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SOUTH PACIFIC COMMISSION

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FOURTEENTH REGIONAL TECHNICAL MEETING ON FISHERIES
(Noumea, New Caledonia, 2 - 6 August 1982)

REPORT

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I. OPENING ADDRESS

1. The Acting Secretary-General, Mr Tamarri Pierre, opened the Meeting and presented the following address:

'Distinguished delegates, observers, ladies and gentlemen, good morning. On behalf of the Secretary-General, Francis Bugotu, I would like to welcome you to the South Pacific Commission and to the Fourteenth Regional Technical Meeting on Fisheries.

'The Secretary-General has had a long-standing interest and involvement in regional fisheries matters, and was therefore understandably disappointed at his inability to attend the opening of this important meeting. His involvement in fisheries matters included chairing the first meeting of the Forum Fisheries Committee in 1979 at which I, too, was present as a Cook Islands' representative. The Secretary-General sends his sincere apologies and has asked me to speak to you on his behalf.

'You have all probably heard it said at just about every meeting you have attended that such meetings were "important". But in the context of this meeting, the application of the word "important" is not made lightly. To indicate the importance of this gathering of fisheries personnel, both to us in the Secretariat and to the people of the region generally, I should like to point out that this is the only technical meeting for which we have approval to convene regularly on an annual basis. Such approval from the planners and politicians who appraise our Work Programmes at the annual meetings of the Planning and Evaluation Committee and the South Pacific Conference, signifies recognition by all concerned of the rapidly increasing accumulation of knowledge and techniques on the fisheries resource of the region and the need to evaluate and determine their effective utilisation and application regularly.

'As in the past, we have invited a number of observers to this meeting and it is pleasing to see representatives of regional, international and private organisations present this morning. You, too, have a vital role to play in assisting the countries and territories of the region in developing their fisheries resources and ensuring that the major benefits arising from such developments accrue to the people of the region. We sincerely hope that both honourable delegates and distinguished observers will not follow the example of the two men who, although they looked through the same bars, one saw the stars and the other only the mud. We should be of one accord in our efforts to develop our fisheries resources and reach for the attainable stars during this week's deliberations.

'The format for this year's meeting differs considerably from past meetings, and includes two workshops on topics identified by past technical meetings as being of immediate interest and concern to countries of this region. The variety of issues to be addressed does, we believe, underline the breadth of the Commission's involvement in regional fisheries development issues.

'In coastal fisheries, emphasis will be centred on the resources of the outer reef slope, with a review of the activities of the Deep Sea Fisheries Development Project, and a one-day workshop on the evaluation of the relevant resources. In view of the increasing interest in the development of these fisheries, the workshop is timely, and should provide valuable insights into the likely effect of increasing fishing pressure on these potentially valuable stocks.

'This meeting marks the end of the first year of the Tuna and Billfish Assessment Programme, and during the week progress in all priority areas will be reviewed in detail. Last year we presented the final results of the highly successful Skipjack Survey and Assessment Programme. Our research signifies that the size of the skipjack resource in the South Pacific Commission area was substantially greater than originally envisaged. This indicated the considerable potential for greater involvement of coastal states in the development of this resource. At the same time we pointed out the possibility of increased interaction between fisheries as they expand. These assessments will be reviewed and updated during this meeting. The last major agenda item is the workshop on observer programmes.

'We hope that before your departure from here at the end of this week you will have identified common goals for both the Secretariat and national institutions to strive for and not be like the man who, after being rejected, flung himself from the room, flung himself on his horse and rode madly off in all directions. Effective utilisation of the sea's resources can only be brought about if we are of one mind and accord. It is perhaps significant that the Pacific, which has been looked upon as being the cause of our isolation, should now be responsible for bringing us together this week. We in the Secretariat look forward to receiving your directions over the next five days.

'The Secretary-General returns to Noumea on Wednesday and he hopes to meet you all personally at that time. He has asked me to pass on his best wishes for a successful meeting and to assure you of his interest in the results of your deliberations.'

