



REPORT OF MEETING

# EIGHTEENTH REGIONAL TECHNICAL MEETING ON FISHERIES

Noumea, New Caledonia, 4-8 August 1986

SOUTH PACIFIC COMMISSION  
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I. OPENING ADDRESS

1. Mr Tamarii Pierre, the Acting Secretary-General, in the absence of the Secretary-General, formally opened the meeting with an address welcoming delegates and emphasising that it was from delegates at this meeting that the South Pacific Commission received directives for the Work Programme.

II. ADMINISTRATIVE ARRANGEMENTS

2. The Fisheries Adviser informed the meeting of all administrative arrangements and the timetable for the meeting.

III. APPOINTMENT OF CHAIRMAN AND OTHER OFFICE BEARERS

3. Following the procedure adopted in the 1982 Regional Technical Meeting on Fisheries of rotating the Chairmanship amongst countries in alphabetical sequence, in the absence of a representative of Wallis and Futuna, Mr U. Faasili of Western Samoa was appointed as Chairman. Mr W. Emmsley of American Samoa was appointed as Vice-Chairman and Chairman of the drafting committee. Other members of the drafting committee comprised representatives from Australia, New Caledonia, Solomon Islands, Kiribati, and the United States of America. The Chairman in his opening remarks thanked the Acting Secretary-General Mr Tamarii Pierre for the outstanding contribution he had made to the countries of the SPC area during his long period of service with the South Pacific Commission.

IV. APPROVAL OF AGENDA

4. The agenda was adopted as follows.

AGENDA

1. Opening address
2. Administrative arrangements
3. Appointment of Chairman and other office bearers
4. Approval of agenda
5. Review of Coastal Fisheries Work Programme
6. Regional Fisheries Training Programme
  - (i) Report on 1985/86 training activities
  - (ii) Preliminary report on training needs and opportunities in SPC area
  - (iii) Fisheries Training Directory
  - (iv) Consideration of core training programme for 1986/87
7. Oceanic Fisheries
  - (i) Progress on priority items of the Tuna and Billfish Assessment Programme
  - (ii) Revision of regional logsheet forms for reporting commercial tuna catch and effort statistics
  - (iii) Report on Southern Albacore Research Workshop
  - (iv) Standing Committee on Tuna and Billfish
8. Workshop Session: Fisheries Extension Services in the Pacific Islands
9. FFA study of fisheries research needs and priorities in Pacific Island countries
10. Survey and assessment of inshore fisheries resources
11. Regional marine resources information needs
12. Reports by other organisations
  - (i) Report of FAO Regional Aquaculture Study Mission
  - (ii) Proposal for an artisanal fishing vessel workshop
  - (iii) Progress reports - ACIAR coconut crab and giant clam projects
  - (iv) NOAA proposal for regional fishery resource assessment
13. Other business
14. Adoption of the report

V. REVIEW OF COASTAL FISHERIES WORK PROGRAMME

5. The Fisheries Adviser, Mr Bernard Smith, briefly introduced the work of the programme as contained in working paper 7 and asked the masterfishermen to report on their activities since the last technical meeting.

6. Masterfisherman Mr Lindsay Chapman reviewed his work by means of a slide presentation. He reported that the work in New Caledonia from June to September 1985 was mainly involved with experimental fishing around FADs, but also included assisting in an ORSTOM experimental trapping experiment, and in a training cruise to Voh in conjunction with the Marine marchande et pêches maritimes to conduct day trips demonstrating deep-bottom fishing methods.

7. In November Mr Chapman moved to the Cook Islands where he was involved in bait fishing and in experimental fishing around FADs by the vertical longline method using Samoan hand reels for setting the lines. The bait fishing using two-inch stretch mesh nets in the harbour and passes was very successful and relieved the bait problems associated with the programme.

8. Mr Chapman described the vertical longline method in detail, explaining how he used this in conjunction with the "drop stone" and "Palu Ahi" methods which he illustrated by the use of slides. Catch rates were an average of 10 kilograms per hour for a 15-hook line. In answer to a question from the representative of the Federated States of Micronesia, he indicated that the soak time varied, and that he seldom had his top hook shallower than 40 fathoms.

9. The representative of Vanuatu asked him to comment on the practice of having a single hook suspended from a buoy at a depth of around five metres as used by small boats in Vanuatu. Mr Chapman answered that this method was used extensively in the Cook Islands and was effective when fish were plentiful, but that fishermen there were now adopting the vertical longline in preference.

10. In answer to requests from the representatives of Vanuatu and the Marshall Islands for copies of the reports of the masterfishermen's visits to these countries, the Fisheries Adviser replied that draft copies of the reports as they now stand could be made available to them. The Fisheries Adviser explained that following recommendations from the 1985 Regional Technical Meeting on Fisheries, strenuous efforts were being made to clear the backlog of masterfishermen country reports and he was certain that this would not be a problem in the future. He also added that from the beginning of 1986 the masterfishermen's preliminary draft copy would be passed to countries at completion of their programme.

11. The representative of the Cook Islands stated his appreciation of Mr Chapman's efforts and achievements while in the Cook Islands. He indicated that his country felt that seven months was too short a visit and should be extended.

12. In the review of his activities, Masterfisherman Mr Paul Mead described his programme in Tonga from September to the end of December 1985, which was involved in the training of fishermen combined with a seamount survey. Catch per trip during this period averaged 800 kilograms, or 14 kilograms per reel per hour of saleable fish. The rest of the year was spent on home leave and his involvement in the SPC/Nelson Polytechnic Fisheries Officer's course, at Vava'u, Tonga in June/July 1986.

13. In reply to questions from the representative of the Federated States of Micronesia, Mr Mead answered that many seamounts in Tonga were uncharted and were found by echo-sounders, and although circumstances differed from country to country, he considered the finding and charting of seamounts generally should be done by bigger and better equipped boats, rather than local fishery boats.

14. The representative of Kiribati stated that his country would welcome the assistance of the masterfishermen to coincide with the FAD programme development.

15. The representative of Fiji reported that with the assistance rendered by the SPC to Fiji through the Deep Sea Fisheries Development Programme and on improving fish handling and quality, his country was now able to export high quality fish to Hawaii. Up to the end of July 1986 Fiji had exported 20 tons of deep sea fish to Hawaii.

16. The representative of Papua New Guinea said that his country had difficulty in obtaining FAD material for extension officers and requested assistance from the meeting in how to obtain this information. He was informed by the Fisheries Adviser that SPC had information on the cost and availability of FAD material which could be made available to member countries.

17. The representative of American Samoa reported that "Palu Ahi" techniques in his country had not been very successful and was pleased to learn that a masterfisherman would be going to American Samoa to demonstrate these techniques.

18. The representative of Tonga said, that as Masterfisherman Paul Mead had mentioned, deep sea fisheries had advanced in Tonga and fishermen were now achieving better results using the techniques they had acquired from SPC.

19. The representative of Tonga also mentioned that the SPC fisheries programme had increased during recent years but still had the same number of administrative staff. This resulted in the professional staff having to undertake administrative duties in addition to their professional obligations. To emphasise this point he mentioned that several publications and reports had not been completed on time and that the Fisheries Adviser had only been able to visit his country once in the past three years.

20. The representative of New Zealand said that his country was sensitive to the administrative needs of the SPC fisheries programme and supported the recommendation made by the representative of Tonga. Subsequently the meeting made the following recommendation:

Recommendation No.1

The meeting acknowledged the importance and value to the region of the Coastal Fisheries Programme, and noting the importance of the need to improve the Programme's administrative capability recommended that:

- (i) additional administrative staff be recruited to the Programme;
- (ii) the South Pacific Commission make recommendation to the October 1986 Committee of Representatives of Governments and Administrations meeting to the same effect;
- (iii) that the professional staff, including the Fisheries Adviser, spend more time doing field work and working with Pacific Island governments.

21. The representative of New Caledonia expressed his territory's appreciation of the activities undertaken in 1985 by SPC Masterfisherman Mr Lindsay Chapman. He also mentioned that discussions had been held recently with Lindsay Chapman concerning the forthcoming course to be held in Belep in September 1986. He added that if masterfishermen could spend one year in countries this would make it possible for them to take account of seasonal variations in fishing conditions and techniques.

22. The representative of Western Samoa reiterated the point that he had made at the previous meeting concerning the question of masterfisherman training at various levels, including the rural level, the middle level and the government officers or counterpart level. Due to the increasing requests for training assistance by member countries he suggested it might be appropriate to restrict training by masterfishermen to counterpart level who would in turn train other fishermen at the various levels. He concluded by stating that perhaps the role of Fisheries Extension Officers was to train others.

23. The Fisheries Adviser stated that the length of time spent in-country by masterfishermen was necessarily limited due to the fact that there are only three masterfishermen. He advised that when processing requests, the Secretariat equates national needs against regional needs based on the priority needs established by the technical meetings, and that it is difficult to address needs at the regional level due to differences at the national level. Following directives from last year's technical meeting, the programme now has one masterfisherman working specifically on regional gear development programmes. The average length of missions is between 5-11 months against 3-7 previously and now with only two masterfishermen and requests from eleven countries, the backlog of requests will not be fulfilled within the next four years. He also informed the meeting that the Secretariat places great importance on the training of counterparts, who have been of a high calibre, and provides assistance to on-going training activities following training courses. He added that the Secretariat would welcome suggestions concerning this matter from the meeting.

24. In reply to a question from the representative of New Zealand, the Fisheries Adviser stated that the capacity to field another masterfisherman was limited due to the administrative support presently available and would place other aspects of the Fisheries work programme in jeopardy.

25. Following the recommendation of the representative of American Samoa which was supported by Papua New Guinea, the following recommendation was adopted:

Recommendation No.2

Based on the review of the Coastal Fisheries Programme, which indicated good progress, success and a strong interest among member countries to gain the services of masterfishermen, it is strongly recommended that the Secretariat take action to consult donors about providing the assistance required to accelerate development activities, including recruiting more masterfishermen.

26. The representative of Tonga said that it would be some time before new masterfishermen could be recruited and other member countries may like to send their trainees to work with Masterfishermen in other regional countries. He said his country had done this in the past, and it had proved beneficial in widening their experiences and enabling them to acquire new skills and knowledge.

