (1992–1996) was approved in principle by the USP Council at its October 1991 meeting in Tarawa, Kiribati, and implementation was now progressing.

214. The following new programmes had been approved to start in academic year 1993: Certificate and Diploma in Tropical Fisheries, Certificate in Ocean Resources Management, Diploma in Ocean Resources Management and Policy, and Diploma in Fisheries Economics and Management.

215. New initiatives included a collaborative programme in marine geology between USP and the South Pacific Geoscience Commission, funded by CIDA, and a new Marine Public Education Programme based at the USP Institute of Education and involving co-operation between USP and regional organisations (SPC, SOPAC, FFA and SPREP). Starting in 1992, the International Ocean Institute would establish a South Pacific Operational Centre in collaboration with USP, Suva.

216. The Institute of Marine Resources Steering Committee and the Marine Studies Coordinating Committee had developed a new Corporate Plan for IMR, and the funding request (USP and Solomon Islands) to Lomé IV had been given the highest priority. In January 1992, a new Atoll Research Programme was established at the USP Centre in Tarawa, Kiribati, and was collaborating in the USAID-funded Tarawa Lagoon Resource Management Project. In January 1992, USP assumed full responsibility for the Ocean Resources Management Programme, previously operated through FFA.

AGENDA ITEM 12 — OTHER BUSINESS

217. The Representative of France asked if it was possible for the Secretariat to prepare a paper for CRGA on appropriate utilisation of the PEACESAT network.

218. The Coastal Fisheries Programme Manager said that the Secretariat would note the request.

AGENDA ITEM 13 — CLOSING FORMALITIES

219. The Meeting examined the draft report page by page. Following further discussion on some of the items and after making some amendments, the Meeting adopted the report.

220. Mr Saimone Tuilaucala offered the closing prayer.

221. The Chairman expressed his appreciation to the participants and the Secretariat and made special mention of the drafting committee, the interpretation/translation section, the printery, the secretarial staff, the organisers of the successful fisheries barbecue and all the other members of the Secretariat who had helped make the Meeting a success. He then declared the Meeting closed.

IV. LIST OF RECOMMENDATIONS

Recommendation No. 1

Noting the world-wide peer recognition of the scientific calibre of the programme's work, the Twenty-fourth Regional Technical Meeting on Fisheries was unanimous in its commendation of the scope, expertise and implementation of the Tuna and Billfish Assessment Programme. Such a vigorous, scientific research programme was essential in support of what has become the world's largest tuna fishery. The Twenty-fourth Regional Technical Meeting on Fisheries was strong in the view that the Tuna and Billfish Assessment Programme should continue to fulfill that role, and recommended that the Secretariat make all efforts to secure funding to that end.

Recommendation No. 2

The Tuna and Billfish Assessment Programme Strategic Plan, initially endorsed by the Twenty-third Regional Technical Meeting on Fisheries and reaffirmed by the Twenty-fourth Regional Technical Meeting on Fisheries, presented a framework for the future activity of the Tuna and Billfish Assessment Programme, and a five-year operational plan was now in preparation. The Twenty-fourth Regional Technical Meeting on Fisheries recommended that the Secretariat seek urgent commitment by extra-budgetary donors for funding on a multiple-year basis for the Tuna and Billfish Assessment Programme.

Recommendation No. 3

Recognising the magnitude and complexity of the logistics of the Regional Tuna Tagging Project, the Twenty-fourth Regional Technical Meeting on Fisheries congratulated the Tuna and Billfish Assessment Programme on the successful implementation of the field component of the Project. However, its full benefit to Pacific Island countries would be dependent on analyses yet to be carried out. While such analyses remained of the highest priority, there had been no success to date in securing adequate funding to undertake them. In view of the urgency of the situation, the Twenty-fourth Regional Technical Meeting on Fisheries recommended that the Secretariat make every effort to secure funding from the European Community, or other potential funding sources, so that the analyses of the Regional Tuna Tagging Project results could proceed without disruption.

Recommendation No. 4

The Meeting recommended that the Tuna and Billfish Assessment Programme Draft Strategic Plan be adopted.

Recommendation No. 5

The Meeting recommended that the South Pacific Commission continue and expand its participation in PIMRIS, and if possible, formalise this participation through the mechanism of an inter-agency agreement with other PIMRIS participants.

Recommendation No. 6

The Meeting recognised the value of the South Pacific Commission Fisheries Information Project in the collection and dissemination of information on marine resources of importance to the region, but expressed its concern that the level of financing to the project was still not sufficient to permit it to fully achieve its objectives, especially the establishment of 12 Special Interest Groups. The Meeting recommended that the Secretariat establish a position of Fisheries Information Assistant, and seek funding for this post in order to improve the capacity of the project to respond to the expressed needs of South Pacific Commission member countries in the provision of fisheries information.

Recommendation No. 7

The Meeting acknowledged the important role that the Inshore Fisheries Research Project (IFRP) had played in assisting and promoting the development of national fisheries research capabilities, and strongly recommended that the Secretariat make every effort to secure continued funding for the IFRP so that its activities could be continued without interruption when the present funding cycle expired in early 1993.

Recommendation No. 8

The Meeting recognised the important contribution being made by the South Pacific Commission Fish Handling and Processing Project in support of the post-harvest sector of national fisheries. The Meeting recommended that the Secretariat make every attempt to secure continued funding for the project so that its activities could be continued without interruption when the present funding cycle expired in early 1993.

Recommendation No. 9

The Meeting expressed its concern that extra-budgetary funding for the establishment of the Regional Post-harvest Fisheries Centre had still not been secured, in spite of the best efforts of the Commission. The Meeting recommended that all possible funding avenues be pursued, including application for uncommitted funds that might still be available under the Lomé II and III programmes. The Meeting requested that country representatives of ACP member countries actively seek formal support from their Governments.