II. APPOINTMENT OF CHAIRMAN AND OTHER OFFICE BEARERS

2. Mr Tui Cavuilati, Principal Fisheries Officer, Fiji, was unanimously elected Chairman of the Meeting and Mr Barerei Onorio, Kiribati, Vice-Chairman. Mr James Crossland, Vanuatu, and Dr Robert Kearney, Tuna and Billfish Assessment Programme Co-ordinator, were elected Chairmen for the one-day workshops on Deep Bottom Fisheries Resources and Evaluation of Observer Programmes respectively. A drafting committee comprising the Vice-Chairman, Mr Semisi Fakahau, Tonga, Mr Michael Batty, Tuvalu, Mr Jacques Muyard, New Caledonia, Mr Michael King and Dr Tony Lewis, SPC Consultants, was appointed.

III. APPROVAL OF AGENDA AND TIMETABLE

3. One change to the order of presentation was suggested, namely that consideration of item 7 on the draft agenda, Fish Aggregation Devices, be deferred until after item 9.

4. The provisional agenda was then amended and adopted.

5. The Chairman drew the meeting's attention to the large number of working papers that had been circulated.

AGENDA

1. Opening address
2. Appointment of Chairman and other office bearers
3. Approval of agenda and timetable
4. COASTAL FISHERIES
 - (a) Review of Coastal Fisheries Work Programme
 - (b) Report of progress with the development and evaluation of simple fishing gears and techniques
 - (c) SPC involvement in fisheries training courses - what are the real requirements of the region?
5. Artisanal fisheries development - an update of progress and developments
6. WORKSHOP - Deep bottom fisheries resources of the South Pacific
7. OCEANIC FISHERIES
 - (a) Update on assessments of skipjack resources
 - (b) Review of progress with priority items of the Tuna and Billfish Assessment Programme
8. WORKSHOP - evaluation of programmes for observers on foreign fishing vessels
9. Fish Aggregation Devices - an evaluation of regional experience
10. Mariculture
11. Other business
12. Adoption of report

IV. COASTAL FISHERIES

6. The Fisheries Adviser, Mr Bernard Smith, briefly reviewed the activities of the SPC in the development of coastal fisheries throughout the region.

Activities and achievements of the Deep Sea Fisheries Development Project

7. The activities of this continuing project were outlined and some interesting contrasts in catch rates within individual countries were noted. He stressed the need for both adequate planning to precede visits to individual countries and allocation of sufficient time in each area to enable areas to be effectively worked.

8. Much of the detailed discussion on this important topic was deferred to the one-day workshop on deep bottom resources. Discussion on the Deep Bottom Resource Survey was similarly deferred.

Recommendation No. 1

The meeting once again commended the South Pacific Commission on the success of the Deep Sea Fisheries Development Project and recommended its continuation with greater emphasis on gear development.

9. It was suggested that future master fisherman appointments should take into account the benefit of introducing a wider range of fishing skills into the project team.

Fisheries training

10. The Fisheries Adviser reported on a review of the Nelson Polytechnic Pacific Island Fisheries Training Course made by himself, Mr Paul Mead, SPC Master Fisherman, and Nelson Polytechnic officials, noting extensive changes to the syllabus in accordance with advice received from member countries.

11. In ensuing discussions, representatives indicated their satisfaction with trainees from previous courses, but supported the amended syllabus as a course for fisheries officers.

Recommendation No. 2

The meeting recommended that the South Pacific Commission convey to the New Zealand Government the opinion that the South Pacific Commission/Nelson Polytechnic fisheries course provided a valuable and much-needed training avenue for Pacific Islanders, and requested the South Pacific Commission to express to the New Zealand Government the wish that the course be continued.

Short-term experts and consultancies

12. The results of two consultancies - preliminary examination of the potential of deepwater shrimps at the request of the Government of Papua New Guinea by Mr Michael King, University of the South Pacific, and the potential for development of a small-scale specimen shell industry in Fiji by Mr Brian Parkinson, Department of Commerce, Papua New Guinea - were outlined. Both reports have been submitted to the respective governments, and it is hoped they can ultimately be distributed.

Information services

13. The Fisheries Adviser drew the meeting's attention to the Commission's role in the collection and dissemination of information. He advised that draft copies of a baitfish identification guide were available for comment and that a similar deep bottom fish guide was in preparation.