27. The Fisheries Adviser expanded on the Gear Development aspects of the project. He emphasised that although Masterfisherman Paul Mead is based in Vava'u, with the valued co-operation of the Tongan Government, this is a regional project. Areas of work include improvements to the vertical longline, deep trolling around FADs, baitfish capture, bottom fishing in more than 400 metres depth, shallow water FADs, and subsurface FADs. In reply to a query from the representative of Papua New Guinea, he explained that fishing vessel design was not included in the programme.

## VI. REGIONAL FISHERIES TRAINING PROGRAMME

### (i) Report on 1985/86 training activities

28. The Fisheries Adviser indicated that the developmental aspects, and the progress of several training courses conducted during 1985/86 were outlined in working paper 6.

29. The Fisheries Adviser highlighted the Nelson Polytechnic/SPC course which is still extremely popular in the region. A total of 24 applications had been received for 12 places. A tri-annual review of this course is due for 1987.

30. Captain Angus Scotland, tutor in charge of the School of Fishing at Nelson Polytechnic, indicated that the Nelson Polytechnic tutor who had attended the practical fishing module at Vava'u had liaised in gear development activities with Masterfisherman Paul Mead and this will be incorporated in the Nelson module of future courses.

31. The representative of the Federated States of Micronesia indicated the difficulty in obtaining places in the course and asked if additional candidates could be accepted if funds were provided. The Fisheries Training Officer explained that the module was a practical "hands on" course and 12 was considered to be the most effective enrolment.

32. The second refrigeration course is underway funded by FAO/UNDP and co-ordinated by SPC. Eighteen trainees from fourteen countries are attending the course, three of whom will attend only relevant sections.

33. Tutors reported that the calibre of candidates had improved. This was surprising as it was considered that the first intake would have included the most suitable students.

34. The second course was slightly modified following comments from member states at the conclusion of the first course.

35. Successful graduates from the refrigeration course will be provided with a tool kit for professional use, valued at NZ\$750 funded by FAO/UNDP.

36. The representative of Tonga expressed concern that a previous graduate had experienced difficulty with some refrigeration systems in Tonga which proved beyond his capacity, which had led him to resign from his post. He suggested that the refrigeration consultant, Mr Mike Vincent, could visit course graduates and assist with follow-up advice and technical assistance.

37. Mr Keith Meecham of FAO/UNDP indicated that Mr Vincent would visit Tonga in November, and he could discuss technical difficulties with the course graduate at this time.

38. The representative of Vanuatu indicated that its course graduate would also benefit from a visit by Mr Vincent. Mr Meecham said he would consider additional requests for follow-up visits and decide on a course of action.

39. The representatives of Fiji, Solomon Islands, Papua New Guinea, and American Samoa expressed their satisfaction with the work of the officers who had attended the 1985 course. They all supported the continuation of the programme. The representative of Papua New Guinea suggested that a third course could be conducted in Papua New Guinea. The Fisheries Training Officer had investigated two potential training sites. Papua New Guinea Foreign Affairs had been asked to consider the possibility of a refrigeration course at Kavieng Fisheries College in late 1987.

40. The Fish Handling Course in Vanuatu has two weeks to run. A total of 27 applicants had applied for 16 positions. The Fisheries Training Officer expressed his appreciation to the Vanuatu Government for assistance with shore- and sea-based training facilities.

41. Some delegates considered that the course may be too long for the needs of some countries. The representative of the Federated States of Micronesia pointed out that their requirements for participation in Hawaiian and Japanese markets could be dealt with by shorter, more specific courses, and advised that the Federated States of Micronesia and the Commonwealth of the Northern Mariana Islands offer sites and support for such courses. The Fisheries Adviser indicated that the Fish Handling Specialist would travel throughout the area and conduct short-term courses to fulfil individual country requirements.

42. The first SPC Fish Handling and Processing Officer had recently resigned and the appointment of a replacement would be given the highest priority.

43. The sponsors for the Fish Handling and Processing Course included FAO/UNDP, the Commonwealth Fund for Technical Co-operation, and the Overseas Development Administration of the United Kingdom.

44. The representative of the Federated States of Micronesia asked if the University of the South Pacific or the University of Papua New Guinea were more appropriate venues for addressing fish quality, the different range of products and markets, and the theory of spoilage and quality of fish in a semester course with classroom and practical components, whereas SPC fish handling and quality courses would more appropriately deal with practical approaches to immediate pressing needs. The representative of the University of Papua New Guinea announced the intended establishment of a K6.6 million fisheries research facility in Papua New Guinea which would be offering courses in seafood handling.

45. The representative of Vanuatu expressed concern at any chance of duplication of courses in fish handling run at the various venues in the region.

46. The representative of the Federated States of Micronesia expressed his gratitude for the observer training assistance given by Mr Richard Farman of the Tuna and Billfish Assessment Programme. He stated how the standard of observer reports and information obtained had improved since the training workshops had been conducted.

47. A course in Catching Methods and Extension Skills was due to commence in Fiji in September. The course will give equal weight to fishing and extension skills as each was important in the implementation of fisheries extension training.

(ii) Preliminary report on training needs and opportunities  
in SPC area

48. The Secretariat introduced the work carried out by the SPC on the review of national training needs and opportunities. It was outlined that the Fisheries Training Officer had undertaken a series of consultations through questionnaires and correspondence with several member countries and work will continue to cover countries that have not been consulted. The outcome of the work would give SPC a better understanding of national training needs of member countries and would form the basis of approaching those needs in the region.

49. In elaborating on the report, the Fisheries Training Officer mentioned how exceedingly well trained fisheries officers are in the region. He stated that the development of training in the private sector is unknown and the report did not cover this area. The Fisheries Training Officer voiced his concern over what he called the ad hoc nature of national training arrangements which often resulted from poor student selection. He emphasised that a good training programme demands better selection of trainees by countries than in the past. On the series of consultations undertaken, the Fisheries Training Officer pointed out that of the 120 questionnaires received, 4 main issues have emerged:

- (a) courses were highly regarded by students only if they received a good allowance and were given single accommodation;
- (b) participants often perceive that an overseas course is always better. The Fisheries Training Officer voiced his reservation over this perception, saying that this is not true.
- (c) there is a need for co-ordination of training courses amongst training institutions in the region;
- (d) there is a great need for better communication between fisheries officers and training institutions in the region.

50. The Fisheries Training Officer repeated the need for better consultation amongst institutions to avoid duplication of programmes. However, he indicated that SPC would continue to consider specialised courses that are not offered in the region.

51. The representative of Solomon Islands thanked the Fisheries Training Officer for the outcome of the questionnaire. He then pointed out that ad hoc training arrangements in countries often develop as the result of late notice received from SPC on training opportunities that are available. This usually gave very limited time for fisheries officers to advise their subordinates who work in isolated areas of their country. He requested SPC to try to send advance notice to member countries. The representatives of the Federated States of Micronesia, Western Samoa, Tonga, and Australia all supported the sentiments of the representative of Solomon Islands. Several delegates commented on the difficulty in selecting officers for training from short staffed departments. The representative of American Samoa noted that family ties could also be a problem.

52. In reply, the Fisheries Training Officer apologised for the short notice given to countries regarding two of the recent courses and said that efforts will be made to avoid this happening in the future.

53. The Acting Secretary-General (Director of Programmes) endorsed the Fisheries Training Officer's reply and advised that SPC will soon publish a calendar of future activities which would be sent to member countries. He pointed out that the sentiments of the representative of Solomon Islands had been well taken.

54. The representative of Tonga, apart from complimenting the efforts of the Fisheries Training Officer and the prepared document, voiced some reservations on the report in that it describes the problems quite accurately but does not adequately cover the reasons why the problems occur. He directed the attention of the meeting to the last sentence of section 7 of working paper 11 and pointed out that he would not like people to perceive extended family loyalty as a bad thing. In fact, the system is a reality with which we have to live and work as we pursue the course of development.

(iii) Fisheries Training Directory

55. The Secretariat felt that no discussion was needed on this as the primary intention was to obtain comments, ideally this week, from representatives to establish an accurate report format useful in searching out and developing training plans for staff on a more realistic basis. Remarks on the content of the report as it applies to each member country and relating institutes will be sought later.

56. The representative of the Federated States of Micronesia requested that the Community College of Micronesia in his country be included in the circulation list. He referred to the Acting Secretary-General's opening speech where he indicated his interest to see more local representation at the technical meeting. The representative of the Federated States of Micronesia outlined the lack of a local fisheries degree holder who could represent FSM. He sought advice on possible sources of scholarship funding.

57. The Acting Secretary-General advised the representative of the Federated States of Micronesia to consult with the delegations from the UPNG and USP for direction. In addition, he commented on working paper 11 saying that SPC has adopted many work links with other regional organisations such as FFA, USP, FAO/UNDP, and will strengthen these links, but emphasised the importance of co-ordination. He concluded by stating that the lack of an appropriate forum of co-ordination encompassing all groups made it difficult to ensure co-ordination.

58. In response to the Acting Secretary-General's advice on funding, the observer from UPNG outlined funding arrangements with the Japan International Co-operation Agency (JICA), which may provide one or two scholarships for students from countries within the region, tenable at the UPNG.

(iv) Consideration of core training programme for 1986/87

59. The Fisheries Adviser stated that the workshop this year on the role of Fisheries Extension Officers would form the core of training programmes for 1986/1987, and he said the Secretariat would prepare a brief and take deliberations from the workshop for discussion later in the week.

60. The Fisheries Training Officer briefly outlined the core training programme, indicating that extension training would be included.

61. In reply to questions from the representative of the Federated States of Micronesia he indicated that the extension training would be a new course and that a proposal would be developed and circulated. He also stated that the course would initially be of the nature of a train-the-trainers course to accommodate the view expressed during the meeting that countries wished individual training within countries for their own personnel.

62. The representative of Kiribati strongly supported the extension training course to be prepared.

63. The Fisheries Adviser and the Fisheries Training Officer outlined the core training activities for 1986 and requested that if countries had additional needs they should communicate them to the training officer.

64. The Fisheries Adviser indicated that a calendar of training activities would be prepared and circulated.

65. The representative of the United States of America requested that an additional item be included in the agenda. This would be agenda item XII(iv) NOAA Proposal for Regional Fishery Resource Assessment. This was put to the meeting which accepted its addition.