Recommendation No.10

The Meeting expressed its concern at the uncertainty of the year-to-year funding arrangements under which the Regional Fisheries Training Programme presently operates. The Meeting recommended that the Secretariat secure long-term funding for the Project to ensure continuity and forward planning of activities.

Recommendation No. 11

The Meeting expressed its concern at the cuts in core budget allocations to the South Pacific Commission Deep Sea Fisheries Development Project that were recommended by the Sixteenth Meeting of the Committee of Representatives of Governments and Administrations. The Meeting reaffirmed the importance and value of the practical fisheries development assistance provided to member countries by the Deep Sea Fisheries Development Project, and strongly recommended that the Project's core budget allocation be reinstated at least to 1992 levels by fiscal year 1993/94. The Meeting urged representatives to ensure that their delegates to the forthcoming Committee of Representatives of Governments and Administrations and the South Pacific Conference were fully briefed on this issue.

Recommendation No. 12

The Meeting recommended that the Secretariat seek such supplementary extra-budgetary funding as would allow the Deep Sea Fisheries Development Project to increase the range and level of its support to regional small and medium-scale fisheries, particularly in the increasingly important development of offshore fisheries and economically viable, sustainable Fish Aggregation Device programmes.

Recommendation No 13

The Meeting commended the Secretariat on its efforts to promote a collaborative regional approach to the development of pearl oyster culture in the Pacific Islands. Delegates noted with considerable interest the offer by French Polynesia to play an active role in furthering such arrangements, as well as the research initiative under development by the Australian Centre for International Agricultural Research, in collaboration with the South Pacific Commission and several Pacific Island countries. The Meeting reiterated the economic importance of pearl oysters and other shell resources to some countries, especially those without substantial tuna fisheries, and recommended that support to the development of shellfish resources be given a high profile within the South Pacific Commission's Fisheries Programme. As a first initiative, the Secretariat should establish a working group on the economic development of pearl oyster resources, consisting of nominees from interested pearl-producing member countries.

The Meeting noted the absence of readily available data on the pearl market and recommended that the Commission undertake, as a matter of urgency, a pearl market study which would address the following issues:

- describe the present world market for pearls and identify potential new market opportunities that should be investigated;
- assess the potential of existing and new markets to absorb increased production from the region;
- explore the various options and alternatives for a co-ordinated regional marketing arrangement for pearls.

Recommendation No. 14

The Meeting, acknowledging the importance of the SPC Fisheries Training Directory as a tool for the identification and planning of appropriate fisheries training programmes, recommended wide distribution of the directory and ongoing attention to the updating of relevant information.

Recommendation No. 15

The Meeting reaffirmed its support for the proposed Western Pacific Fisheries Consultative Committee study tour of Association of South-East Asian Nations fisheries training and education institutions to be held in October 1992 and recommended that a representative of the University of the South Pacific be included in the tour.

Recommendation No. 16

The Meeting recommended that:

- the SPC/Nelson course not be upgraded to a Certificate programme, but continue in its present form;
- the institution of the proposed Certificate programme be postponed pending the re-establishment of the Institute of Marine Resources in the Solomon Islands. Once the Institute is functional, the concept of the Certificate as a multi-institutional course involving modules at the Institute of Marine Resources, Nelson Polytechnic, and possibly other institutions, be re-examined;
- in the interim, the South Pacific Commission Regional Fisheries Training Project make a concerted effort to canvass each Commission member country with the aim of further documenting the vocational fisheries sector training requirements of the region and the likely future demand for both a Certificate programme, and the present SPC/ Nelson course;
- the South Pacific Commission Regional Fisheries Training Project consult extensively with training institutions in the region in order to determine the extent to which they could participate in a Certificate in Fisheries Studies programme, with a view to moving towards standardisation of appropriate certificate-level curricula.

Recommendation No. 17

In acknowledgement of the potential for the increased employment of Pacific Island nationals in the industrial fisheries sector, the Meeting recommended that the South Pacific Commission undertake a study of the feasibility of introducing standardised fishing deckhand certification in the region, with the proviso that such a study should not take priority over existing SPC training-related activities.

Recommendation No. 18

While recognising the need to establish a new position within the Regional Fisheries Training Project to meet the increasing country requirements for training co-ordination, the Meeting, in its concern to meet immediate needs without the financial burden of hiring additional staff, recommended that:

- the newly proposed Fisheries Information Project staff position endorsed by the Meeting be utilised on a shared basis by the Regional Fisheries Training Project in the enhanced dissemination of information relating to fisheries training and education;
- the Regional Fisheries Training Project seek funding to allow for the attachment of national officers to the project, with a view to developing the capabilities of both parties to undertake the dissemination of information relating to fisheries training and education.

Recommendation No. 19

The Meeting noted an on-going need for management training within fisheries administrations and recommended that the South Pacific Commission continue to provide assistance in the implementation of appropriate management training.

Recommendation No. 20

The Meeting, while noting the preference of some countries to hold the Regional Technical Meeting on Fisheries annually, recommended that it be held on a biennial basis while finance remained a constraint, with the proviso that extraordinary meetings be convened to deal with issues of major concern to the region when they arose. Such meetings should only be convened after adequate consultation between countries and the Secretariat. The meeting also recommended that the Secretariat secure funding for such meetings.

Recommendation No. 21

The Meeting recommended that the South Pacific Commission, the Forum Fisheries Agency and the FAO/UNDP Regional Fishery Support Programme meet with the United Nations Development Programme as soon as possible to re-programme the US\$ 2.3 million available from the fifth cycle of UNDP regional funding for fisheries projects.