V. ARTISANAL FISHERIES DEVELOPMENT - AN UPDATE OF PROGRESS
AND DEVELOPMENTS

14. Individual countries outlined their own recent experience in artisanal fisheries development. Discussion centred on two areas: the need for suitable fish handling and processing methods, and the development of appropriate small fishing vessels.

15. There was considerable interest in all aspects of fish handling and processing, including cost-effective methods appropriate to the small island situation, the relative merits of chilling and freezing, and other methods such as drying, salting and smoking.

Recommendation No. 3

A workshop on the handling and processing of fishery products was recommended for inclusion in the agenda of the Fifteenth South Pacific Commission Regional Technical Meeting on Fisheries in 1983.

16. The meeting discussed recent work in the development of various small fishing vessels for use in South Pacific countries. The increasing use of sail power in some countries was noted. The view was also expressed that vessels should be sail-assisted rather than solely dependent on wind power. Although it was pointed out that no one design or vessel type was likely to be suitable for all countries and in all fisheries, it was felt it would be beneficial to review designs in present use.

Recommendation No. 4

The meeting recommended that the South Pacific Commission prepare a synopsis of small vessel types in present use or being developed for Pacific Island countries. The synopsis should include details on building costs, applicability to various fisheries, and running costs.

17. The Fisheries Adviser stressed that the implementation of this recommendation would largely depend on information supplied by Island countries.

VI. WORKSHOP - DEEP BOTTOM FISHERIES RESOURCES OF THE SOUTH PACIFIC

Deepwater shrimps

18. Mr Michael King (USP) presented an overview of deepwater shrimps in the Pacific Island countries. It has been established that resources of several species of deepwater caridean shrimps (including Heterocarpus species) are present in many south-western Pacific islands. Unlike other pandalids, the Heterocarpus species appear to be heterosexual. Growth was shown to be slow and the largest size groups in the catches are from 3 to 5 years old, depending on species and depth.

19. Estimates of economic efficiency of small- and large-scale fishing operations, based on long-term mean catch rates of 1.3 kg/trap, were presented. It was pointed out that the marketing, and particularly export, potential is presently low in most countries. Exceptions were possibly New Caledonia and Vanuatu where prices were likely to be over A\$8.00 per kg.

20. Results of commercial trials from a large (25 m) vessel operating in Fiji were discussed in detail by Mr G. Southwick. These trials remain the only ones to be carried out in the SPC area. Problems encountered included availability of bait, trap loss, difficulties in handling large numbers of traps, and lower catch rates than those obtained in preliminary surveys. Local variations in catch rates were discussed. Aspects of marketability and handling problems were also raised. Possibly due to the large number of areas covered in a short time, the mean catch rate during these trials was less than 1 kg/trap.

21. Reports from commercial interests in Hawaii were relayed to the meeting by Dr Kearney. Catches from 1,000 to 4,000 kg per week were reported to be possible for one vessel, and local market prices were about US\$4.00 to \$12.00 per kg. The source was reportedly of the opinion that commercial shrimp fishing in the Pacific may not be viable outside Hawaii.

22. Points raised by delegates on the basis of their own experience included:

- the problem of isopods attacking bait in Papua New Guinea;
- the optimal spacing of traps along the bottom line; and,
- the likely degree of resilience of an exploited shrimp population.

The general feeling of the meeting was that, in many countries, exploitation of this resource was unlikely to be economically feasible at present.

Deep bottom fish

23. Master Fisherman Mr Paul Mead used colour slides to acquaint delegates with the more common species of deep bottom fish found during SPC surveys. Several delegates endorsed the need for the proposed SPC handbook on deep bottom fishes and urged the South Pacific Commission to accord its preparation high priority.

24. The Fisheries Adviser briefly outlined the history of the Deep Sea Fisheries Development Project. The project commenced in 1978 and the three master fishermen have been in the field almost continuously during that time. Catch rates achieved by the project varied from 2.4 to 9.1 kg of saleable fish/reel/hour, although these figures did not necessarily reflect productivity since one of the major aims of the project was training. Although it is difficult to generalise, it appears that catch rates and species diversity, as well as the average size of fish, are generally greater around large, high islands than around atolls and small islands.