VII. OCEANIC FISHERIES

(i) Progress on priority items of the Tuna and Billfish Assessment Programme

66. The Tuna Programme Co-ordinator, Dr John Sibert, reviewed progress on the priority items for the Tuna and Billfish Assessment Programme (TBAP) as described in working paper 2. The SPC regional data base continues to increase at a rate of roughly 60,000 daily catch reports per year. Numerous problems in duplicate data and missing data are being resolved. Progress on several of the biological priorities has been hampered by a lack of data from Japanese and American sources, as well as by the failure to find funds for a tagging programme. Considerable effort has been spent on training, with training courses offered during the last year on observer methods, statistics, and fisheries stock assessment. Several TBAP staff have made visits to various countries to assist in observer programmes and small-scale fisheries statistics.

67. The representative of the Federated States of Micronesia asked if the problem of missing average weight data from foreign longliners could be resolved by using average weights taken from national vessels of SPC countries. Dr Sibert answered that it would be difficult to be confident that the average weights by different vessels would be similar, or that resulting estimates of catch per trip would be accurate.

68. The representative of Papua New Guinea stated that in future his country would be sending its log sheets to the FFA, and that SPC would receive copies. He also mentioned a Japanese proposal to tag juvenile tuna in PNG waters and wondered if SPC would be interested in participating.

69. Dr Sibert responded that he would like to consider co-operating in the proposed tagging programme with Papua New Guinea and the Japanese. He also stated that he would wait until other countries have discussed sending catch forms to the FFA before responding.

70. The representative of New Zealand expressed some concern that the catch per effort figures given in working paper 2 might be misinterpreted by people unfamiliar with the degree of species-specific targetting that takes place in some longline fisheries.

71. The representative of Australia, in response to Papua New Guinea's intention to send its catch forms to the FFA, stated that certainly every country has the right to make such a decision. However, he cautioned that the development of a duplicate data base will make data editing difficult, with the reliability of each data base degraded as a result. He mentioned that any log collection was subject to difficulties with missing or incomplete data regardless of which institution maintained it; Australia had had similar problems with its log collection.

72. He also stated that the proposed port sampling by the TBAP would undoubtedly greatly increase the reliability of the log books. Australia had found that the presence of port samplers increased the rate of usable returned log books from 60 to 99 per cent.

73. The representative of New Zealand stated that he shared Australia's concern about redirection of catch log books and asked the observer from the FFA if he could explain what they are using the data for.

74. The representative of Papua New Guinea stated that they were quite concerned about the economic sensitivity of the catch data.

75. The observer from the FFA stated that the logbook data were intensively used for the following three areas: (1) monitoring of catches and negotiation of agreements, (2) surveillance, (3) analysis of local fishing industry.

76. The representative of New Zealand asked if the design of the current logsheets was acceptable for FFA purposes.

77. The observer from the FFA replied that the forms were a compromise and were acceptable. The representative of Papua New Guinea stated that the current forms were acceptable.

78. The representative of Australia expressed interest in the SPC Observer Manual and asked if it would be acceptable to have the manual circulated to Australian observers for their comments. He also asked for clarification on publication of results arising from TBAP work, particularly in the area of fishery interaction.

79. The Tuna Programme Co-ordinator replied that he would welcome Australian comments on the observer manual. With reference to publication, Dr Sibert stated that the TBAP produces internal reports that document internal work that is either preliminary or incomplete and not suitable for outside publication. The TBAP has produced a number of papers that are technical and not particularly suitable for publication in the TBAP series. The appropriate place for these papers would be in the refereed journals, but there have been problems in obtaining approval to submit papers for such publications.

80. The representative of Australia stated that he felt that it was important that the technical work done by the TBAP be made available to other workers and that the papers should be published in journals.

81. The Chairman summarised the discussion and stated that there were several proposed recommendations that needed to be considered; specifically, a proposal for port sampling, and a proposal for a tagging programme to be considered a regional priority.

82. The representative of Tonga stated that his country is interested in priority items 6,7 and 8 of the TBAP.

83. The representative of the Federated States of Micronesia stated that his country is very interested in the interaction between fisheries and would endorse a tagging programme as a regional priority.

84. The representative of New Zealand supported the establishment of a port sampling programme, but would like more information on the proposed tagging programme. The Tuna Programme Co-ordinator clarified the goals of the tagging programme, emphasising the need to co-ordinate a catch/effort data base and port sampling with the tagging programme.

85. The representative of Kiribati affirmed his country's support for the work of the TBAP, and stated that priority items 6,7, and 8 also are considered very valuable.

86. The representative of Fiji supported the establishment of port sampling and tagging programmes. This was also supported by France, Marshall Islands, Papua New Guinea, and Solomon Islands.

87. The representative of Solomon Islands thanked the TBAP for sending Mr Richard Farman to help train observers in his country.

88. The Chairman suggested that the tagging and port sampling programmes had received general support.

89. The representative of Tonga affirmed his support for the proposal for port sampling, but reserved his country's position on the tagging programme proposal.

90. The Tuna Programme Co-ordinator stated that the tagging programme is the same as was approved at last year's Technical Meeting, at which time it was described in a working paper. He then went on to say, in response to the concerns expressed by the representative of Papua New Guinea, that all data in the regional data base are treated as confidential and not released without the written approval of the country or agency supplying data. Further, he said that he felt that the attempt to set up two regional data bases was a technical mistake, and to presume that a change of venue will alleviate the errors was naive.

91. The representative of Papua New Guinea stated that his country did not wish to undermine the SPC data base, but because of the needs for data listed by the observer from the FFA, his country would be sending its forms to the FFA.

92. The representative of Solomon Islands asked if any progress had been made in the last year in getting data from the Japanese fisheries in the international ocean areas, or from the ATA (American Tunaboat Association) for pre-1984 data. The Tuna Programme Co-ordinator replied that, despite numerous letters, and a personal visit to Japan, no data have been forthcoming.

93. The representative of New Zealand strongly supported the Tuna Programme Co-ordinator's comments on the problems of the establishment of a duplicate data base at the FFA.

94. The representative of Australia stated that they are about to begin tagging of yellowfin tuna on their east coast and would welcome any co-ordination with an SPC tagging programme or assistance in technical matters by SPC staff.

95. The representative of New Caledonia asked about the proposed magnitude of the SPC tagging programme. The Tuna Programme Co-ordinator stated that it was proposed to tag 30,000 yellowfin over a two-year period from a Japanese style pole-and-line vessel for a total cost of about US\$2.3 million.

96. The Acting Secretary-General asked the representative of Tonga if he could clarify his concerns about the TBAP proposed tagging programme.

97. The representative of Tonga stated that he was confused about the role of the Regional Technical Meeting on Fisheries, the CRGA and the South Pacific Conference and found it difficult to make recommendations in a forum where he did not know who had the power to make changes.

98. The Chairman said that the purpose of this meeting was to make recommendations and no other committee possessed the technical expertise. He said that recommendations from this meeting were passed on to the CRGA and then to the South Pacific Conference for final approval.

99. The Acting Secretary-General thanked the representative of Tonga for expressing his concerns and said that he had heard some expressions of concern from several countries about the priorities of the TBAP. He clarified the role of the technical fisheries meeting, stating that it was up to the technical body to make recommendations on fisheries direction in the TBAP and other fisheries programmes. To his knowledge all recommendations of the regional technical meeting had been approved by the South Pacific Conference unless there were financial limitations. He further stated that the function of technical fisheries meetings was to make recommendations about the work programme of SPC's fisheries programmes. If representatives wanted to see effort redirected, they should make this clear in this meeting.

100. The Chairman thanked the Acting Secretary-General for his comments, and, in the absence of further comment from the floor, moved on to the next agenda item.

(ii) Revision of regional log sheet forms for reporting commercial tuna catch and effort statistics

101. The Tuna Programme Co-ordinator gave the reasons that had led him to propose a revision of the catch report forms (working paper 3). Designed seven years ago and now adopted by most countries in the region, their routine use has brought to light a number of shortcomings, particularly for scientific work. The Tuna Programme Co-ordinator also pointed out the advantages to be derived from the revised forms in negotiations of future fisheries agreements. The forms had been circulated at an early date, and the many comments received have been summarised in working paper 3/Add.1, together with notes from the TBAP.

102. The representative of Solomon Islands drew attention to the administrative problems that the proposed change could cause, particularly in connection with the bilateral long-term fisheries agreements which provided for the use of the old forms. The representative of the Federated States of Micronesia expressed concern at the time it would take to bring the new forms into use, since their acceptance by DWFNs was dependent on re-negotiation of fisheries agreements.

103. The Tuna Programme Co-ordinator replied that the changeover was based on the assumption that it would be effected gradually as use of the new forms was included in the new agreements.

104. The representative of Australia mentioned that the only distant-water tuna fishing activity in the Australian region was longlining; pole-and-line and purse seine activities were specifically directed at southern bluefin tuna and involved a combined operation and hence a specific log. The importance of southern bluefin tuna longlining activities has required development of a special log form to obtain details of catch by size grade. However, Australia would ensure that the data required by the SPC form were collected.

105. Adoption of the new forms was agreed to in principle by the majority of representatives, with a number of comments regarding technicalities. It was then decided to set up a working group, chaired by the representative of Papua New Guinea, to consider the forms in detail.

106. The Chairman invited the logsheet working group to present its conclusions, the amended logsheets having been circulated.

107. The representative of Papua New Guinea stated that the group had sat twice to consider the changes and presented the approved draft. He explained that there were only minor changes. The logsheets presented no problems and the forms were a good representation of licensing requirements. The problems of a unique numbering system for logsheets had not been solved although it would be desirable to have this feature to improve the accounting of the logsheets. There would be problems with administering a unique numbering system but this should not affect the adoption of the logsheets at this meeting. The question of logsheet forms for carrier vessels of group purse seine operations was discussed. Only two countries within the region license DWFNs to carry out this type of operation. The information being collected on the carrier vessel operation is not needed for the regional fishery data base. The logsheet forms to be called Regional Logsheet rather than SPC Logsheet.

108. The Chairman indicated that as there were no objections the logsheets were taken as adopted by the meeting.

109. The representative of Australia asked if there were plans to adopt non-carbon reproducing paper for multi-copy logbooks, to which the Secretariat responded that there were no plans to do so at present due to logistic problems.

(iii) Report on Southern Albacore Research Workshop

110. The Tuna Programme Co-ordinator briefly reviewed the background to the workshop. Sponsored by the SPC at the request of several member countries, it was funded and hosted by the New Zealand Government. Its purpose was to address concerns over the size, location and potential interaction with other fisheries of the newly discovered concentration of surface albacore around 40-45 degrees South. The status of the existing knowledge of albacore biology and population dynamics was reviewed and a plan for future research established. The outcome of the meeting is summarised in the report of the workshop presented to this meeting under information paper 2.