V. LIST OF WORKING PAPERS

Working Papers

- WP.1 SPC Fisheries Programme
 WP.2 Tuna and Billfish Assessment Programme – Work Programme Review 1991–92
 WP.3 Report on SPC Coastal Fisheries Programme activities 1991–92
 WP.4 The future of SPC small-scale fisheries development activities
 WP.5 Introduction of a Certificate in Fisheries Studies
 WP.6 Coordination of regional fisheries training
 WP.7 Pacific Island Fishing Deckhand Certification – preliminary considerations
 WP.8 Collaboration of Pacific Island pearl oyster resource development
 WP.9 Coastal fisheries statistics in the South Pacific
 WP.10 Inshore fish aggregation devices – their deployment and use
 WP.11 Fifth Standing Committee on Tuna and Billfish – (Honolulu, Hawaii, 18–19 June 1992) – Draft Report
 WP.12 Tuna and Billfish Assessment Programme – Draft Strategic Plan 1992–1996 – An update
 WP.13 Report of the Fifth Pacific Islands Marine Resources Information System (PIMRIS) Steering Committee Meeting (Noumea, New Caledonia, July 30–31 1992)
 WP.14 Regional trials with a new FAD raft type
 WP.15 Preliminary report on inshore FAD research being undertaken on Espiritu Santo, Vanuatu
 WP.16 Future of SPC Regional Technical Meetings on Fisheries

Information Papers

- IP.1 Country Statement – The Commonwealth of the Northern Mariana Islands
 IP.2 Report – SPC/FFA Colloquium
 IP.3 Country Statement – Federated States of Micronesia
 IP.4 Regional Tuna Tagging Project – Monthly summary, July 1992
 IP.5 Country Statement – New Caledonia
 IP.6 Statement – Outer Island Fisheries Project, Kiribati
 IP.7 The Western Pacific Fisheries Consultative Committee (WPFCC) – an update
 IP.8 Regional Tuna Tagging Project – overview of field operations
 IP.9 Country Statement – American Samoa
 IP.10 Country Statement – Papua New Guinea
 IP.11 Statement – Overseas Fishery Cooperation Foundation (OFCF) of Japan
 IP.12 Exposé national – Polynésie française
 IP.13 Country Statement – Tokelau
 IP.14 A summary of the National Marine Fisheries Service research and management activities in the Central and Western Pacific
 IP.15 Country Statement – Solomon Islands
 IP.16 Country Statement – Tuvalu
 IP.17 United States Agency for International Development – Statement: Updates on USAID fisheries programs
 IP.18 Country Statement – Australia
 IP.19 Country Statement – Fiji
 IP.20 Country Statement – Kingdom of Tonga
 IP.21 International Centre for Ocean Development (ICOD) (Canada) – Statement: Status of ICOD and Canadian development assistance to the South Pacific
 IP.22 An update on ACIAR supported fisheries research activities in SPC member countries
 IP.23 University of the South Pacific Marine Studies Programme 1991–92. A report to the 24th Regional Technical Meeting on Fisheries

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REPORT OF TECHNICAL SESSIONS**AGENDA ITEM 3 — TECHNICAL SESSION****3.1 Review of Western Pacific tuna fisheries**

A review of Western Pacific tuna fisheries was provided to set the scene for the consideration of the preliminary analysis of Regional Tuna Tagging Project results. This was done by considering total catches by gear, fleet, area and species for 1980 and 1990/1991, examining historical trends in catch-per-unit effort (CPUE), and briefly considering the status of stocks and rationale for the Regional Tuna Tagging Project.

The total catch in 1980 from the SPC region was just over 400,000 t. It was dominated by pole-and-line catches (182,000 t), primarily those by the Japanese long-range fleet. Longline catch levels were similar (170,000 t, although 1980 was the all-time peak year), but of considerably greater value. Nearly all the catch was made by large conventional longline vessels. Purse seine catches were minimal (51,400 t), from a relatively restricted area and involving log-associated fish. The catch in adjacent areas (Philippines/Indonesia, Japan offshore) was, at the time, slightly larger than in the SPC region, at 440,000 t total.

During the 1980s, along with changes resulting from the influence of the United Nations Convention on Law of the Sea and greater regional solidarity, came numerous other changes in the fishery. Pole-and-line fisheries generally decreased in importance as a result of economic factors. The conventional longline fishery saw a general decline in activity and greater targeting on more valuable bigeye tuna. Smaller vessels, based in ports in the region and landing chilled fish for air export to Japan, increased in number. The biggest changes, however, occurred in the purse seine fleet; following re-deployment of much of the US fleet in 1981/82, significant technological advances in efficiency were made, more fleets (ROC, ROK, Philippines) joined the fishery, and at the end of the decade, high seas transshipment became a significant factor. The driftnet/troll fishery for albacore developed, only to become embroiled in political controversy.

By the end of 1990, the total catch (860,000 t) had more than doubled since 1980. Pole-and-line catches had halved (87,000 t), and contributed only 10 per cent of the total catch. Longline catches (reportedly 94,000 t, but possibly higher) were also much reduced. With increased targeting and the emergence of small vessels, bigeye and yellowfin made up 85 per cent of the catch. The purse seine catch, however, exceeded 660,000 t, a 13-fold increase since 1980, with Japan, ROK, US and ROC the main fleets, and skipjack comprising 75 per cent of the catch. Approximately 170 seiners were active. Albacore catches had declined with the cessation of driftnetting in the South Pacific. The catch in adjacent areas had increased, especially in Indonesia/Philippines, but was now considerably less than in the SPC region. Japan remained the leading fishing nation, but now with 32 per cent of the total, as opposed to 60 per cent in 1980.

During 1991, the total catch increased by 25 per cent relative to 1990, due entirely to increased skipjack catches by purse seine and pole-and-line fleets. Korea became the top purse seine fleet in catch volume terms, and approximately 190 vessels were potentially active.