25. It was pointed out that initial catch rates of deep bottom fish were not likely to be maintained in a continuing fishery.

Marketing

26. In accordance with a request from last year's meeting to discuss marketing aspects, delegates outlined country situations. Marketing objectives in most cases were seen as import substitutions. Some resistance by local consumers was thought to be mainly due to the size of fish caught. This could, in some cases, be solved by processing.

Deep bottom fish resource management

27. It was suggested that at least preliminary working estimates of available deep bottom fish stocks could be obtained by considering the length of the 200 m depth contour lines. Where depletion of stocks becomes severe, limited entry seemed to be a suitable management option for avoiding over-exploitation. It was suggested, however, that sufficient unfished areas existed to make, in general, any restrictions on effort unnecessary at this time. Some discussion of the value of such 'fallow' areas ensued.

28. Several countries outlined their current and proposed research on deep bottom fish, and it appears that a good deal of useful work is already under way. To co-ordinate and make full use of information collected, some change of emphasis in the proposed Resource Survey was suggested.

Recommendation No. 5

The meeting recommended that future activities under the Deep Bottom Resources Survey Project be redirected to undertake, as a matter of some priority, a detailed analysis of the extensive data base compiled by the South Pacific Commission Deep Sea Fisheries Development Project, to co-ordinate, where possible, activities of countries in the region and to undertake short-term field studies, where necessary.

29. It was emphasised that the support of scientific staff in individual countries would still be necessary to carry out this task. Several countries noted that additional staff would probably be required to cope with the steadily increasing workload borne by SPC fisheries staff.

VII. OCEANIC FISHERIES

A. Update on assessments of skipjack resources

30. Dr Kearney briefly reviewed the major conclusions of the Skipjack Survey and Assessment Programme, as presented at last year's meeting. Since further analysis of the results is continuing as a priority item of the Tuna and Billfish Programme, an update of these conclusions was then presented.

31. At the last meeting it was suggested that the standing stock of skipjack in the area of the South Pacific Commission might be as high as 3.4 million tonnes. In the last year this estimate has been revised to 3.1 million tonnes. The caution needed in interpreting these figures was again stressed.

32. Both estimates substantially exceeded present levels of catch and, when considered with the estimated turnover rates of 18 to 20 per cent per month, suggested strongly that total catches from the whole of the SPC area could be increased considerably. However, it was stressed that yields could only be maximised if catches were taken across the whole of the region in proportion to the abundance in each area. It was further stressed that, as fishing effort increases, competition between fisheries and fleets for the available resources will increase.

33. In reviewing the evaluation of the skipjack resources, no changes in analytical methods have proven necessary, although the value of the correction factor 'p' (Working Paper 11) may need to be adjusted for particular fisheries in the region. Little additional work has been necessary on population structure, growth and baitfish assessments, and the interpretations presented last year remain unchanged.

34. It was explained that the presentation of results on an individual country basis was now being undertaken as a high priority. The final country report for Fiji was presented to the meeting as an example. Progress in the preparation of other country reports was reviewed; many are nearing completion.

35. The interest and expectations generated by the resource estimates underlined, in the view of a few delegates, the need for the Tuna and Billfish Expert Advisory Committee, as recommended by last year's meeting. Dr Kearney, in outlining that this recommendation had yet to be implemented owing to financial constraints, pointed out that the results had already been subjected to critical review by other organisations, particularly by the Inter-American Tropical Tuna Commission (IATTC), and had been supported by their scientists.

36. In responding to a formal request from the Government of Solomon Islands that the Forum Fisheries Agency (FFA) be included as a member of the Committee, the SPC Deputy Director of Programmes explained the procedural difficulties of such a move, but supported in principle the value of input from FFA. As the regular sessions of the Expert Committee would be held in conjunction with annual Regional Technical Meetings on Fisheries, all organisations, such as FFA, which attend these meetings would be free to participate.

Recommendation No. 6

The meeting recommended that the first meeting of the Tuna and Billfish Expert Advisory Committee be convened in conjunction with the Fifteenth Regional Technical Meeting on Fisheries and, if necessary, in order to effect this arrangement, the South Pacific Commission seek appropriate funding.