111. The representative of New Zealand drew the meeting's attention to the upcoming publication of a newsletter about southern albacore research and announced a possible follow-up workshop for 1988. This was seen as an opportunity for parties who were not able to attend the Auckland meeting to be included in future activities.

112. The representative of France reviewed the history of the discovery of the surface concentrations of albacore. Starting from an observation of the Northern Pacific albacore fishery and the existence of a small surface fishery in New Zealand, it was hypothesised that significant surface concentrations should be occurring in the southern hemisphere as well. Several scientific cruises by French, New Zealand and United States vessels have since found supporting evidence, and exploratory fishing by United States trollers has been extremely promising. During thirty fishing days, these boats averaged 1.8 to 2 metric tonnes per day, which is equivalent to daily catches by longliners with six times fewer fishermen. Given the importance of these results and the significant implication they have for Island Countries, either directly through exploitation or indirectly through interaction with existing fisheries, a workshop was organised to direct biological and population dynamics investigations. The venue for this research was left to existing institutions already involved and a newsletter was envisaged as a vehicle for communication.

113. In conclusion, the representative of France suggested that an informal meeting of the participants should be held to examine new developments since the June meeting in Auckland.

114. On the suggestion of the representative of Australia, Dr S. Blaber of ACIAR described the role of this organisation in identifying research problems in overseas countries and in developing collaborative research. A specific baitfish project is contained in information paper 10.

115. The representative of Papua New Guinea said that although there was no doubt that an agreement of a bilateral programme between ACIAR and the previous Papua New Guinea Government existed, he considered that the present Government would accord this project low priority.

116. The representative of the Federated States of Micronesia asked if the baitfish research efforts in his country might be implemented in collaboration with the ACIAR project outlined in working paper 10. Dr Blaber answered that ACIAR can respond to such bilateral requests from island countries.

117. During lunch hour demonstrations were given on the use of the echo sounder by Captain Angus Scotland of Nelson Polytechnic and on longline equipment by David Shirer from the New Zealand Fishing Industry Board.

(iv) Standing Committee on Tuna and Billfish

118. The Chairman introduced Working Paper 4 describing the Standing Committee on Tuna and Billfish. He explained that the creation of the Standing Committee, its terms of reference and its composition had been approved by the meeting of the CRGA in May 1986.

119. The representative of Tonga sought clarification from the Secretariat on the background of the Standing Committee since this had not been discussed at previous technical meetings.

120. The Secretariat explained that the Committee arose out of concerns expressed by the Seventeenth Regional Technical Meeting on Fisheries on the need for improved data coverage and that the Committee resulted from the recommendation of two consultants to the CRGA reviewing alternative institutional arrangements for the TBAP. The Committee is seen as a way to involve DWFNs in an advisory and technical capacity in the TBAP as a means to encourage better data coverage. The Technical Meeting was not consulted prior to the adoption of the terms of reference and composition of the Committee because of a sense of urgency in the need to get the Committee established. However, this Technical Meeting is in a position to recommend any changes for consideration at the next meeting of the CRGA.

121. A discussion followed on the terms of reference and composition of the Committee. The representatives of New Zealand and Tonga stressed the importance of restricting the size and composition to technical and scientific personnel if the Committee was to act effectively in its role as technical advisory and reviewing body. Tonga suggested that it might be more appropriate for the Fisheries Development Officer of FFA instead of the Director to be included as a member. The representative of Australia suggested that the Tuna Programme Co-ordinator should definitely be included as a member and not be optional as the wording in working paper 4 might suggest.

122. The Technical Meeting was asked to comment on the proposed agenda and specific composition for the first meeting. The representative of New Zealand suggested that the agenda should try to reflect the need to involve scientists of DWFNs in data analysis and wished to have further discussions on the agenda. The representative of Australia suggested that the scope of the meeting might be broader so as to cover the research work being done on tuna by other research agencies considering the fisheries in the SPC region.

123. The observer from the University of Papua New Guinea suggested that Dr Chien-Hsiang Wang from Taiwan would be a valuable expert to include on the Committee.

124. Further discussion on the agenda and specific nomination of members were deferred until later in the meeting.

125. The Chairman established a working committee to review the draft agenda for the first meeting of the Standing Committee.

126. Extensive discussions took place on the composition of the Standing Committee and nominations to be made by the Technical Meeting. The representative of New Zealand suggested that nominees should include those who had attended the stock assessment workshop from countries involved in the tuna fisheries and whose work was directly related to tuna.

127. The consensus of the meeting was that delegates would prefer to consult with their governments back home and send nominations to the Secretariat, although several delegations expressed reservations about this meeting missing its opportunity to nominate candidates.

128. The representative of Tonga expressed concern that the Regional Technical Meeting on Fisheries had not been consulted on the proposed composition of the committee, particularly since the work of the previous Expert Committee on Tropical Tuna had been assigned to the Technical Meeting.

129. The representatives of Papua New Guinea and Tonga indicated their concern about the lack of representatives from island governments in the composition of the Committee.

130. Several delegations stated that there was a need to keep the size of the committee small and for it to focus on technical matters, and not become a substitute for another regional technical meeting.

131. The Secretariat explained that the function of the Standing Committee was to provide a mechanism for DWFNs to have technical and advisory input into the work of the TBAP and in no way was meant to develop or express policy. The Secretariat also explained that the proposed nominees in working paper 4 represented nominations by the Tuna Programme Co-ordinator. The proposed nominees on page 4 were individuals closely tied to sources of data, either in a position to authorise the release of data or to help obtain such authorisation. Those nominees on page 5 are well-known first-class researchers in tuna biology, many of whom have made significant contributions to the study of tuna movements.

132. A sub-committee formed to review the proposed draft agenda for the Standing Committee presented in working paper 4 recommended a revised draft agenda. The revised agenda was formulated by directly addressing the terms of reference for the committee contained in working paper 4. The representative of Tonga said that he could not consider adoption of the agenda suggested for the Committee, as proposed by the representative of New Zealand, while no decision had been taken about the Committee's mandate and membership. He said that he thought discussion of the matter should be closed. The consensus of the meeting was that the proposed agenda needed to be taken back to governments before any recommendations could be made.

133. A number of delegates expressed their hope that country representatives to the next CRGA and the fisheries staff in countries would fully discuss and clarify their position with regard to the Standing Committee before the October meeting of the CRGA.

134. The representative of Papua New Guinea agreed with the representative of New Caledonia when he suggested that the meeting should address a recommendation to the next meeting of CRGA, inviting it to reconsider the Committee's membership and mandate in order to take account of the views expressed by participants at the present meeting.

135. In conclusion, the meeting decided to defer taking any decision about the Committee.

#### VIII. WORKSHOP SESSION: FISHERIES EXTENSION SERVICES IN THE PACIFIC ISLANDS

136. The Training Consultant of the extension workshop then addressed the meeting. He outlined the links between research, extension and training with reference to his own career. He suggested that people viewed the role of the extension officer from different perspectives of policy, management and implementation. The meeting divided into four working groups, according to how closely delegates felt that their work involved them in extension.

137. Groups returned from the first small group sessions and the Chairman handed the meeting to the training consultant.

139. Representatives from the four groups presented their conclusions from these sessions.

141. Results of small group session 1: Define Role of the Fisheries Extension Officer

A. Purpose:

- liaison and communication
- promote appropriate fishing
- define needs of fishermen
- provide link between department and fishermen
- motivate fishermen
- provide assistance to industry
- provide information service
- self-development
- administer government programmes
- advise (train) fishermen
- respond to requests for help
- feedback and monitoring

B. Primary duties and responsibilities:

- instructor/trainer
- manager/administrator
- technician
- warden
- train/advise fishermen and other groups in areas of technical matters
- provide liaison services between government/fishermen and other groups
- assist industry, i.e. arrange loans, establish business, provide services
- provide information services
- administer government programmes
- self-development

140. The training consultant briefed the groups on the task to be carried out in the second small group session, which would examine the skills required of a fisheries extension officer.

141. Upon completion of small group session 2 the meeting reconvened with each discussion group displaying the conclusion of their deliberations by means of posters in the conference room.

142. Results of small group session 2: What are the skills required, with regard to role and duties?

A. Personal attributes:

- approachable
- good listener
- self-motivated
- initiative
- flexibility
- aptitude
- physical and mental fitness
- self-confidence (not over)
- knowledge of limitations
- honesty and trust
- good personality

B. Qualifications:

- social education
- education
- enthusiasm
- resourcefulness
- adaptability
- persistence
- memory

C. Social or operating skills:

- appropriate use of authority
- ability to assimilate and summarise information and ideas
- problem solving
- understand social system
- communication (speaking and writing)
- define technical needs
- leadership
- oratory (speaking, persuasion)
- innovative
- language
- listening
- actual experience
- motivator, confidence building
- knowledge of relationship between local client groups
- job understanding

D. Technical skills:

- mechanical
- gear technology
- statistics collection
- navigation
- specialised
- seamanship
- marine safety
- fishing
- general subject confidence
- competence in specific area
- financial management and accounting
- fish handling
- marketing
- knowledge of fishing regulations
- teaching skills
- knowledge of adult education methods
- audio-visual skill

E. Management and administration:

- administration and organisation
- organise meetings
- identify training needs
- monitor, evaluate and control
- fisheries management
- budget
- planning
- report writing
- access information
- administrative skills

143. Mr Trendell requested the meeting to examine the posters with the purpose of comparing the differing group conclusions, then to divide again into the discussion groups to specifically consider whether the skills shown were being addressed by present training and, if not, what training was necessary to cover these areas.

144. On reconvening after the third group session the discussion group rapporteurs were asked to report to the meeting the conclusion of their deliberations on the above areas.

145. The representative of the Federated States of Micronesia reporting for his group stated that this group considered that most of the skills listed were covered in some form or other by existing training.

146. The representative of Tonga reporting for his group indicated that the group considered that the technical skills component of the checklist was already being covered. He pointed out that there was value in sending trainees for general training outside their country which as well as the specific training, would also enable them to widen their outlook and scope of knowledge, enabling them to be better able to adapt.

147. The group further indicated there was a need for training in administration and commercial skills, as well as a need for training of trainers.

148. The representative of FAO/UNDP who reported for his group said that before considering the recommendations of this group he should point out that in developing their skills checklist, the group had made two basic assumptions:

- (i) Technical skills were self evident and need not be listed in detail;
- (ii) It should be noted that the longer an extension officer stayed at one location the more effective he became through familiarity. This is not a skill, but is a management situation which is desirable.