Unadjusted CPUE trends in Japanese pole-and-line, longline (yellowfin and bigeye) and purse seine, Taiwanese longline and US purse seine fisheries, were reviewed, as crude indicators of abundance. In no instance are there clear indications of declining CPUE in the face of great increases in catch over the last decade.

Assessment of the status of stocks from catch and effort data is hampered by incomplete data coverage, hence the resort to tagging data as the most timely and direct method of providing first-cut resource assessments. The Regional Tuna Tagging Project was designed and implemented with the primary objective of studying yellowfin population dynamics, with skipjack and bigeye populations secondary objects of study. These data will also be used to investigate local depletion and interaction issues where relevant.

A study of by-catch in WTP tuna fisheries and post-capture product flows of tuna caught in the region were also briefly summarised.

3.2 Review of Regional Tuna Tagging Project field operations

The primary objective of the RTTP is to gather information on the population dynamics of western Pacific yellowfin, skipjack and, to a lesser extent, bigeye tuna with an emphasis on studies related to yellowfin resources. A total of 128,137 tuna had been tagged by the end of July 1992 (32,433 yellowfin, 89,391 skipjack, 6,321 bigeye, 82 longtail) in a wide area of the western Pacific (10° N to 10° S, 120° E to 170° W), which corresponds to the area of most intense surface tuna fisheries in the western Pacific. Tagging operations have maintained this high proportion of yellowfin (YF) and bigeye (BE) releases (25.3% YF, 4.9% BE) through a variety of methods that concentrate fishing effort and promote the capture of these two tuna species.

The majority of RTTP fieldwork has been carried out on the MFV *Te Tautai*, a 173 GRT Japanese-style tuna pole-and-line vessel chartered from the National Fishing Corporation of Tuvalu. Additional tagging projects have been conducted that are components of the RTTP and support the overall Project objectives while providing information on specific regions and fisheries of the western Pacific. In-country tagging projects, using domestic pole-and-line vessels, have been conducted in Solomon Islands, Kiribati and Fiji. Small-scale, experimental tagging projects have also been conducted on tuna taken by Japanese purse seine, small-scale longline, artisanal handline and Philippine ring-net vessels. Most of the releases have been made from the *Te Tautai* (86.5%), with the Solomon Island, Kiribati and Fiji In-country Tuna Tagging Projects contributing 6.6, 3.4 and 3.0 per cent respectively.

The tagging procedures used by the SPC Skipjack Survey and Assessment Project were largely adopted by the RTTP, with modifications made to concentrate tagging effort on a broad size-range of yellowfin and bigeye tuna. Details of tagging and fishing gear, tagging methodology and procedures for data collection, biological sampling and school location are given in Information Paper 8.

A large proportion of total yellowfin releases have been made on schools found in association with FADs (20%), logs (19%), seamounts or whale sharks. Over 61 per cent of total bigeye releases were made during a very short period on yellowfin and bigeye feeding aggregations in the Australian Coral Sea. Most of the remaining bigeye releases were made from unassociated, log- or FAD-associated schools. In contrast, the majority of skipjack releases were made on unassociated (51%) or FAD-associated (19%) schools.

The importance of ocean anchovy (*Stolephorus punctifer*) resources as a forage species for tuna has been noted during RTTP field operations. Tuna schools actively feeding on this food source are highly vulnerable to purse seine gear but not easily taken on pole-and-line gear and this has strongly influenced the deployment and fishing strategies of DWFN purse seine fleets.

Lengths of yellowfin released have ranged from 19 to 140 cm, with a mean length of 49.1 cm. Bigeye lengths have ranged from 21 to 130 cm, with a large mean fork length of 69.1 cm, due to the high proportion of large bigeye tagged on Coral Sea aggregations. The mean size of skipjack tagged during the RTTP is 48.2 cm, ranging from 20 to 80 cm.

By the end of July 1992, a total of 12,033 tags had been returned to SPC headquarters and entered to the master tagging database. These constitute an overall return rate of 9.4 per cent and came from 2,942 yellowfin, 8,837 skipjack and 254 bigeye recaptures representing recapture rates of 9.1, 9.8 and 4.1 per cent respectively. The majority of recaptures have been made by Philippine PS¹, HL, TR, LL (23.6%), Japanese PS, PL, LL (15.4%), Solomon Islands PS, PL, TR (15.3%), Indonesian PL, PS, HL, TR (11.2%) Taiwanese PS (6.7%), Korea PS (5.7%), and Fiji PL (4.1%) vessels. A small quantity of tags has also been returned from vessels from Kiribati, Palau, FSM and the USSR.

Of the total 12,033 recaptures, 4,112 were returned from canneries or unloading operations based in Thailand (42%), the Philippines (25.6%), American Samoa (23.8%), Tinian (4.6%), Puerto Rico (2.5%) and Indonesia (1.4%). Release, recapture and movement information is summarised in Information Paper 4.

AGENDA ITEM 5 — TECHNICAL SESSION

5.1 Regional Tuna Tagging Project preliminary results

Following the review of Western Pacific tuna fisheries and the field operations of the RTTP, preliminary results of the RTTP and the Albacore Research Project were presented to the RTMF for the first time. Knowledge of the extent of movement or mixing, as revealed by the RTTP tagging results, is a partial prerequisite to undertaking stock assessment and was reviewed. Preliminary assessments of yellowfin and skipjack were then presented, and the special case of the Solomon Islands, where unique analytical approaches to assessment were needed to account for the presence of FADs, considered. Finally, a report on interim results of the Albacore Research Project was presented.

(a) *Tuna movement*

Recapture rates by country of release were presented in summary, and consistent return rates in the range of 9 to 13 per cent were noted for intensively fished areas. Over 12,000 recaptures had been received from the nearly 130,000 releases (89,400 SJ, 32,400 YF, 6,200 BE) made to 31 July 1992.

