

SOUTH PACIFIC COMMISSION

SIXTEENTH REGIONAL TECHNICAL MEETING ON FISHERIES
(Noumea, New Caledonia, 13 - 17 August 1984)

SUMMARY REPORT OF THE SOUTH PACIFIC COMMISSION ACTIVITIES
UNDER THE FISHERIES WORK PROGRAMME- COASTAL RESOURCES

1. The activities of the South Pacific Commission in the development of coastal fisheries throughout the region, covering the period August 1983 to July 1984, will be reported in detail under Agenda items 4 and 5. A summary is presented here to facilitate discussion under these items.

I - DEEP SEA FISHERIES DEVELOPMENT PROJECT

2. The Deep Sea Fisheries Development Project operates at village or artisanal level in SPC member countries following a formal government request. Its objectives are:

- (i) to promote the development or expansion of artisanal fisheries throughout the region based on fishery resources which are at present under-utilised, in particular the deep bottom resources of the outer reef slope and offshore aggregations of surface and mid-water pelagic fish;
- (ii) to develop and evaluate new simple technology fishing gear and techniques suitable for use by village fishermen, which will enable them to substantially increase catches while reducing dependence on costly imported fuels;
- (iii) to provide practical training in appropriate fishing techniques to local fishermen and government fisheries extension workers.

3. The Project superseded the Outer Reef Artisanal Fisheries Project in 1978, and since that time has completed 31 visits to 15 countries, with three still in progress. Eight country visits have been partially or wholly completed during the past year (1 August 1983 to 31 July 1984) as detailed in Table 1.

4. Dropline fishing for deep-water snappers continued to remain the major fishing technique used by the masterfishermen. However, most country visits this year have involved work of a more varied nature than in the past. The master fisherman have generally worked at more than one level within the fisheries sector, e.g. in assisting with both catching and processing the fish in visits to Palau, Tuvalu and FSM, and in the development of fishing techniques, followed by extension training for village fishermen in these techniques in Fiji.

TABLE 1: DEEP SEA FISHERIES DEVELOPMENT PROJECT ACTIVITIES,
1ST AUGUST 1983 - 31ST JULY 1984

<u>Country, dates masterfisherman</u>	<u>Primary objectives</u>	<u>Activities of masterfisherman</u>
Palau 3/5/83-31/10/83 P. Taumaia	Training, export market development	Training government demonstration team in deep-bottom fishing. Subsequently worked with demonstration team training members of state fishing cooperatives and preparing fresh fish for export.
Tuvalu 10/9/83-20/12/83 L. Chapman	Local market development, training	Deep bottom fishing around Funafuti with initial trials in production and marketing of salt fish. Trips to outer islands training fishermen in deep-bottom fishing and further market trials for salt fish.
Wallis & Futuna 4/11/83-22/3/84 P. Taumaia	Training, resource assessment	Demonstration of deep-bottom fishing techniques to fishermen on Futuna. More extensive training programme on Wallis, plus collection of detailed catch information to assist in basic resource assessment.
Papua New Guinea 10/1/84-10/7/84 L. Chapman	Resource assessment, exploratory fishing	Trolling survey to assess spanish mackerel potential in Kimbe area. Demonstration bottom fishing and trolling trips from a number of centres, deployment and monitoring of two FADs from Wewak.
Fiji 15/1/84-current P. Mead	Gear development, extension training	Testing and improving fishing gear/techniques for use around FADs including deep trolling, vertical longlining, surface trolling, based in Suva. Development of optimum fishing strategy around FADs and training of village fishermen of Northern Division in FAD-fishing.
Kiribati 24/3/84-current P. Taumaia	Training, resource assessment	Working with government demonstration team training outer island fishermen in deep-bottom fishing techniques. Deep bottom fishing around Kiritimati (Christmas) Is. and preparation of fish for export.
Federated States of Micronesia 10/7/84-current L. Chapman	Export market development, gear development	Based in Yap State, locating bottom fishing areas, improving catch handling and processing to export standard. Deployment of FADs and development of fishing techniques around them, including gill nets.