149. He stated that the recommendations of his group included the desirability of improved selection, which meant the need for more people to select from, as well as recognition of the special qualities, which are untrainable. Recognising that training in technical skills existed, his group considered that there was no specific extension skills training programme in the region and there was a need for this.

150. The representative of Solomon Islands, reporting for his group, said that they considered that technical training needs were being addressed, but perhaps the meeting had been led to decide there was a need for extension training. There were, however, reservations within the group that this could be accomplished in any kind of training course and certainly not by tacking a bit onto the end of other courses. It was felt that extension training was best accomplished by those who know fisheries on the ground in-country.

151. Mr Trendell sympathised with the point of view expressed by the previous group and acknowledged the need to integrate extension training with other training and in-country activities.

152. He suggested the meeting should examine the skills checklist to see how it can be used to select candidates for training and to evaluate staff members' performance to see if they have the need for training. This is done by considering the checklist skill by skill then grading these skills from 0 to 5 to determine how important the skill is to the job itself. Then, similarly grading the performance at that skill of the staff member himself. From the results of this a much clearer picture of the exact training needs of the staff can be obtained.

153. He concluded by reiterating that training is not something you do just for training's sake but for a specific purpose.

154. The SPC Fisheries Training Officer said that owing to the somewhat contradictory reports from the groups, the Commission would have some difficulty in deciding whether to develop training in this area or not and asked if the meeting would give some direction on the matter.

155. A general discussion, followed with the representatives of Papua New Guinea, Tuvalu, and Fiji indicating that technical expertise was not enough in extension work and that training in extension skills was considered desirable in their countries. The representative of Papua New Guinea also suggested the information gained from this workshop should enable the SPC to produce some extension training. His country, being larger, was planning the development of a method which provided for a group on standby to go to solve specific extension problems.

156. The representative of Tonga said that his country did not consider any training as irrelevant and that, owing to the small staff and wide range of duties, they needed training in many areas. He said the diversity of backgrounds and experience of the persons attending this meeting illustrated the benefits which could be had from such a diversity.

157. Capt. Scotland said his impression from talking to people at the meeting was that there is a need for quite diverse training for extension officers to meet island needs. He also considered that, although it might be desirable to keep extension officers in one location, this could not happen in practice.

158. The representative of CINADCO said that experience from Israel was that training in communication skills enhanced technical training programmes and was well received by the participants.

159. The Chairman, following a similar suggestion by the representative of New Zealand, directed the Fisheries Training Officer to liaise with the spokesmen of the various groups and other interested parties to formulate a recommendation.

160. After commenting that this was the first opportunity that representatives to this meeting had ever been given to discuss in detail the role of the Fisheries Extension Officer, and the results presented the Fisheries Training Officer with an excellent opportunity to develop training in this field, the representative of American Samoa indicated that had the Chairman not given his instructions on this matter, he would himself have recommended the meeting instruct the SPC to use the information from the workshop to develop an extension officers course for future implementation.

161. The Chairman concluded this agenda item by thanking Mr Trendell for his very valuable contribution to the development and operation of this workshop session. Subsequently the following recommendation was adopted:

Recommendation No.3

That taking into account the material produced by the discussion groups on what skills are desirable for Fisheries Extension Officers in the Pacific, it is recommended that the South Pacific Commission organise training in extension skills suitable for the region.

IX. FFA STUDY OF FISHERIES RESEARCH NEEDS AND  
PRIORITIES IN PACIFIC ISLAND COUNTRIES

162. After a brief introduction by the representative of the Federated States of Micronesia, the observer from the FFA explained the background to the preparation of the report. Responding to a query from the Acting Secretary-General, he indicated that the report was being presented to the meeting for discussion.

163. The representative of Tonga, speaking as one of the consultants who had prepared the report, then described and summarised it. He thanked the FFA, participating governments, universities and international organisations for their co-operation, and apologised to the four countries that had not yet been visited. He testified to the competence of Dr Shepherd, the second consultant involved in the project.

164. In outlining the situation in the ten countries covered by the report, the consultant explained that most of the research effort arose in response to particular problems and development needs. He drew attention to funding and manpower constraints and indicated that all fisheries departments had some requirement for external assistance. The representative of Tonga compared the fisheries programmes of the SPC. The study had found that while countries greatly valued the Deep Sea Fisheries Development Project, with its approach of direct practical assistance, there was a feeling in most countries that the TBAP was out of touch with their requirements.

165. The consultant summarised the recommendations of the report, highlighting information services, the need for special technical meetings and the desirability of involving Pacific Island nationals in the TBAP.

166. The Chairman drew the attention of the meeting to the six recommendations relating directly to the South Pacific Commission. In the discussion that followed, delegates expressed their appreciation of the consultants' work and their support for the recommendations. The Fisheries Adviser indicated that the SPC would try to conform with the recommendations relating to SPC programmes.

167. Concern was expressed by the representative of Papua New Guinea that the report was incomplete without the input from the four North Pacific countries. The representative of Kiribati emphasised that his country had national priorities over and above the recommendations of the report.

168. The representative of Tonga explained his concern over the TBAP, and stressed the need for a programme that could respond to the immediate requirements of countries.

169. It was decided to defer adoption of the report's recommendations until after agenda items 10 and 11, since these involved consideration of research needs. The Chairman introduced the recommendations from the Fisheries Research Needs Study findings and invited the representative of Fiji to speak as Chairman of that working group.

170. The representative of Fiji introduced the recommendation, stating that it had been difficult to find suitable wording.

171. The representative of American Samoa stated that although he had no objections to the recommendation as it stood, if the Secretariat had known in 1985 when the project was first discussed that the results of that report were to be brought up in 1986, then he would like the Secretariat to acknowledge the almost unique position of American Samoa in being a member of SPC but not of many other organisations, notably FFA, which commissioned the report. He went on to state that American Samoa would have welcomed the consultancy and the results as presented, which did not completely address the research needs of American Samoa.

172. The Chairman noted the concern of the representative of American Samoa and suggested that room may be available for observer status on bodies of which it was not a member.

173. The representative of Papua New Guinea pointed out that it was not for the meeting to make decisions on behalf of other Pacific Island countries not represented at the meeting. The Chairman clarified the situation by reminding the meeting that all FFA countries had met earlier in the year and knew that the report would be discussed at this meeting.

174. The representative of Tonga, while noting the concerns voiced, pointed out that the wording of the recommendation made allowance for the fact that not all countries had been covered by the report.

175. The representative of Papua New Guinea expressed a reservation to the endorsement of the recommendation; however, for the sake of understanding and to avoid getting held up he was prepared to see it adopted.

176. The Chairman, while noting the reservation expressed by the representative of Papua New Guinea stated that the meeting had adopted the following recommendation:

Recommendation No.4

Noting the importance of the findings of the Fisheries Research Needs Study (Fakahau/Shephard Report 1986), in particular the reporting of the unattended, important fisheries research needs of most Pacific Island governments, the meeting recommended that the South Pacific Commission fisheries programmes and Pacific Island fisheries administrations work together towards satisfying these research needs.

177. Before proceeding to agenda item 10, the Chairman requested that the representative of Fiji head a small working group to consider the form of wording of the recommendation emanating from the FFA Consultants' survey of fisheries research needs and priorities in Pacific Island countries.

X. SURVEY AND ASSESSMENT OF INSHORE FISHERIES RESOURCES

178. The Fisheries Adviser outlined the basis of the proposal (working paper 19), being an attempt to bring together the considerable resources of both SPC fisheries programmes to address certain urgent issues, some of which had already been touched on earlier in the meeting.

179. Both programmes receive requests for advice on resource assessments and data collection systems. Dr Polacheck of the TBAP has already visited Tuvalu and Tonga to assist in fisheries data collection, and several outstanding requests for assistance remain.

180. Three major areas of need were seen as pressing: lack of biological and fisheries-related information, including status of resources; compatible systems of data collection within the ability of individual countries to maintain; and information dissemination.

181. The representative of Kiribati noted the problems of statistical data collection in small island countries, and supported the proposal.

182. The representatives of the Federated States of Micronesia and Fiji outlined the status of their own data collection systems and offered assistance in the form of reports.

183. The representative of France, while in favour of the proposal, warned that it would not magically solve all problems, and that countries would need to continually educate and motivate fishermen as to the benefits in such data collection. Regarding information dissemination, he referred to a plan for a new university in the area which would give priority to computerised fisheries data and information for both French- and English-speaking countries.

184. The representative of Vanuatu noted that the consultants' report on fisheries research needs and priorities in Pacific Island countries suggested that committees or working groups be set up to advise SPC on issues such as this. He stated that Vanuatu would prefer SPC to perform the role outlined in working paper 19, and that if this proposal were adopted, many problems would be solved.

185. The representatives of Kiribati and Tuvalu supported the proposal, and noted their own specific problems in data collection, such as form collection and transport to widely scattered points of landing.

186. The representative of American Samoa expressed his gratitude for his country's statistical collection system, funded by National Marine Fisheries Service (NMFS) through Westpacfin. He advised that an incentive programme, set up by American Samoa, had been very successful in having fishermen complete catch forms. He offered help to other countries in this regard.

187. The representative of Papua New Guinea supported the proposal, and outlined his country's problems in the area of data collection; these included lack of information on inshore and reef fisheries, and statistical collection from outer provinces.

188. The Fisheries Adviser noted that a key element in successful systems, such as that operated through NMFS Honolulu in ex-United States Trust Territories, was the continuity of support and feedback by individuals involved in the initial setting up of the system. Such systems need to be adaptable, and SPC feels that the proposal will operate in this way.

189. The representative of the Cook Islands, supported by the representatives of New Zealand and Australia, stated that it was vital to know what data to collect at the outset if such collections were to be useful for stock assessment and management strategies.

190. The representative of Fiji identified the three problem areas in fishermen completing catch forms. These are: lack of time at the end of a fishing trip, suspicion regarding revelation of income details, and secrecy regarding good fishing grounds. He advocated a system of sub-sampling at small landing areas.

191. The representatives of Solomon Islands and Niue supported the proposal as being most useful to their needs.

192. After discussing data collection problems and generally supporting the proposal, the representative of Tonga suggested that the title of the working paper could be widened to encompass fisheries research needs, not just inshore resources. He advocated that national research officers should freely exchange information and be involved in co-operative proposals even more than in harvesting or development issues, which were seen as more localised.