37. Comment was sought from members of the American tuna industry, present as observers at the meeting, on the future of the tuna industry. Despite problems presently caused by oversupply of product, the observers expressed optimism that the current market situation will improve, and that further development in the western Pacific should be encouraged, but on a regional basis if possible.

B. Review of progress with priority items of the Tuna and Billfish Assessment Programme

38. The Co-ordinator of the Tuna and Billfish Assessment Programme, reviewed progress to date. Highest priority has been attached to the regional statistical programme, for which most of the computer software is now complete; data entry has commenced and summaries have been provided to some countries. A number of countries expressed their appreciation for this service.

39. Work on the interaction between pole-and-line and purse-seine fisheries has commenced. A small tagging programme to specifically investigate this interaction is planned and will probably be carried out in Fiji. Although this represents a temporary shift of emphasis from the study of interaction in the west of the SPC region, it will supplement the considerable amount of information available from previous tagging in equatorial areas.

40. Because of the decrease in longlining effort, the urgency of evaluating billfish resources has lessened. Data from the statistical programme will be largely sufficient.
41. In the further work on skipjack programme results, more emphasis will be given to country reports, which are presently being distributed by the programme.
42. Assessment of the exploitation of other commercially important tunas will rely mainly on the Regional Statistical Programme. Biological information will be obtained from the same programme, perhaps with additional input from observer programmes. No further work on baitfish is planned at present under the programme. Other items on the programme have been accorded a lower priority, but some work has been undertaken on all of them. This work was briefly described.
43. There was prolonged discussion of alternative catch and effort report forms for longline vessels. An amended form (as appended) incorporating daily sea surface temperature and daily total weight for each species was accepted for use by all countries.
44. The Co-ordinator of the programme indicated the format in which country statistical reports would be made. He stressed that these reports were confidential and remained the property of the country providing the original statistics. Only monthly catches by 1° squares are published.
45. The decline in the longline fishery was discussed, together with its implications for future catch rates. It was felt that longline catch data had proved to be an unreliable indicator of stock abundance.
46. Collection of oceanographic and environmental data relevant to description of tuna habitat and predictions of abundance was discussed with a view to obtaining input from other organisations. A detailed presentation by the French delegation indicated that satellite imagery, in conjunction with ORSTOM's large ongoing oceanographic research programme, could be very useful in this regard.

Recommendation No. 7

Recognising its potential value to both the Tuna and Billfish Assessment Programme and countries of the region, and appreciating the progress already made in introducing new techniques, the meeting recommended that the South Pacific Commission request the French Government to increase its efforts to develop satellite imagery techniques for use with oceanographic data and make such information available to the South Pacific Commission and to countries of the region in accordance with approved priority item 8 of the Tuna and Billfish Assessment Programme.

47. The future of the Skipjack Training Course, which remains a part of the Work Programme but has yet to be implemented owing to lack of real interest from member countries and lack of funding, was discussed. The suggestion that it be re-oriented to take the form of a short-term statistical training course run by the South Pacific Commission in Noumea was strongly supported, particularly as the Commission already runs similar courses of a non-fisheries nature.

48. It was the meeting's view that the course should be in Noumea, of one to two weeks' duration and that member countries should be consulted as to its content. It was also suggested that the Asian Development Bank be approached as a possible source of funds.

Recommendation No. 8

The meeting recommended that the South Pacific Commission run a general fisheries statistics training course for fisheries officers of the region and that financial support be sought.

49. An offer to host a longer course with emphasis on computer analysis of data was made by the representative of Australia. Several countries have already expressed interest in this offer, and it was noted that future approaches should be made through the appropriate channels. It was thought that this course would complement, rather than compete with, the recommended SPC course.

50. It was noted that all recommendations from last year's meeting pertaining to oceanic fisheries had been satisfactorily acted upon.