Movements of tagged fish, as displayed in arrow maps (which need to be interpreted with caution), indicated that movement on a significant scale occurred for all species, with displacements of up to 3,000 km recorded. Rates of dispersal with time were presented, with steady dispersal away from the point of release noted. Of all three species, skipjack appeared to show the most rapid dispersal.

Movements of RTTP tagged tuna, mostly in the 10°N–10°S band, were primarily meridional (west—east and vice-versa) in equatorial areas, with little evidence of latitudinal (north—south) movement. In contrast, earlier SSAP releases in sub-tropical areas (outside 10°N–10°S) indicated considerable latitudinal movement. Given this pattern of movement and the disposition of catches, it appears that the majority of tropical tuna biomass is concentrated in equatorial areas, with incursions (seasonal) of an unknown portion of this stock to sub-tropical/temperate areas.

Preliminary vector analysis indicates a definite eastward component to this movement in equatorial areas for all species, superimposed on a pattern of more random short-term dispersion. There is also some evidence of size-specific movement in the case of yellowfin. The development of movement models to analyse tuna movement in the region more rigorously, based on RTTP results, is planned.

1. PS = purse seine, HL = handline, TR = troll, LL = longline, PL = pole-and-line

The tagging results to date indicate that movement does not occur across the breadth of the Pacific, as noted previously for skipjack during the SSAP. There is similarly no evidence of discrete geographical stock units. Stock structure is thus likely to be best described by a form of isolation-by-distance. Movements of the larger long-lived tunas (yellowfin, bigeye) over the entire life cycle will, however, need to be considered.

The extent and rates of vertical mixing for the larger tunas (i.e. between surface and sub-surface gears) remain unclear at this time.

(b) Skipjack and yellowfin assessment

The assessment of skipjack and yellowfin tuna was an important objective of the RTTP. The results of an analysis of aggregate tag returns to estimate the rates of natural and fishing mortality, population sizes and recruitment rates pertaining to those portions of the stocks vulnerable to surface fishing were discussed.

An important aspect of the analysis was to attempt to account for all sources of tag loss, including those due to tag shedding and non-reporting. Tag loss due to tagging mortality was thought to be insignificant, but any losses due to emigration from the study area or declining vulnerability to the surface fisheries with time would be incorporated into the estimates of natural mortality.

The results suggested that fishing mortality on both species was currently relatively low, approximately 15 per cent of the total mortality rate. Turnover rates were high relative to current levels of catch (approximately 6 million t of skipjack turnover per year compared with a current catch of 990,000 t and approximately 2 million t of yellowfin turnover per year compared with the current catch of 370,000 t). These results imply some capacity of the stocks to accommodate increased exploitation. Although accurate estimates of potential sustainable yield are not possible at this stage, projections indicated that the stocks should be fairly resilient to further increases in catch during the next few years.

The study will continue, incorporating new data and adding additional structures (e.g. size structure) to the model as appropriate.

5.2 Solomon Islands FAD model

This study aims to assess the interaction between the Solomon Islands purse seine fishery and the pole-and-line fishery for skipjack, to quantify the effects of the FADs, and to determine a reasonable development target for the fishery.

The model is based on a spatial grid of half-degree squares and incorporates natural mortality, harvest by the two gear types, and movement of fish between squares. The effect of FADs is simulated by a sub-model that diminishes the movement out of squares that contain FADs, with the degree of diminishment increasing with the number of FADs in the square and approaching a saturation level. Preliminary fits of the model to tag data indicated the need for an inhibition of movement away from the island archipelago as a whole. This effect was modelled by an imaginary 'archipelagic fence' allowing free movement into the archipelago but inhibiting any movement out.

By fitting to tag data, the model was able to estimate the parameters of the FAD sub-model, and the archipelagic fence, plus diffusivity, natural mortality and catchabilities for the two gear types—seven parameters in all. Disabling either the FAD effect or the archipelagic fence effect significantly diminishes the goodness of fit of the model to the data. Therefore it is established that the tag data contain a signal of a FAD effect and an archipelagic fence effect on skipjack movement, and the model captures at least some part of these effects.

Further work on the model will be directed at estimating confidence intervals for parameter values and using the model to explore the effects of altering the effort regimes of the fleets and of altering the deployment of FADs.

5.3 Albacore Research Project

The Tuna and Billfish Assessment Programme's Albacore Research Project was initiated in 1989 to provide advice to South Pacific countries on the development, rational exploitation, and management of albacore stocks. Emphasis so far has been on acquiring data on fishery/stock dynamics, mainly by means of port sampling operations, high seas fishery observer programmes, and large-scale tagging operations. Over 900 daily fishing records were obtained this season, which showed that the troll fishery catch-per-effort was the lowest since 1985, perhaps due to the recent El Nino event. Over 6,500 albacore were tagged and released this season, which is almost five times more tags than were released in a single season prior to the Tuna and Billfish Assessment Programme's involvement.

Important results have already been obtained. One plausible hypothesis that we cannot reject at this stage is that the current exploitation rates are relatively low given the size of the albacore population. Release/recapture records also indicate that juvenile albacore can move from surface to longline fisheries within as little as 25 days, so certain types of interactions between these fisheries may take place without the long time lags that were once assumed. There also appears to be little exchange between the population of the Tasman Sea and the STCZ area east of New Zealand. Extensions to the MULTIFAN model are currently being developed for doing catch-at-age analysis, and we hope to generate preliminary estimates of yield and exploitation rates before 1993. This exercise would, of course, lead the way for the future evaluation of potential management scenarios.