193. The representative of Tonga further discussed the proposal and raised concern over the autonomy of the new programme, preferring that it not be attached to the Tuna Programme. He recommended that personnel not be removed from the Tuna Programme, but that outside staff be recruited for the new initiative, thereby allowing TBAP staff to work specifically on that Programme. He further recommended that the Standing Committee on Tuna and Billfish consist of member countries of the SPC, contain technical people involved in research, and that the functions of the Committee should be to review the TBAP and advise future Regional Technical Meetings on Fisheries.

194. The representative of Western Samoa referred to last year's Technical Meeting and noted his country had expressed concern over the attachment of the Survey and Assessment priority items to the Tuna Programme.

195. The representative of New Zealand agreed with the concept that the new group should be recruited from outside and be seen to be separate from existing programmes.

196. The Chairman summarised alternative views regarding the recruitment and attachment status of the proposed positions and requested additional comments. He suggested that the representatives of Tonga, New Zealand and any other interested representatives, including the Secretariat, should prepare a draft recommendation.

197. The representative of Tonga summarised the two major components of his recommendation, i.e. (1) to recruit staff for the proposed project from outside the existing TBAP; (2) to allow TBAP to concentrate its efforts on the core work programme. In addition to this component the representative advocated the establishment of a Standing Committee composed of island country research officers and scientists set up with the role of (a) reviewing the activities of the TBAP and (b) advising the Technical Meeting.

198. The representative of Australia pointed out that most delegates had previously (paragraph 128) indicated their desire to consult with their governments at home in relation to composition of the Standing Committee. He suggested that it therefore seemed inappropriate to incorporate in this recommendation the suggestion about Standing Committee composition.

199. The Acting Secretary-General indicated that the proposal in working paper 4 was structured to include ties with the TBAP to facilitate a rapid implementation of the proposal following endorsement by CRGA; existing staff and equipment were already available to fill in until full-time staff could be appointed.

200. The Acting Secretary-General indicated that many of the alternatives to the proposal had merit. The recommendations of the FFA Consultants could form part of the project. A working group could be put together early next year to examine the best way to address the requirements for research, and forward a plan to address research needs to present at the next Technical Meeting.

201. The Acting Secretary-General then indicated that the establishment of a Standing Committee as proposed in working paper 4 has merits when considered in the context of past deliberations. In June 1984 at a meeting with DWFNs, fishing nations such as Japan indicated that as a result of the Canberra Agreement they could not provide data to an institution (SPC) of which they were not members. In order to obtain information from the DWFNs the consultants, Mr Terry Curtin and Dr Richard Herr recommended against a change to the Canberra Agreement and for the establishment of a committee that could include DWFNs.

202. The Acting Secretary-General asked that delegates keep this background in mind when consulting with their governments about composition of the Standing Committee.

203. The representative of the Marshall Islands indicated his support for the proposal as outlined in working paper 19.

204. The representative of Tonga thanked the Acting Secretary-General for his historical perspective of the development of the proposal, and emphasised his preference for a research project which operates independently from the TBAP. He pointed out that the TBAP core activities have no relevance to Tonga's needs, and the Programme's involvement with priorities 6, 7 and 8 is on a part-time basis only. As such, he could recommend for the termination of the TBAP had his government sought his opinion. He pointed out, however, that in due respect to the needs of other member governments, institutions and donor governments, such action was not necessary.

205. The Chairman again referred to the need for a working group (Tonga, New Zealand, Secretariat and other interested delegates) to develop a proposal for the meeting to consider.

206. The Acting Secretary-General also indicated that the TBAP would be evaluated by a consultancy study early next year. The report would be initially tabled at the CRGA meeting in May 1987 which, with deliberations of subsequent SPC meetings, would be available for the South Pacific Conference in November 1987. The Chairman invited the representative of Tonga as Chairman of the Working Group to introduce the results of the group discussions.

207. The representative of Tonga stated that the working group had restricted its work to working paper 19. The title had been changed due to the urgent nature of the project, and an earlier recommendation of the Secretariat on staffing had been adopted and inserted.

208. The representative of Australia sought clarification as to the status of the proposed two new positions referred to in working paper 19 relative to the recommendation.

209. The Fisheries Adviser indicated that two positions are already available for reassignment to the Inshore Resource Assessment Project. The other two positions will be subject to approval from CRGA. Following a request from the representative of the Federated States of Micronesia, the Fisheries Adviser explained that the two new positions would be a fisheries scientist and a fisheries communication officer.

210. The representative of Papua New Guinea agreed with the proposal. He indicated that additional manpower and facilities would be required for the project, and that facilities were available within Papua New Guinea to assist with the project. He indicated his country's wish to be involved in the project implementation.

211. The Fisheries Adviser thanked Papua New Guinea for its offer, and explained that the project will draw on expertise from within the region.

212. The Chairman stated that considerable expertise was available from within the region. He asked delegates and observers to contribute summaries of expertise available in their countries. The observer from USP made a brief statement.

213. The representative of the Federated States of Micronesia suggested that a precedent for drawing on expertise in the region already existed with activities with SPREP, and the representative of Fiji mentioned that the Institute of Marine Resources (IMR) also had considerable facilities and expertise to offer.

214. The representative of France stated that as financial constraints always existed with such a project, it would be advisable to draw on facilities and expertise within the region wherever possible.

215. As the Pacific Island fisheries research needs were considerable the representative of New Zealand suggested that resources should be obtained from as wide a base as possible.

216. The representative of Tonga agreed. He indicated that while many governments and university research organisations exist within the region, funding was always a problem. The meeting then adopted the following recommendation:

Recommendation No.5

The meeting supported the proposal for the establishment of an Inshore Resource Assessment Project as outlined in working paper 19 with the following modifications:

- (i) that the title be broadened to "Inshore Fisheries Research Project";
- (ii) that positions C and D be titled "Fisheries Scientist", and their work activities be revised to place greater emphasis on research activities as follows:

Fisheries Scientist C

- (1) In collaboration with national fisheries staff, analyse fisheries research data and requirements.
- (2) Design appropriate field programmes for research and data collection.
- (3) Participate in field surveys and other data collection activities and train local staff in data collection procedures.
- (4) Train local staff in the proper methods of storing and maintaining statistical records.
- (5) Provide follow-up support and assistance as required to ensure that activities continue at a high standard.

Fisheries Scientist D

- (1) Work closely with other fisheries scientists in the project and national fisheries staff to design appropriate procedures for analysis of fisheries data.
- (2) Evaluate resource assessment methods currently in use and adapt appropriate methods for use in local situations.
- (3) Participate in selection and development of computer software for analysis of fisheries data.
- (4) Train local staff in the analysis of fisheries data.

- (iii) that the Secretariat prepare a review document on this project covering the structure and activities for consideration by the 1987 Regional Technical Meeting on Fisheries.

217. In response to a query from the representative of Papua New Guinea the Secretariat explained the relationship between the proposed Inshore Fisheries Research Project (IFRP) and existing programmes, indicating that although this was a new project it would be integrated with existing programmes and would draw on their resources.

218. The representative of New Zealand drew attention to the structural changes originally proposed by the representative of Tonga. He indicated that a separation of functions of projects was necessary.

219. The representatives of the Federated States of Micronesia and Tuvalu drew attention to the fact that in some inshore fisheries, tuna and billfish were caught. It was agreed that work on these species by the Inshore Fisheries Research Project should be restricted to matters that fell outside the established priorities of the TBAP. The meeting then adopted the following recommendation.

Recommendation No.6

The meeting recommended that the Committee of Representatives and Government Administrations in reviewing the Tuna and Billfish Assessment Programme as planned also consider the structural relationships between the Tuna and Billfish Assessment Programme, the Coastal Resources Programme and the Inshore Fisheries Research Project such that:

- (i) an Inshore Fisheries Research Project should be formally attached to the Coastal Fisheries Development Programme of the SPC to serve member governments by carrying out fisheries research work on fisheries resources outside the priorities of the Tuna and Billfish Assessment Programme.
- (ii) that the Inshore Fisheries Research Project absorbs the research activities now included under priorities 7 and 8 of the work programme of the Tuna and Billfish Assessment Programme.

XI. REGIONAL MARINE RESOURCES INFORMATION NEEDS

220. The Chairman introduced agenda item 9, on regional marine resources information needs and referred the meeting to working paper 17.

221. The Secretariat introduced Mrs Bess Flores, the SPC Librarian, and referred the meeting to information paper 4 on the Pacific Information Centre (PIC).

222. The Librarian illustrated the lack of information documentation by producing four reports from the early 1970s, all of which covered important fields, that she considered had had no circulation and were unknown to the participants. She went on to emphasise the need for individuals and organisations to be kept up to date with documented information.

223. The Librarian drew attention to the origins of the Pacific Information Centre as described in information paper 4 and to recent developments at the UPNG and ORSTOM, while commenting on the dangers of competition for funding and incompatibility of computer systems.

224. She went on to state that the Pacific Information Centre Advisory Committee has suggested to the International Development Research Centre (IDRC) that all interested organisations should get together and as a result the PIC is asking for co-sponsors, such as FFA. They are also asking SPC to sponsor as this would be a meeting place between English and French languages and SPC has translation services. The Librarian asked the meeting to address their needs referring again to working paper 17.

225. The observer from UPNG explained the workings of the Fishery Information Network Centre in Papua New Guinea and expressed a desire for co-operation to prevent duplication and waste of financial resources.

226. The representatives of Fiji, Tonga and Vanuatu supported the proposals described in the documents. The representative of Tonga highlighted his country's information problems and the recommendations of the FFA Consultants' report.

227. The FFA observer added his endorsement to the proposals stating that the FFA itself was very poor at information services. The FFA would support the initiative, but does not necessarily mean support for a large electronic data system. He saw the SPC as taking the lead and would support SPC.

228. The representative of Papua New Guinea commented on his Division's success with a Fisheries Bibliography, which is a list of publications, government documents and papers dating from the beginning of the Fisheries Research Establishment in Papua New Guinea. He endorsed the recommendation and commented on poor mail services in the Pacific region.

229. The representatives of Solomon Islands and the Federated States of Micronesia also supported the paper, the latter indicating other information sources such as the University of Hawaii Sea Grant Program and the University of Guam.

230. The representative of New Caledonia strongly supported the proposals put forward. He suggested that if such a system was to be created it would be advisable to set up a bibliography by species, which is necessary for the proper operation of any fisheries department involved in research.