VIII. WORKSHOP - EVALUATION OF PROGRAMMES FOR OBSERVERS ON FOREIGN FISHING VESSELS

51. The Co-ordinator of the Tuna and Billfish Assessment Programme introduced the workshop and tabled a letter from the Acting Director of Fisheries, Papua New Guinea (Background Paper 1). The representative of New Zealand summarised the stated requirements of most member countries and placed before the meeting several recommendations (Working Paper 19). The personal experiences of Mr R. Gillett, SPC Fisheries Scientist, as observer were related to delegates. The main points concerning biological sampling aboard purse-seine vessels were that:

- data collected should be simple but accurate;
- only a small amount of actual sampling time is available on board;
- length measurements can be more easily and accurately collected than weight data;
- observers should be trained in species recognition, and identification keys should be made available to observers.

Other comments related to the safety and comfort of observers on foreign vessels.

52. Several delegates expressed concern over the high cost of observer programmes. Some countries suggested that the costs could be borne by countries with access rights.

53. The American Tunaboat Association related problems associated with National Marine Fisheries Service observers, noting the existence of litigation over the status and duties of such observers, and also related the favourable experience with IATTC observers carrying out scientific and technical duties, noting that such experience aboard United States tuna vessels commenced in 1953.

54. The outcome of discussions was inconclusive. However, there was general acceptance of the concept of observer programmes as a means of gathering data on fish resources in the region. It was also accepted that standardisation of activities in observer programmes in the region is desirable, particularly with regard to harmonising the transfer of scientific and technical fisheries knowledge among member states, and to help assure the development of an adequate statistical sampling effort throughout the region.

55. It was seen that the SPC standardised log forms, and the commitment of SPC to their distribution to member countries, the subsequent collection and collation of collected forms, analysis of the data, and communication of results to SPC countries would contribute to harmonisation of the region's observer programmes.

56. At the conclusion of the workshop, it was clear that further discussions were necessary on observer programmes.

Recommendation No. 9

The meeting recommended that the South Pacific Commission, in consultation with member countries and territories, define an appropriate set of objectives for observer programmes of the region, investigate the possibility of harmonising existing observer programmes in the region, perhaps through the establishment of a South Pacific Commission observer programme co-ordinator. It was also requested that the South Pacific Commission determine the need for placement of professional observers in the field to conduct particular research, and provide support for national observer programmes when required.

IX. FISH AGGREGATION DEVICES - AN EVALUATION OF REGIONAL EXPERIENCE

57. In view of the fact that substantial losses of FADs continue to occur throughout the region, the South Pacific Commission has prepared a proposal, based largely on comments received from countries, for a design study. The objectives of this proposal were outlined by the Fisheries Adviser, who also advised that funds specifically for the project have been provided by the Australian Development Assistance Bureau (ADAB).

58. Delegates then discussed some informative working papers and exchanged experiences on various aspects of FAD design, installation, usage and catch composition. Although good progress has been made in some countries, the need for a study as outlined in the proposal still exists, especially with regard to artisanal fishing activity.

Recommendation No. 10

The meeting endorsed the objectives of the South Pacific Commission design study on Fish Aggregation Devices as given in the project document and recommended that the South Pacific Commission continue its efforts to locate a suitably qualified consultant to assist with this study as soon as possible.

X. MARICULTURE

59. Considerable interest was expressed in recent advances in the culture of giant clams and trochus. It appears that growth rates of several species of clams are relatively rapid and this, combined with simple techniques used, provides some encouragement for future development in this field.

60. Individual countries related their own recent experiences with mariculture. These included prawn farming, baitfish culture, mother-of-pearl production and experimental rearing of marine food fishes. The willingness of several organisations with experience in mariculture to assist countries of the region was noted with appreciation.

XI. OTHER BUSINESS

61. The meeting was advised that an ESCAP-sponsored workshop on the role of women in fisheries was planned for Suva in October. Countries interested were advised to contact the Fiji delegate.

62. Clarification of USP's role in tuna research was requested. The meeting was advised that, at this time, the work had been redirected towards baitfish research, but that requests from individual countries would be taken up.

63. The feasibility of very small-scale or backyard aquaculture was raised. Opinion appeared to be that there was some potential in this regard for Tilapia, but very few other species.

64. The meeting considered it highly desirable that continuity in representation, particularly in the case of leaders of delegations, be encouraged.