5. More emphasis is being placed on the evaluation of new fishing methods and gears, in line with recommendations from the 15th and previous technical meetings. Gear development activities form a major part of two country visits, both of which are still under way. In this respect, we are grateful to FAO/UNDP Regional Fisheries Development Project RAS/73/025 for the supply of specialised fishing equipment in support of these activities.

6. In addition to the formal country visits listed in Table 1, the Project Master Fishermen have been involved in a variety of regional training activities. These are:

- a) 3 weeks spent in the Federated States of Micronesia in September 1983 by Master fisherman P. Mead, who conducted a brief training course in deep-bottom fishing for students attending the SPC Mobile Training Unit in Ponape;
- b) 3 weeks spent in Fiji by Master fisherman L. Chapman in June 1984 to assist an international course for managers of fish distribution centres, organised by the Commonwealth Secretariat;
- c) a one-month suspension of the Fiji country visit in June/July to enable Master fisherman Paul Mead to instruct SPC trainees in small-boat fishing techniques. The trainees travelled from New-Zealand, where they had attended the SPC/Nelson Polytechnic Pacific Fisheries Officer Training Course (see para 13) to participate in the practical fishing module in Fiji.

II - ANALYSIS OF DEEP BOTTOM FISH RESOURCE DATA

7. The Commission was unsuccessful in its attempts to locate funds for the appointment of a senior scientist to carry out the proposed Deep Bottom Resources Project, and in accord with procedures adopted by the Twenty-Third South Pacific Conference, the proposal has been dropped from the Work Programme.

8. Initiated in response to directives from both the 1982 and 1983 Regional Technical Meetings on Fisheries, work is processing well towards a detailed analysis of the data generated by the DSFD Project. In the absence of funding support for this activity, staff from the TBAP have generously assisted with the computer entry of catch, effort and related data from the DSFD Project's thirty-one (to date) country visits. Most of the daily catch and effort forms have been coded and punched, and following compilation of an exhaustive list of bottom fish species recorded during Project operations over the past seven years, entry of catch composition data is now proceeding and should be completed within the next few months. A preliminary analysis of this data will form the basis of a planned paper to be presented at a Workshop on "The Biology and Fishery Management of snappers and groupers in the Tropics" convened by NMFS Honolulu Laboratory and scheduled to be held in Hawaii in May 1985.

III - FISH HANDLING AND PROCESSING PROJECT

9. The 1983 Regional Technical Meeting on Fisheries identified training in basic fish handling and simple processing as a priority need in most countries of the region, and felt that such training could best be carried out in-country. Considering the undoubted success of the Deep Sea Fisheries Development Project, the meeting strongly recommended that the South Pacific Commission either expand the Deep Sea Fisheries Development Project or establish a new project through which the services of a practical specialist in fish handling and simple processing could be made available to countries and territories of the SPC area, to provide longer term in-country training and assistance in this important area. In response to this recommendation, a two-year project was proposed for inclusion in the 1985/86 Work Programme, and subsequently endorsed by the 1984 Committee of Representatives of Governments and Administrations (CRGA) with funding to be obtained from extra-budgetary sources.

Project Outline

10. The project concept is modelled on the Deep Sea Fisheries Development Project, and will draw on the services of a suitably qualified and motivated specialist with a background of practical experience in the fishing industry to provide technical advice and training assistance, on request, to SPC member countries and territories. The objectives of the project are:

- (1) to assist countries in the improvement and upgrading of fish handling practices in all sectors of the national fishing industry.
- (2) to promote the use of and assist with the development of simple processing techniques suitable for use in Pacific Island countries.

11. During a country assignment, envisaged to be 2 to 3 months in duration, the specialist will conduct intensive training programmes and workshops tailored to meet the specific requirements of individual countries and provide on-the-job instruction to fishermen and to staff involved in the handling, processing and marketing of fishery products. During the first year of the project, conditional on suitable funding being available, a regional training course in fish handling and simple processing will be held to train instructors from within the region. The SPC specialist will provide follow-up training assistance to graduates of this course during subsequent country visits and involve them in all aspects of the project in-country training activities.