231. The representative of France also supported the proposals and questioned the future role of SPC in this Centre. The Librarian replied that SPC did not suggest it should be the information centre for historical reasons, but would be ex-officio member of the Pacific Information Centre represented on the advisory committee and would receive financial assistance to do the work. She also pointed out that the information already held by SPC was incompletely catalogued. At present all communications between existing bodies were on an informal ad hoc person-to-person basis.

232. The representative of New Zealand highlighted the proposed meeting in 1987 and supported the formation of a working group on information as outlined in working paper 17.

233. In reply to a query from the representative of Papua New Guinea the Librarian replied that a CHOGRM meeting had decided to support existing regional systems rather than create a regional centre. She emphasised that the Pacific Information Centre is a multi-disciplinary body and marine resources were only a part of its work.

234. The Secretariat then clarified the issue by stating that marine resources were most important and that the decision to proceed with a separate meeting was to decide what needed to be done to improve the Pacific Information Centre and existing information sources on marine resources to meet requirements.

235. There being no opposition among participants, the Chairman announced that the recommendation was accepted.

#### Recommendation No. 7

The meeting endorsed the future plans for development of a South Pacific Marine Resources Information System as outlined in working paper 17, in particular supporting the initiative for a meeting to be held in early 1987 to discuss co-operation in the area of fisheries information.

## XII. REPORTS BY OTHER ORGANISATIONS

### (i) Report of FAO Regional Aquaculture Study Mission

236. The FAO/UNDP observer reported on events leading to the current activity designed as a responsive project to regional needs. Much of the current revision resulted from input of delegates at the April/May Forum Fisheries Committee meeting.

237. Based on this, the project has identified a single staff member who will soon be appointed. Some project-related expenditure for equipment had already occurred.

238. The representative of the Federated States of Micronesia asked about the start of the project and how long the project would continue. The FAO/UNDP observer replied that the project would first have to be approved and in this regard sought advice from member countries. He indicated that because of the Japanese funding system, only one year was currently approved. However, he had assurance that the project would continue beyond that period, based on the project scope.

239. Representatives from the Federated States of Micronesia, Tuvalu, Fiji, Papua New Guinea, Niue, and Tonga endorsed the project. The representative of Tonga added that his country was most interested in the appointment of an aquaculture expert. The Chairman recorded consensus of the group in endorsing the project.

240. The representative of American Samoa reported that although his country would not benefit directly, he requested that reports on activities be made available.

(ii) Proposal for an artisanal fishing vessel workshop

241. Following a request from the Chairman, the SPC Fisheries Adviser briefed the meeting about the status of a proposal for an artisanal fishing vessel workshop. He referred to a recommendation in the 1984 Regional Technical Meeting on Fisheries and reported that the Secretariat's attempts to organise such a workshop had met with a lack of interest, which had resulted in postponement of the activity. He also reported FAO/UNDP interest in pursuing the workshop and invited the FAO/UNDP observer to comment.

242. The FAO/UNDP observer reported that after consulting with FAO/Rome and countries in the region the workshop would be very complex and costly. As a result, FAO/UNDP proposed to recruit a consulting team consisting of a naval architect, a boat builder and a video cameraman to survey the region to identify problems, the need for a workshop, and recommendations regarding appropriate workshop design.

243. The representative of Tonga reported his country's willingness to host a workshop. He alluded to the problem regarding relevancy of the workshop to countries and suggested that FAO/UNDP recruit a boat builder to work on the regional project and to consult with other boat builders.

244. The representatives of Vanuatu, New Caledonia, Western Samoa, Tuvalu, Solomon Islands, Papua New Guinea, Fiji, and Kiribati each agreed that the consulting team would be most useful and invited a visit.

245. The representative of Vanuatu reported that a FAO/UNDP-funded boat builder had been most successful and asked if the boat builder to be included on the consulting team would be from a Pacific Island country. He asked that the consulting team confer with fishermen. The FAO/UNDP observer reported that, although the selection of a boat builder was still open, the person recruited would definitely be a person with Pacific boat building experience. He added that the long-term boat builder for Tonga had not yet been decided.

246. The representative of Tonga asked about the visit of the team and whether the issue of a follow-up workshop had been settled and suggested that the SPC Fisheries Training Officer be added as a member to the team. The FAO/UNDP observer replied that the consulting team would have very broad terms of reference, including problems and strategies related to boat design, material availability, construction methods, needs of fishermen and power requirements. He suggested that the team would identify needs and determine whether workshops would be appropriate.

247. The Chairman summarised the group's feeling that the activity was endorsed by all countries. He introduced agenda item 12(iii).

248. The representative of Australia apologised to the Chair and reported that he had believed agenda item 11(iv) to include two ACIAR presentations but noted that only the report on coconut crab research had been listed. He asked if the Chair would agree to inclusion of a report on giant clam research. The Chair agreed, after determining agreement from delegates.

(iii) Progress reports - ACIAR coconut crab and giant clam projects

249. Dr Rick Fletcher presented a report on progress of research on coconut crabs in Vanuatu. The report was based on working paper 13. Following a slide presentation, he invited delegates and observers to meet informally to discuss research activities in detail.

250. Dr John Lucas from James Cook University, North Queensland, described marine biology activities at the University, pointing out its emphasis on tropical mariculture and fisheries. The University was keen to promote training activities for the region. Subsequently, Dr Lucas made a presentation on giant clam research. Information papers 7 and 8 were the basis of his presentation.

251. The representative of Tonga reported that James Cook University activities were described in the FFA Consultants' report on Research and Information Needs. He also reported Tonga's interest in giant clam, and asked about the effect of low temperature on growth. Dr Lucas replied that growth of Tridacna gigas was slowed by lower temperature. He also reported that Tridacna derasa might be better adapted to lower temperatures.

252. The representative of Papua New Guinea asked about status of ICLARM activities, based on the report from Dr Munro at the Seventeenth Regional Technical Meeting on Fisheries. Dr Lucas reported that the hatchery would soon be established in Solomon Islands. This facility would serve the South Pacific. He also reported that Fiji had established quarantine hatcheries and would soon be receiving some 2,000 juveniles. Work to replenish extinct or relic population in Fiji and the Republic of the Philippines was also in progress.

253. The representative of Fiji invited participants to discuss the project informally. He reported that a description of progress was available from the representative of Fiji.

(iv) NOAA proposal for regional fishery resource assessment

254. The observer from NOAA, Mr J.R. Spradley, briefed the meeting on background leading to development of the fishery resource assessment proposal. He stated that while CCOP/SOPAC had been active in assessing mineral and hydrocarbon potential, NOAA was now in a position to assist the assessment of fisheries resources in the region.

255. The NOAA observer stated that the project was multi-year in design but was currently only partially funded. It would require an additional US\$2.0 million.. The project would produce maps, fishery resource assessment, fishery management and development plans. Training would also be a major feature of the project.

256. Mr Richard Shomura, NOAA/National Marine Fisheries Service, described NOAA research activities which had been carried out in the central Pacific. He described the Cromwell ship and its capabilities. The NMFS was capable of assessing resources existing at shoreline and slopes and also pelagic resources. The proposal being discussed would focus on the off-shore resources of snapper/grouper species. Reports of research on previous cruises were submitted to the SPC Fisheries Adviser for review by delegates.

257. The NOAA observer described the process of developing the project. Activities would be planned in consultation with Island governments. Mr Shomura added that a 60-day cruise was sufficient to ensure that a research project provided sufficient useful information.

258. The representatives of Tonga, Kiribati, and Fiji stated their support for the proposal. They reported contact with NOAA and willingness to follow-up.

259. The representative of Vanuatu stated that, as his government had not been approached to participate in this proposal he could not make pertinent comments. He felt, however, that it had technical merit as Vanuatu had benefited greatly from similar work that had been carried out by ORSTOM. That work had provided the country with a good management tool.

260. The representative of France thanked the representative of Vanuatu for his comments and stated his country's support for this important project. He said that based on the comments of SPC Masterfisherman Paul Mead, regarding location of seamounts, it was easy to appreciate the complexity of such a task. The representative of France described ORSTOM geophysical studies in locating seamounts and reported success using remote sensing by satellite. He reported that work carried out by the research vessel Jean Charcot confirmed the satellite data. He said that these resources, combined with NOAA, would be most valuable. He also said that France would be submitting a report on this work to the next CCOP/SOPAC meeting and also made available maps produced by ORSTOM for review by delegates. The representative stated that France and ORSTOM would be most interested in co-operating in their regional project.

261. The NOAA observer in reply to a question from the representative of New Zealand stated that the selection of survey areas would be dependent on expressions of country interest and availability of funds.

262. The representative of Australia asked to what extent could work proceed independent of funding needed from countries like Australia and New Zealand. Mr Spradley replied that the NOAA portion was already funded, but the GLORIA cruise was not. He stated that CCOP/SOPAC, the EEC and bilateral donors were possible sources of funds.

263. The representative of the Federated States of Micronesia noted that the Islands' needs for such assessment are great and NOAA has obviously done a very good job in such work as RAIOMA project described by Mr Richard Shomura. However, the Federated States of Micronesia, Palau, and Marshall Islands have been left out of NOAA services of this kind while being under United States administration. Now as the Islands move out from under United States administration, they are still being left out of new initiatives by NOAA for neighbouring countries in the region, so that they are not being given opportunities for this assistance. He would like to know how the Federated States of Micronesia can be included in NOAA plans for the region.

264. In response to the question raised by the representative of the Federated States of Micronesia, the representative of the United States of America, Mr Shomura, and the NOAA observer, Mr Spradley, advised that NOAA was awaiting instructions about its relationship to the free compact states. They expressed an appreciation of the dilemma noted by the Federated States of Micronesia. Mr Shomura indicated that NOAA had provided technical services to the Federated States of Micronesia, Marshall Islands, and Palau in the past.

265. The representative of New Zealand asked the NOAA observer about costs for each phase of the NOAA cruise, whether the bathymetric cruise could be carried out separately and wanted an idea about discussions regarding survey sites. The NOAA representative replied that US\$2.0 million was needed to fund the GLORIA cruise (1.5 for ship time, 0.5 for processing). Mr Spradley stated that the bathymetric work would not be economically feasible as a separate activity to locate seamounts.

266. The representative of Western Samoa stated that his country endorsed the proposal, but with reservations regarding funds. He strongly suggested that funds needed for this project not be committed from USAID's proposed regional fisheries project. Mr Spradley replied that such funds could not be utilised unless Island countries so requested.