AGENDA ITEM 8 – TECHNICAL SESSION

8.1 Inshore FADs and bait fishing techniques

The Fisheries Development Officer referred the Meeting to Working Paper 10 which described a series of shallow-water FADs deployed around Espiritu Santo in Vanuatu at the request of the Vanuatu Fisheries Department. The purpose of these deployments was to determine the effectiveness of various style of FADs, in various locations, in aggregating small pelagic species. The aim of this work was to provide enhanced and more easily harvested resources of both bait and food fish for subsistence and small-scale commercial fishing communities.

The Fisheries Development Officer described the importance of bait fish supply in regional tuna and deep-bottom fisheries and work by DSFDP masterfishermen in developing effective bait fishing techniques.

SPC Masterfisherman Paxton Wellington gave a detailed technical account of the way in which the FADS set in Vanuatu were rigged and deployed. The essential point made was that such FADs could often be rigged of surplus materials and therefore might involve little cost.

Mr J. Anderson of the Marine Resources Assessment Group of the United Kingdom referred to Working Paper 15 which described a research effort conducted in collaboration with SPC and the Vanuatu Fisheries Department and aimed at assessing the social and economic impact of the FAD deployments on fishing communities on Espiritu Santo. He explained that the research methodology adopted would seek to determine the present status of small pelagic fisheries and changes in this fishery that were the result of the FAD deployments.

During the discussion that followed a number of representatives asked technical questions relating to the materials used and the way in which the devices were rigged. Several representatives expressed interest in pursuing inshore FAD use in their own countries, including Papua New Guinea, where traditional inshore FADs are used.

The Fisheries Development Officer introduced the second part of this technical session dealing with regional trials with a FAD raft type first developed in the Indian Ocean. He referred the Meeting to Working Paper 14 which described the rigging of FAD rafts comprising a string of pressure-resistant floats, pointing out that this type of raft reportedly submerged under the effect of strong currents or storms and thus avoided most of the stresses that the customary raft undergoes in these conditions. He said that although the developers of this raft in the Indian Ocean did not incorporate catenary curve moorings in their FADs, it was felt that by doing so a superior FAD system might be developed. He then introduced SPC Masterfisherman Paxton Wellington and New Caledonia's Fisheries Service Masterfisherman Aymeric Desurmont who, in turn, gave accounts of trials with this new raft type in Vanuatu and New Caledonia.

In the discussion that followed both Masterfishermen reported that although FADs using this raft type appeared to perform very well in seaways, they had seen no indication as yet that the rafts might submerge. They suggested that it might therefore be possible to reduce the number of pressure-floats used, and thus the cost. They agreed that an important unresolved technical question was the best choice of material on which to string the floats and discussed the merits and drawbacks of the various materials used to date.

In response to questions, the Masterfishermen reported on catches taken from the FADs of this type deployed so far and agreed that they appeared to be at least as effective as conventional FADs. In reply to requests from several countries, the Fisheries Development Officer said that information on the design and sources of materials could be supplied on request.

The Representative of Niue pointed out that FADs using pressure-floats had been used in Okinawa and asked if attempts had been made to learn more about them.

The Fisheries Development Officer informed the Meeting that a request for technical information on this subject had been made to the Okinawan fisheries authorities.

8.2 Design and interpretation of fisheries statistical programmes

The Inshore Fisheries Scientist referred the Meeting to Working Paper 9 which emphasised the need for reliable statistical data from coastal fisheries in the South Pacific region and for improvements in the current level of reporting. National fisheries statistics collection programmes showed that, although commercial landings are fairly well covered in most countries, estimates of the subsistence production are usually extrapolated from nutritional data collected by health officers or from agricultural census data collected at infrequent intervals. Coastal fisheries databases were established in several countries but discontinued after a few years of operation.

The SPC Nutritionist described the relationship between fisheries statistical data and nutrition and reviewed areas where fisheries and nutritional workers could collaborate. Data on subsistence catches were important to provide information on nutrition and food availability, whilst dietary data were useful for empirical estimates of subsistence production. Fisheries production was not generally included in food and nutrition policy and planning, and fisheries officers should be made aware that, at the national level, fisheries statistical data were also vital to professions and organisations outside the fisheries sector.

The Fisheries Education and Training Officer reviewed the use of log books as statistical tools and described several types of log data sheets used by commercial fishermen, the SPC masterfishermen, and the simple log sheets that had been used during the recent practical module of the SPC/Nelson Polytechnic training course in Vanuatu. Simple log sheets might be used by fishermen if they perceived the benefit of keeping such records, and training workshops could be organised to train fishermen in their use.

On behalf of Fiji (where until recently he was Acting Director of Fisheries), the Senior Inshore Fisheries Scientist, Dr Tim Adams, emphasised the importance to Fiji's Fisheries Division of regular collection of fisheries statistics for dealing with issues relating to development, management and marine tenure. Mr Ray Clarke of NMFS then discussed the collaborative arrangement by which fisheries statistics are collected in the American-affiliated territories of Guam, the Commonwealth of the Northern Marianas and American Samoa. He also described the methods by which data were collected and indicated the manpower requirements for data collection and reporting.

REPORT OF THE WORKSHOP ON FISHERIES TRAINING FOR THE PACIFIC ISLANDS

Mr Rufo Lujan, Chairman of the Workshop, summarised the Workshop agenda.

Agenda Item 1 — Fisheries Training Directory

The SPC Fisheries Training Associate reported on progress with the SPC Fisheries Training Directory. He briefly summarised the history of the Training Directory project, noting that the present directory had evolved from a 1986 version prepared by the RFTP. The draft version of the Directory, circulated to participants, was being converted from a word-processed document to a database format to enable regular updates and to facilitate wide distribution.