65. Regarding procedural matters it was suggested that:
- (a) more detailed outline of workshop content be presented before the meeting;
 - (b) future meetings might include suggested time allocation for each item, but that this obviously needs to remain flexible;
 - (c) the date of next year's meeting be again set for the first week in August.

66. Although the usefulness of evaluating background documents before the meeting was recognised, the practical difficulties experienced in the past were thought to preclude this. The Fisheries Adviser, however, urged that all large documents be submitted six weeks or more before the meeting.

67. Following a suggestion from the Chairman, the meeting agreed to nominate particular countries to act as next year's Chairman and Vice-Chairman. Tonga and Tuvalu were accordingly nominated and accepted in principle.

XII. ADOPTION OF REPORT

68. The report of the meeting was adopted.

XIII. SUMMARY OF RECOMMENDATIONS

COASTAL FISHERIES

Activities and achievements of the Deep Sea Fisheries Development Project

Recommendation No. 1

The meeting once again commended the South Pacific Commission on the success of the Deep Sea Fisheries Development Project and recommended its continuation with greater emphasis on gear development.

South Pacific Commission/Nelson Polytechnic Fisheries Training Course

Recommendation No. 2

The meeting recommended that the South Pacific Commission convey to the New Zealand Government the opinion that the South Pacific Commission/Nelson Polytechnic fisheries course provided a valuable and much-needed training avenue for Pacific Islanders, and requested the South Pacific Commission to express to the New Zealand Government the wish that the course be continued.

ARTISANAL FISHERIES DEVELOPMENT - AN UPDATE OF PROGRESS AND DEVELOPMENTS

Recommendation No. 3

A workshop on the handling and processing of fishery products was recommended for inclusion in the agenda of the Fifteenth South Pacific Commission Regional Technical Meeting on Fisheries in 1983.

Recommendation No. 4

The meeting recommended that the South Pacific Commission prepare a synopsis of small vessel types in present use or being developed for Pacific Island countries. The synopsis should include details on building costs, applicability to various fisheries, and running costs.

WORKSHOP - DEEP BOTTOM FISHERIES RESOURCES OF THE SOUTH PACIFIC Deep bottom fish resource management

Recommendation No. 5

The meeting recommended that future activities under the Deep Bottom Resources Survey Project be redirected to undertake, as a matter of some priority, a detailed analysis of the extensive data base compiled by the South Pacific Commission Deep Sea Fisheries Development Project, to co-ordinate, where possible, activities of countries in the region and to undertake short-term field studies, where necessary.

OCEANIC FISHERIES
Tuna and Billfish Expert Advisory Committee

Recommendation No. 6

The meeting recommended that the first meeting of the Tuna and Billfish Expert Advisory Committee be convened in conjunction with the Fifteenth Regional Technical Meeting on Fisheries and, if necessary, in order to effect this arrangement, the South Pacific Commission seek appropriate funding.

Tuna and Billfish Assessment Programme - Item 8

Recommendation No. 7

Recognising its potential value to both the Tuna and Billfish Assessment Programme and countries of the region, and appreciating the progress already made in introducing new techniques, the meeting recommended that the South Pacific Commission request the French Government to increase its efforts to develop satellite imagery techniques for use with oceanographic data and make such information available to the South Pacific Commission and to countries of the region in accordance with approved priority item 8 of the Tuna and Billfish Assessment Programme.

Fisheries Statistics Training Course

Recommendation No. 8

The meeting recommended that the South Pacific Commission run a general fisheries statistics training course for fisheries officers of the region and that financial support be sought.

WORKSHOP - EVALUATION OF PROGRAMMES FOR OBSERVERS ON FOREIGN FISHING VESSELS

Recommendation No. 9

The meeting recommended that the South Pacific Commission, in consultation with member countries and territories, define an appropriate set of objectives for observer programmes of the region, investigate the possibility of harmonising existing observer programmes in the region, perhaps through the establishment of a South Pacific Commission observer programme co-ordinator. It was also requested that the South Pacific Commission determine the need for placement of professional observers in the field to conduct particular research, and provide support for national observer programmes when required.