### XIII. OTHER BUSINESS

267. The Chairman introduced agenda item 12 and solicited an indication of the number wishing to speak.

268. Mr Paul Holthus of the South Pacific Regional Environment Programme (SPREP) outlined areas of present and potential interaction between the environmental programme activities and fishery-oriented activities in the region. He briefly indicated the range of SPREP activities and pointed out that SPREP may be a means of addressing otherwise unfunded fisheries-related issues.

269. The representative of Tonga agreed that it was necessary to address interaction between the two SPC work programmes. However, he pointed out that some of the SPREP personnel were promoting inappropriate concepts and attitudes in relation to fisheries issues where overlap of interests occurred. Definition of boundaries of fisheries and SPREP spheres of involvement was necessary.

270. The observer from the Ministry of Agriculture of Israel (CINADCO) thanked the meeting for the invitation to attend, and indicated exchange of information and future possibilities of co-operation with SPC.

271. The representative of Tonga made a statement that the SPC programmes presently being followed had not been given the flexibility required to find out the needs of Pacific Island countries. He noted that fisheries is a dynamic area with rapid changes in technology. He suggested that the Secretariat allow the base staff the flexibility to travel to member countries to find out research needs which would reduce the need for consultancies, reduce costs and better enable the staff to serve the Island countries.

272. The representative of Tonga went on to suggest to the Secretariat that it might be a good idea to have the report of the forthcoming consultancy tabled for consideration by the next Regional Technical Meeting on Fisheries before the CRGA actually reviews the work of the TBAP. This would allow the technical meeting to brief the CRGA properly on technical issues related to the work of the TBAP. He also suggested that one of the consultants should be recruited from within the region to assist in securing the co-operation of government officials and to obtain the relevant information required.

273. The representative of Tonga went on to suggest to the Secretariat that in the forthcoming consultancy on the Tuna and Billfish Assessment Programme (to enable the CRGA to review its work) the out-of-region consultant be accompanied by a regional helper, which would enable barriers to be broken down and better information obtained. He pointed out that he was not proposing himself.

274. The representative of the Federated States of Micronesia asked the Secretariat whether, in the light of recent technological developments on the subject of ciguatera fish poisoning, the SPC was prepared to revive programmes. He further suggested that the subject be included in next year's technical meeting.

275. In reply the Secretariat stated that SPC's role had been to initiate early work but this had become a co-ordinating role with time and had finally ended due to budgeting restrictions.

276. Professor Helfrich of the University of Hawaii acknowledged the contribution made by the Institut Malardé in Papeete. He indicated that research in Hawaii was in two areas - the 'stick test' for detecting ciguatoxins in fish, and work on the chemical structure of the toxins.

277. The representative of French Polynesia briefly referred to the Institut Malardé and stressed the important work that has been done by Professor Bagnis whom he suggested should be included in any future discussions on the subject.

278. The observer from IMR, USP commented briefly on the work on ciguatera carried out by this establishment.

279. The representative of New Zealand requested views on the desirability of a scientific symposium in early 1987 or 1988 on marine resources in the South Pacific area. Unfortunately lack of time precluded discussion of this.

#### XIV. ADOPTION OF THE REPORT

280. The report of the meeting was adopted.

XV. SUMMARY OF RECOMMENDATIONS

REVIEW OF COASTAL FISHERIES WORK PROGRAMME

Recommendation No.1

The meeting acknowledged the importance and value to the region of the Coastal Fisheries Programme, and noting the importance of the need to improve the Programme's administrative capability recommended that:

- (i) additional administrative staff be recruited to the Programme;
- (ii) the South Pacific Commission make recommendation to the October 1986 Committee of Representatives and Government Administrations meeting to the same effect;
- (iii) that the professional staff, including the Fisheries Adviser, spend more time doing field work and working with Pacific Island governments.

Recommendation No.2

Based on the review of the Coastal Fisheries Programme, which indicated good progress, success and a strong interest among member countries to gain the services of masterfishermen, it is strongly recommended that the Secretariat take action to consult donors about providing the assistance required to accelerate development activities, including recruiting more masterfishermen.

WORKSHOP SESSION: FISHERIES EXTENSION SERVICES  
IN THE PACIFIC ISLANDS

Recommendation No.3

That taking into account the material produced by the discussion groups on what skills are desirable for Fisheries Extension Officers in the Pacific, it is recommended that the South Pacific Commission organise training in extension skills suitable for the region.

FFA STUDY OF FISHERIES RESEARCH NEEDS AND PRIORITIES  
IN PACIFIC ISLAND COUNTRIES

Recommendation No.4

Noting the importance of the findings of the Fisheries Research Needs Study (Fakahau/Shephard Report 1986), in particular the reporting of the unattended, important fisheries research needs of most Pacific Island governments, the meeting recommended that the South Pacific Commission fisheries programmes and Pacific Island fisheries administrations work together towards satisfying these research needs.

SURVEY AND ASSESSMENT OF INSHORE FISHERIES RESOURCES

Recommendation No.5

The meeting supported the proposal for the establishment of an Inshore Resource Assessment Project as outlined in working paper 19 with the following modifications:

- (i) that the title be broadened to "Inshore Fisheries Research Project";
- (ii) that positions C and D be titled "Fisheries Scientist", and their work activities be revised to place greater emphasis on research activities as follows:

Fisheries Scientist C

- (1) In collaboration with national fisheries staff, analyse fisheries research data and requirements.
- (2) Design appropriate field programmes for research and data collection.
- (3) Participate in field surveys and other data collection activities and train local staff in data collection procedures.
- (4) Train local staff in the proper methods of storing and maintaining statistical records.
- (5) Provide follow-up support and assistance as required to ensure that activities continue at a high standard.

Fisheries Scientist D

- (1) Work closely with other fisheries scientists in the project and national fisheries staff to design appropriate procedures for analysis of fisheries data.
  - (2) Evaluate resource assessment methods currently in use and adapt appropriate methods for use in local situations.
  - (3) Participate in selection and development of computer software for analysis of fisheries data.
  - (4) Train local staff in the analysis of fisheries data.
- (iii) that the Secretariat prepare a review document on this project covering the structure and activities for consideration by the 1987 Regional Technical Meeting on Fisheries.

Recommendation No.6

The meeting recommended that the Committee of Representatives and Government Administrations in reviewing the Tuna and Billfish Assessment Programme as planned also consider the structural relationships between the Tuna and Billfish Assessment Programme, the Coastal Resources Programme and the Inshore Fisheries Research Project such that:

- (i) an Inshore Fisheries Research Project should be formally attached to the Coastal Fisheries Development Programme of SPC to serve member governments by carrying out fisheries research work on fisheries resources outside the priorities of the TBAP.
- (ii) that the Inshore Fisheries Research Project absorbs the research activities now included under priorities 7 and 8 of the work programme of the Tuna and Billfish Assessment Programme.

REGIONAL MARINE RESOURCES INFORMATION NEEDS

Recommendation No.7

The meeting endorsed the future plans for development of a South Pacific Marine Resources Information System as outlined in working paper 17, in particular supporting the initiative for a meeting to be held in early 1987 to discuss co-operation in the area of fisheries information.

ANNEX I

LIST OF WORKING PAPERS PRESENTED AT THE MEETING

- SPC/Fisheries 18/Informal 1 - List of participants
- WP.1 - Tuna stocks of the southwest Pacific,  
by J.R. Sibert
- WP.2 - Review of Tuna and Billfish Assessment  
Programme, presented by the Secretariat
- WP.2/Add.1 - Summary of catch and effort data  
currently held by the Tuna and  
Billfish Assessment Programme -  
1979 to 1986
- WP.3 - Proposed revision of the regional daily  
catch report forms, presented by the  
Secretariat
- WP.3/Add.1 - Notes on comments received concerning  
draft revisions to regional daily  
catch logsheets
- WP.4 - Standing committee on tuna and billfish,  
presented by the Secretariat
- WP.4/Corr.1 - Corrigendum
- WP.5 - A review of SPC's DWFN coverage in the  
SPC region, presented by the Secretariat
- WP.6 - An outline of South Pacific Commission  
fisheries training activities, presented  
by the Secretariat
- WP.7 - Summary report of the SPC 1985/86  
activities under the fisheries work  
programme - coastal resources, presented  
by the Secretariat
- WP.8 - The extension worker in Kiribati, by  
R.H. Lindley

- WP.9 - Country statement - Kiribati
- WP.10 - Fisheries Training Directory
- WP.11 - Fisheries training in the Pacific Islands - progress and perspectives, presented by the Secretariat
- WP.12 - Country statement - Solomon Islands
- WP.13 - ACIAR Project: growth and recruitment of coconut crabs in Vanuatu
- WP.14 - Country statement - Marshall Islands
- WP.15 - Country statement - New Caledonia
- WP.16 - The role of the Fisheries Extension Officer in Pacific Island countries, by Brian P. Trendell
- WP.17 - SPC area marine resources information services and systems, presented by the Secretariat
- WP.18 - Country statement - Australia
- WP.19 - Proposal for an integrated SPC inshore resource assessment project, presented by the Secretariat
- WP.20 - Country statement - Northern Mariana Islands
- WP.21 - Fisheries research needs in the South Pacific, by Semisi T. Fakahau and Michael P. Shepard
- WP.22 - Country statement - Fiji
- WP.23 - Country statement - Papua New Guinea
- WP.24 - Country statement - New Zealand

- Information Paper 1
- 2 - Fisheries observer manual
  - 3 - Report of the First South Pacific Albacore Research Workshop, by Talbot Murray, Kevin Bailey and Carolyn Wood
  - 4 - The Vanuatu Village Fisheries Development Programme (VFDP)
  - 5 - The Pacific Information Centre (PIC), by Esther Winianamaori Williams, USP
  - 6 - Notes of application procedures for countries wishing to nominate candidates to SPC fisheries training courses
  - 7 - Design improvements and evaluations of the fishing performance of Kiribati Fisheries Division canoes, by Mark Day, Outer Island Development Programme, and Michael Savins, Fisheries Division, Ministry of Natural Resources Development, Republic of Kiribati
  - 8 - ICLARM to open new Pacific Regional Aquaculture Centre
  - 9 - Report on the ACIAR Giant Clam Project
  - 10 - Information paper on a new canoe design under trial at DPI Fisheries Division, Kanudi, Papua New Guinea
  - 10 - Research on baitfish biology in the Solomon Islands, Maldives and Papua New Guinea for the tuna industry

ANNEX II

LIST OF PARTICIPANTS

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