Agenda Item 2 — Personnel Database

The Fisheries Training Associate reported on the present status of the Fisheries Personnel Database, an ongoing activity of the RFTP since 1987, which now contained over 500 entries based on information obtained from SPC training course nomination forms and from the Human Resource Development Study. A summary sheet of the parameters of the database and country-specific personnel data summaries had been circulated to country representatives. The option of engaging a consultant to visit countries and gather additional data was being considered. The summaries could assist in the preparation of additional personnel information needed to monitor and plan training programmes for fisheries personnel more accurately.

Agenda Item 3 — INTROMARC

Dr Geoff Jones of James Cook University made a brief presentation on the International Tropical Marine Resource Centre (INTROMARC). He explained that INTROMARC was a joint-venture initiative between James Cook University, the Great Barrier Reef Marine Park Authority, and the Australian Institute of Marine Science to promote research and education in the tropical marine environment. Dr Jones informed the Workshop that 30 per cent of graduate students at James Cook were from the Asian region and that the University was keen to encourage greater participation from Pacific Island countries in university programmes. Dr Jones said that INTROMARC was a new initiative which was investigating several avenues for potential funding support for Pacific Island students.

Agenda Item 4 — ASEAN/PINs collaboration in education and training

Ms Elvira Baluyut, Director of the Western Pacific Fisheries Coordinating Committee (WPFCC) reported on the ASEAN/PINs Workshop on Fisheries Education and Training which was hosted by SPC in April 1992 and jointly funded by CIDA and the Government of France. Ms Baluyut presented an overview of the workshop summarising the presentations, discussions and key points as follows:

- fisheries sector problems and issues in the ASEAN countries and PINs were identified. It was agreed that PINs could benefit from greater understanding of the ASEAN experience, especially in fisheries education areas;
- the large number of ASEAN education and training institutions have considerable potential to strengthen the institutional capabilities of those in the PINs;

- in terms of co-operation, it was agreed that there is considerable scope for improved information, student and faculty exchange within and between the two regions.

Ms Baluyut then presented the action plan agreed on by the ASEAN/PINs Workshop, which included mechanisms for enhanced flow of information such as training directory and newsletter distribution. Noting the overall success of the SPC/TPFCC-organised study tour of Latin America in 1991 as a mechanism to promote greater inter-regional understanding and co-operation, Ms Baluyut outlined an agreement for the organisation of a similar study tour to ASEAN by PIN education and training representatives. She informed the workshop that CIDA had agreed to fund five participants in a WPFCC organised study tour which had been endorsed by the April FFC technical meeting. In recognition of the potential benefit of the study tour to Pacific Island training institutions, the technical meeting had suggested that membership of the study tour should include three additional persons and nominations had been received to that effect.

The Representative of the Government of France then informed the workshop of the continuing commitment of France to the support of fisheries training. He advised that France had been approached to provide financial support for the three additional participants to take part in the study tour, noting that a positive response was likely, subject to strong endorsement of the study tour by the Meeting.

Questions were asked regarding study tour dates, participant nomination and WPFCC membership. The Representatives of Fiji, Tokelau, Nauru and the Cook Islands expressed strong support for the study tour, thanked the Government of France and CIDA for their offer of financial support, and proposed that a representative from USP be included in the study tour team. This recommendation was endorsed by the Workshop for adoption by the RTMF plenary.

Agenda Item 5 — Progress with IMR/USP Marine Studies Programme

Professor Robin South presented an update on the USP Marine Studies Programme. He referred participants to the USP Information Paper which he then briefly summarised. He referred to the scheduled introduction of five new diplomas and certificates in 1993 and the incorporation of the Ocean Resource Management Programme into the Marine Studies Programme in 1992. He outlined the establishment of the International Ocean Institute Centre at USP, and the newly established Marine Public Education programme. He then reported on progress with the IMR programme for Solomon Islands, noting that a corporate plan had been prepared for IMR and approved by the IMR steering committee, but that further progress would be subject to EC consideration of a Lomé IV proposal to fund the construction of premises for IMR in Solomon Islands. In responding to a query regarding the Marine Public Education programme, Professor South reported that this Canadian-funded initiative would allow for the employment of a Co-ordinator within the Institute of Education. The Co-ordinator would be responsible for the development of curriculum and teaching materials for schools, with the overall goal of incorporating relevant materials on marine resources in school curricula.

Agenda Item 6 — Certificate in fisheries studies

The SPC Fisheries Education and Training Adviser referred the Workshop to Working Paper 5 on the introduction of a Certificate in Fisheries Studies. He emphasised that the issues and considerations surrounding the introduction of a certificate were complex; despite widespread consultation, the Secretariat had not been able to present a clear course of action for the introduction of a certificate programme. He then summarised the history of certificate level training in the region and presented an overview of the likely content of a certificate programme. Potential institutional arrangements were discussed and the SPC perspective, suggesting a postponement of certificate implementation, was summarised. Mr Walton said that this perspective was presented

in the working paper as a potential recommendation to the Meeting and called on the Workshop to discuss and amend the recommendation as required.

The Representative of the Cook Islands remarked that there was a wide range of training options available to PINs and that the real need was to know what training was being offered, by whom, where and when. He suggested that this should take priority over the introduction of further training, especially given the difficulties currently being experienced with general financial support for new initiatives. This perspective was echoed by the Representatives of Papua New Guinea and Fiji, with the latter reinforcing the need for the Fisheries Training Directory to be distributed as soon as possible. The Representative of Vanuatu noted the success of the 1992 Nelson course practical module hosted in Vanuatu and stressed its value as an introduction to technical aspects of fisheries. He thanked SPC for the opportunity to host the course in 1992 and formally offered to host the 1993 practical module. The Workshop endorsed the recommendation for adoption by the Meeting.