IV - TRAINING

SPC Nelson Polytechnic Pacific Fisheries Training Course

12. Twelve students from 11 SPC member countries and territories attended the fifth SPC/Nelson course, which ran from February to June 1984. The course went well and the students' mature attitudes and positive approach to the course was commended by the course tutors, who also noted that SPC member governments appear to be nominating older and more experienced candidates who are better able to absorb and make use of the training offered.

13. Supplementary to the main body of the course was a one-month training module in practical fishing, held in Fiji. The students travelled to Suva in mid-June with Nelson tutor Captain A. Robertson and learned a variety of fishing techniques at sea under the supervision of SPC Master Fisherman P. Mead, using Fiji Fisheries Division vessels and facilities. An evaluation of the Nelson Course, together with a critique of the Fiji module, is presented as Working Paper 2 to this meeting.

14. Organisation of the course on an ad-hoc basis has in the past hindered SPC member countries in planning their long-term training programmes, and made course administration difficult. In line with recommendation 3 from the 15th RTMF, the Commission has approached all major donors who contribute to the costs of the course for a longer term commitment of funding. The New-Zealand Government, as major donor, has indicated that it is prepared to consider this request, but as a pre-requisite wishes to conduct a formal evaluation of SPC member countries training requirements in this field. To assist in this evaluation, the New-Zealand Foreign Affairs Department has prepared a short questionnaire which the Secretariat has agreed to distribute to SPC member countries on their behalf.

V - COLLECTION AND EXCHANGE OF INFORMATION

A. Fisheries Newsletter

15. With five issues published and another in press, the new format Newsletter has maintained a quarterly publication schedule and reader response has met or exceeded Secretariat expectations. It is particularly pleasing to see fisheries officers and people working in fisheries related fields making increasing use of the Newsletter to solicit and exchange information and experience.

B. Handbook - Tuna Baitfish

16. A handbook entitled "A guide to the Common Tuna Baitfishes of the SPC area" was distributed in September 1983. Designed as a field guide, the format has been kept as simple as possible without compromising accuracy. Only those families and species which occur regularly in night baitfish catches are featured; species taken in beach seining operations during the day are briefly mentioned.

C. Handbook - Design Improvements to Fish Aggregation Device (FAD) Mooring Systems in General Use in Pacific Island Countries

17. This handbook reports the results of the South Pacific Commission design study of fish aggregation device systems in current use in Pacific Island Countries. It was presented as a working draft (Working Paper 2) to the Fifteenth Regional Technical Meeting on Fisheries, 1-5 August 1983, entitled 'An improved FAD mooring line design for general use in Pacific Island countries: a report of the SPC design study of fish aggregation devices'. The manuscript has been substantially revised to take account of comments and suggestions from delegates to the above meeting.

D. Handbook - Notes on the Construction of The FAO Wooden Handreel

18. The simple wooden handreel developed in 1976 for deep bottom dropline fishing by the FAO/DANIDA Village Fisheries Project in Western Samoa, and later adopted by the SPC Deep Sea Fisheries Development Project is an effective and versatile fishing tool. Poor mechanical performance or breakage can usually be attributed to poor construction.

19. To help overcome many of the problems commonly encountered with the use of this reel, the above handbook, now in press, provides detailed guidelines to the construction of the reel. These have been kept as simple as possible, and assume limited access to sophisticated tools and equipment and only basic carpentry skills on the part of the user. A number of modifications to the original design, developed by SPC master fishermen to improve the overall efficiency of the reel, have also been incorporated. Areas where particular care is required are indicated in the text and detailed instructions are provided to help eliminate common mistakes. Full size paper templates of the major wooden components of the reel will be included for use with the construction notes.