FISH AGGREGATION DEVICES - AN EVALUATION OF REGIONAL EXPERIENCE

Recommendation No. 10

The meeting endorsed the objectives of the South Pacific Commission design study on Fish Aggregation Devices as given in the project document and recommended that the South Pacific Commission continue its efforts to locate a suitably qualified consultant to assist with this study as soon as possible.

LONGLINE VESSEL - CATCH REPORT FOR THE WATERS OF

VESSEL NAME _____
 COUNTRY OF REGISTRATION _____
 REGISTRATION NUMBER _____
 GROSS REGISTERED TONNAGE _____
 LICENCE/PERMIT NUMBER _____
 NAME OF CAPTAIN _____

NUMBER OF HOOKS/BASKETS _____
 DISTANCE BETWEEN FLOATS (M) _____
 LENGTH OF FLOAT LINE (M) _____
 LENGTH OF BRANCH LINES (M) _____

BAIT USED (Species)	1	2
---------------------	---	---

	NAME	YYMMDD
DEPARTURE FROM PORT		DATE
ARRIVAL AT PORT		DATE
NUMBER OF CREW		

YEAR _____ MONTH _____

LICENCE/PERMIT HOLDER'S SIGNATURE _____

Comments Code
 1. Days not fishing
 2. In port

DAY	NOON POSITION				NUMBER OF HOOKS	SEA SURFACE TEMPERATURE	Albacore		Bigeye		Yellowfin		Bluefin		Striped marlin		Blue marlin		Black marlin		B.B. Sword fish		Sailfish		Shark		OTHER SPECIES		DISCARDS		REMARKS		
	LAT		LONG				NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	NO.	TOT. WT. (KG)	TUNA (KG)	OTHERS (KG)			
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CATCH AND EFFORT REPORT FORM FOR LONGLINE VESSELS

APPENDIX

ANNEX I

LIST OF WORKING PAPERS PRESENTED AT THE MEETING

SPC/Fisheries 14/Informal 1 - Provisional list of participants.

- WP.1 - Country statement - Australia.
- WP.2 - Development of a trochus shell industry in New Caledonia.
- WP.3 - First results of tuna pole-and-line fishing in New Caledonia.
- WP.4 - Project document - Design study of Fish Aggregation Devices in the South Pacific.
- WP.5 - Update on the study of parasites as skipjack population markers.
- WP.6 - Country statement - Fiji.
- WP.7 - Country statement - New Zealand.
- WP.8 - Country statement - Kiribati.
- WP.9 - A reappraisal of the SPC/Nelson Polytechnic Pacific Island Fisheries Training Course, and revised syllabus for proposed 1983 course.
- WP.10 - Review of progress with priority items of the Tuna and Billfish Assessment Programme.
- WP.11 - Update of assessment of skipjack and baitfish resources.
- WP.12 - An assessment of baitfish resources in the South Pacific Commission area.
- WP.13 - Summary report of South Pacific Commission activities under the fisheries work programme - coastal resources, September 1981-July 1982.
- WP.14 - Oceanography and fisheries biology at ORSTOM in the tropical Pacific.
- WP.15 - Fish Aggregating Devices or Payaos, by M. de San, FAO Associate Expert, Project RAS/73/025, Regional Co-ordinator (South Pacific).

- SPC/Fisheries 14/WP.29 - Pacific Tuna Development Foundation - Northern Marianas Tuna Aggregation Project, final report, March 1982.
- WP.30 - ESCAP/FAO project on improving the socio-economic condition of women in fisheries: relevance of the Fiji study to other South Pacific countries, by Padma Narsey Lal and Claire Slatter.
- Information Paper 1 - Folio of current FAD designs
- Background Paper 1 - Letter from Acting Director of Fisheries, Papua New Guinea, with reference to observer programmes.
- 2 - Results of bottom fish research in the north-western Hawaiian islands, by Richard N. Uchida, Darryl T. Tagami and James H. Uchiyama, Southwest Fisheries Center Honolulu Laboratory, National Marine Fisheries Service, NOAA, Honolulu, Hawaii.
- 3 - Review of fish handling techniques in Hawaii, by Richard N. Uchida, Southwest Fisheries Center Honolulu Laboratory, National Marine Fisheries Service, NOAA, Honolulu, Hawaii.

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