Agenda Item 7 — Pacific Island fishing deckhand certification: preliminary considerations

The Fisheries Education and Training Adviser introduced the session on training for the offshore fishery and referred the Workshop to Working Paper 7. He referred to the potential for expanded employment of Pacific Island nationals on DWFN fishing vessels and summarised the current extent of such employment, stressing the *ad hoc* nature of existing training opportunities for recognised deckhand certification. He suggested that agreement on a standard curriculum for deckhand training would assist in obtaining international recognition for a Pacific Island Fishing Deckhand Certificate. Existing national maritime training institutions already had the capacity to offer such a programme. Noting that DWFN employment was not presently an attractive employment option for Pacific Island nationals, he suggested that there was a need to establish a mechanism for standardising terms and conditions of employment aboard such vessels. He outlined the possibility of establishing a register of fishermen. He stressed the need to consider the implementation of a certificate programme and the use of the programme as separate issues. He requested the Workshop to debate the former as a prerequisite to discussion of the latter.

The Representative of Vanuatu informed the Workshop that up to 400 ni-Vanuatu were employed on foreign vessels, often under unfavourable conditions. He welcomed the potential introduction of standardised deckhand certification. He requested clarification on the appropriate mechanism for this. The Fisheries Education and Training Adviser said that the first step would be agreement on an appropriate curriculum. The concept of standardised certification was also endorsed by the Representatives of Fiji and the Federated States of Micronesia.

The Representative of Nelson Polytechnic then outlined the existing New Zealand Qualified Fishing Deckhand Certificate programme. He offered the assistance of Nelson Polytechnic in developing the course curriculum. The Representative of FFA summarised the history of FFA's work in this area, noting that a standard contract form for employment had been prepared by the agency but had not yet been adopted. The Representative of New Caledonia, stating that a deckhand training programme for the local fishing industry would soon be introduced in New Caledonia, supported the wider application of a standardised curriculum for such training. The Representative of the Federated States of Micronesia, whilst supportive of the concept, questioned the priority of this matter in relation to the work programme of the RFTP. He suggested that the Workshop should endorse the concept of standardised deckhand certification for further study and development but that it should not take priority over other items in the RFTP work programme. This suggestion gained consensus support from the Workshop and was then adopted as a recommendation to the plenary session.

Agenda Item 8 — Co-ordination of fisheries training — an SPC perspective

The Fisheries Education and Training Adviser presented an overview of the SPC perspective on co-ordination and referred the Workshop to Working Paper 6. He gave a brief summary of current RFTP projects oriented towards co-ordination, stressing that the RFTP had always had a mandate to co-ordinate training activities, but that historically the project had concentrated its efforts on the organisation and implementation of training programmes. He went on to state that the RFTP viewed co-ordination as a function of information flow and communication; the project had given considerable thought to potential improvement in this area. Mr Walton summarised the perspective of the Human Resource Development Study (HRD) in relation to co-ordination of training. SPC did not agree with the HRD recommendation to establish a Regional Fisheries Training Coordinator position, suggesting instead that the Workshop consider the establishment of a junior professional position within the existing RFTP. This would allow the RFTP to strengthen its capacity to undertake co-ordination-related activities, including a Special Interest Group (SIG) in training and education, without compromising its training implementation activities.

Discussion of general issues relating to co-ordination brought general acknowledgement from the Workshop on the need for greater co-ordination, with a degree of division on whether a regional training co-ordinator position was appropriate. Responding to a question on the possibility of establishing a new junior position within the RFTP, the SPC Fisheries Co-ordinator pointed out that the RFTP could access the position already recommended for establishment within the Fisheries Information Project.

The Representative of Palau suggested that the RFTP could attempt to identify potential funding for the attachment of national officers to the RFTP, to work in matters relating to the co-ordination of training. This suggestion was endorsed by the Representative of the Cook Islands who suggested that it be presented as a formal recommendation. The Representative of Fiji suggested that there was still a need for overall co-ordination of training. This view was endorsed by the Representative of Nauru.

It was agreed that the record of the Workshop should reflect the continuing debate on co-ordination issues and that the matter should be reviewed at subsequent fora.

The Chairman proposed a recommendation that the RFTP share the new position in the Fisheries Information Project to undertake expanded information dissemination, and that provision to be made for attachment of nationals to the RFTP. The suggested recommendation was accepted by the Workshop for endorsement by the plenary session.

Agenda Item 9 — Coordination of fisheries training — an FFA perspective

The FFA perspective on co-ordination of fisheries training was then presented by FFA representative, Fisheries Research Co-ordinator, Mr Andrew Richards. He advised of FFA's strong interest in the co-ordination of training and outlined the Agency's main areas of training activity, namely specialist training executed under fellowship or workshop-type attachments. He noted the HRD advisory capacity of the Agency and the fisheries awareness project that had resulted in the publication of books, posters and slides for public dissemination. He went on to discuss the interest of the research co-ordination unit of the Agency in developing longer-term national HRD plans in order to increase national research capabilities and informed the workshop of FFA's keen interest in the development of national personnel databases in collaboration with SPC. In considering SPC initiatives to enhance co-ordination of training, Mr Richards endorsed the proposals outlined to the workshop by Mr Walton and noted that the Agency was committed to inter-agency co-operation.

Agenda Item 10 – Human Resource Development Study – an overview

The Fisheries Education and Training Adviser summarised issues, problems, and recommendations contained in the Human Resource Development Study. He suggested participants use the final session of the workshop to discuss any further possible responses to such issues and problems that might be appropriate to the RFTP, noting, in particular, the Organisational Management Workshop for Senior Fisheries Personnel.

Several participants expressed their satisfaction with the Organisational Management Workshop and agreed there was an on-going need for this type of management training. The Representative of the Federated States of Micronesia suggested that the Workshop propose a recommendation for adoption in plenary session, endorsing the continuation of an SPC management training programme for regional fisheries departments. This was accepted by the Workshop.

The Chairman then closed the Workshop.