E. Handbooks - Small Scale Fishing Techniques

20. Two handbooks, one on bottom fishing techniques and one on trolling methods, are in preparation. Both draw on the combined knowledge and experiences of the three SPC master fishermen and will provide a wealth of practical advice to small boat fishermen both in the Pacific and elsewhere.

VI - SPC GRANTS-IN-AID (FISHERIES)

A. Inter-Country Study Visits

i) Study of national tuna fishing operations - American Samoa

21. Mr S. Tui Cavuilati, Principal Fisheries Officer of Fiji's Fisheries Division, visited American Samoa between 8 and 14 January 1984 on a familiarisation study tour of the large international tuna fishery based there. Mr Cavuilati discussed the administration and management of the various sectors of the fishery with representatives of government, canneries, and fishing boat owners and operators. Fiji's industrial fisheries are expanding in several directions and this visit will assist the Fiji Government in the administration of such development.

ii) Study of alternative baitfishing operations - Federated States of Micronesia

22. Mr F. M. Apelu, second officer on the National Fishing Corporation of Tuvalu (NAFICOT) pole-and-line vessel 'Te Tautai', visited Truk, in the Federated States of Micronesia, from 14 to 29 March, 1984, to observe small-scale baitfishing operations used by the Truk fleet of small pole-and-line vessels. The techniques used principally involve the use of lifting and herding nets during the daytime to catch coral-associated fish species. The 'Te Tautai' has previously relied on the bouki-ami night-baiting technique for small schooling bait species, and largely because of this, has been obliged to fish in Fiji waters, as adequate quantities of night bait species are not regularly available in Tuvalu. The Tuvalu Government is now investigating alternative baitfishing techniques which will enable the 'Te Tautai' to fish closer to home and the above study visit forms a part of this programme

iii) Other

23. Other inter-country study visits which have been approved in the past year but not yet completed are:

- a) a fish marketing officer from Yap State (FSM) to study fish market operations and export practices in Palau;
- b) a boatbuilder from Fiji to study alternative vessel designs and construction techniques by visiting the government boatyard in Tonga, and, subsequently, attending the small boat workshop at this meeting;
- c) a fisheries officer from Papua New Guinea to study fisheries extension programmes in Vanuatu and Fiji.

B. Short-term expert and specialist services

i) Assessment of the specimen shell resources of Tuvalu

24. Consultant conchologist Mr B.J. Parkinson visited Tuvalu between 1 and 28 November 1983 to carry out the above assignment. The consultant's terms of reference were to survey, assess and catalogue the shell resources of the country, advise on options for the promotion of a local shell industry, and provide information on suitable methods of shell collection and treatment.

25. Mr Parkinson visited Funafuti, Nukufetau and Nukalaelae, and made collections at a number of sites at each island by scuba or snorkel diving. Despite the limited time period of the survey and the fact that only three islands were visited, over 60 new records for Tuvalu were found. Mr Parkinson felt that more detailed survey work would uncover the presence of many more species which have not yet been recorded. The consultant also noted that many shells popular with collectors were reasonably abundant, and that some of the local cowries were brighter and more colourful than individuals of the same species originating from other areas. However, on the whole, the species diversity of gastropods and other shells was found to be relatively low, as can be expected in a group of remote atolls. The consultant's final report is currently in press.

ii) Feasibility study into the establishment of a Trochus (Trochus niloticus) hatchery in Vanuatu

26. Aquaculture specialist M. J.L. Martin, of CNEXO (Centre National pour l'Exploitation des Océans - now Institut français de recherches pour l'exploitation de la mer (IFREMER) carried out the above study on the Commission's behalf between March 10 and 13, 1984. The study had been originally scheduled for mid-1983 but unexpected difficulties in recruiting a suitable consultant led to its postponement.

27. Mr Martin examined local environmental conditions and held discussions with government and other personnel concerned with the revitalisation of the trochus industry in Vanuatu. A local button-blank manufacturing company was forced to close down in late 1983 due to difficulties in obtaining adequate supplies of shell, and the hatchery is proposed to support a reef reseeded programme aimed at supplementing natural recruitment. Trochus hatchery techniques are reasonably well understood but it will be necessary to establish growth rates, reproductive capacity, etc. of the local trochus population, as these may vary. M. Martin has therefore recommended that Vanuatu initially establish a small experimental hatchery unit to investigate and solve any specific technical problems which may arise before investing in a larger scale operation. Such a facility would also make it easier for Vanuatu to cooperate with similar efforts in other countries of the region, as have been proposed.

iii) Other

28. Other requests for assistance in the fisheries field under this programme which have been approved during the past year, but not yet carried out, are:

- a) a request by Papua New Guinea for a prawn fishing specialist to demonstrate the use of low-technology prawn fishing gear (beach seines, push nets, small trawls, etc.) in villages adjacent to prawn fishing grounds;
- b) a request by Cook Islands for a feasibility study into the establishment of a trochus hatchery, to assist in their programme of introducing trochus to remote islands.

VII - SUMMARY OF ACTION TAKEN IN RESPONSE TO RECOMMENDATIONS OF THE FIFTEENTH REGIONAL TECHNICAL MEETING ON FISHERIES

Recommendation No.1

The meeting commended the South Pacific Commission on the success of the Deep Sea Fisheries Development Project and recommended its continuation with sustained emphasis on the development of small-scale fishing gear and techniques.

Action taken: Increasing emphasis has been placed on gear development activities, and in particular on techniques suited to use around FADs. Section I refers.

Recommendation No.2

The meeting recommended that the South Pacific Commission continue to co-operate with other organisations in the collection and collation of data on deep bottom fish stocks, and to encourage member countries to gather such data where possible.

Action taken: Considerable progress has been made towards analysis of DSFD Project data. Section II refers.

Recommendation No.3

The meeting recommended that the South Pacific Commission endeavour to locate long-term funding for the South Pacific Commission Fisheries Officer Training Course.

Action taken: The New Zealand Government is presently considering possible longer term funding for this course. Section IV refers.

Recommendation No. 4

The meeting commended the work carried out by the Tuna and Billfish Assessment Programme and strongly recommended its continuation for two years in the first instance, with priority accorded to the collection and evaluation of catch and effort data and assessment of interaction between fisheries.

Action taken: The Twenty-third South Pacific Conference approved a two-year extension in the first instance for the Tuna and Billfish Programme.

Recommendation No. 5

The meeting recognised that there are substantial gaps in the catch and effort data available to the Programme, but was unable to identify methods of obtaining the information required. Accordingly, the meeting recommended that the Twenty-third South Pacific Conference explore ways and means of obtaining input from the distant-water fishing nations in pursuing the objectives of the revised work programme. The meeting suggested that this include the convening of a meeting of coastal states, distant-water fishing nations, and international organisations with an interest and experience in this field, such as the Forum Fisheries Agency (FFA), FAO, IATTC and ICCAT, to identify methods of collection, integration and analysis of statistical and other scientific data on highly migratory species in the region. The meeting understood that the information generated from the Programme would be used to identify issues relating to the conservation of highly migratory species in the region. The suggested meeting would therefore need to explore possible structural arrangements which might be required for the conservation of tuna stocks of the region.

Action taken: This recommendation was considered approved by the 23rd South Pacific Conference. A report on the meeting between coastal states and distant water fishing nations held at Noumea from 18 - 22 June 1984 will be presented to the meeting (W.P.8).

Recommendation No. 6

Identifying training in fish handling and simple processing as a priority need in the region and considering the undoubted success of the Deep Sea Fisheries Development Project, the meeting strongly recommended that the South Pacific Commission either expand the present Deep Sea Fisheries Development Project or establish a similar project to make available practical specialists in fish handling and simple processing to provide longer-term in-country training and assistance in this important area.

Action taken: A two-year project developed along the lines recommended by the meeting was proposed for inclusion in the 1985/86 SPC Work Programme. This was subsequently endorsed by the 1984 CRGA and will be considered by the 1984 South Pacific Conference in October. Section III refers.
