

The history of SPC's involvement in fisheries development in the Pacific

Part 1: the 20th century

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SPC's fisheries programme: How did it start and evolve (1947 to 1969)?

The Pacific Community (SPC), formerly known as the South Pacific Commission (SPC), was established in 1947 when the six countries (Australia, France, United Kingdom, the Netherlands, New Zealand and the United States of America) that were administering non-self-governing territories in the Pacific signed the 'Canberra Agreement'. At that time, the dependent territories covered by SPC were Papua, New Guinea, Nauru, Norfolk Island, the French establishments in Oceania (consisting of the Society, Tuamotu, Austral and Marquesas groups), New Caledonia, Wallis and Futuna, Netherlands (or Dutch New Guinea), Western Samoa, Cook Islands, Niue, Tokelau Islands, Fiji, British Solomon Islands, Gilbert and Ellis Islands, Pitcairn, American Samoa and the New Hebrides. In 1949, Papua and New Guinea were combined (PNG). In 1951, Guam and the USA Trust Territories of the Pacific were included. In 1962, Norfolk Island and Dutch New Guinea (now Irian Jaya and part of Indonesia) were removed. As Pacific countries gained their independence, they became full members in their own right, with the current Pacific Island membership covering the 14 independent countries and 8 territories (3 French, 3 US, 1 British and 1 New Zealand).

Appended to the 'Canberra Agreement' was a list of 'projects' to which the SPC should give early consideration due to their great importance for the economic and social welfare of Pacific Islanders. Fisheries was mentioned as one of the 'projects': fisheries research, including surveys and the testing of methods of catching and processing fish and other marine products with the special aim of improving the nutrition of local Pacific Islanders. Furthermore, this was considered a project that called for early action and showed promise of early results, and information was to be collected on the various fisheries in the region. In support of this, the first 'Fisheries Conference' was held in Noumea. The underlying theme of this meeting was to increase the availability of protein from marine resources for Pacific Islanders. The objectives of the meeting were to work out a practical method of bringing together all relevant fisheries information; suggest the best way of investigating the problems of catching, processing, transporting and marketing; make constructive suggestions for fisheries development in

the region; and consider and advise what role SPC could play in the development of fisheries in the region.

As a result of this first 'Fisheries Conference', a fisheries programme was established, and in 1954 SPC founded a Technical Advisory Committee on Fisheries (TACF) to support the implementation of recommendations from the meeting. Mr Hubertus (Bert) van Pel was recruited as SPC's first Fisheries Officer. From 1954 to 1961, the Fisheries Office undertook a range of fisheries and aquaculture assignments across the region. Some of the assignments included: an evaluation of the fisheries industry in Fiji, Dutch New Guinea, Tonga, Cook Islands, French Polynesia, and Norfolk Island; an assessment of the possibility of fish culture in ponds, and sea fisheries, in Western Samoa; a survey of the fisheries in the New Hebrides, British Solomon Islands and Tokelau; an assessment of possibilities for improving fisheries in American Samoa and the territory of PNG; a fisheries development plan for the Caroline Islands; an assessment of fisheries development in the South Pacific; and an assessment of a 25-foot motor fishing boat for Pacific waters.

In addition to the in-country assessment work on fisheries and development potential, two major trainings were undertaken. The first was from November 1956 to February 1957 in Noumea, where 24 participants were funded to undertake training in boat building, engine operation and maintenance, elementary navigation and chart reading, fishing equipment and methods, fish breeding, oyster culture, fish preservation, fisheries management and conservation of marine resources. As a result of this training, almost all participants gained employment in fisheries in their own country. A second boat building course was undertaken in the Solomon Islands, which lasted 15 months and had 24 participants in 1960/1961. The result of this training was the construction of three diesel-powered boats. Using these boats, a training course was undertaken in the Solomon Islands on the use of fish traps and the use of small powered vessels. A second boat building course was then conducted over two years in Noumea, and this commenced in 1963.

In 1962, a 'Fisheries Technical Meeting' brought together members of SPC's TACF and representatives of territorial fisheries departments and research institutions. This meeting

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The SPC *Boatbuilding Guide* by Mr Arthur N. Swinfield, a leading Australian naval architect, was the instruction manual for the 15-month boatbuilding course that took place at Auki, Solomon Islands (1961/1962) (images: SPC).

was requested to study SPC's activities in the fisheries field and to make recommendations on future activities. The meeting also needed to consider the progress made since 1952, the organisation by some territories of their own fisheries departments, the interest shown by some territories in the development of commercial fisheries, and the question of technical training in the fisheries field. At this meeting, recommendations were made to establish a project to develop more efficient fishing gears and methods – especially to exploit deep-water bottom species in depths to 400 m – and to gather further information on surface-schooling tunas, deep-swimming tunas, and baitfish resources.

In 1963, it was decided that the SPC Fisheries Officer position would not be maintained, however, several years later, this decision was reversed and in late 1967, Mr Val Hinds was appointed to the position. One of his first tasks was to prepare a Fisheries Technical Meeting for June 1968 in Noumea. At this meeting, mainly coastal fisheries topics were discussed, with concerns expressed on over fishing of the reef and lagoon resources. A recommendation of this meeting was to establish a South Pacific Islands Fisheries Development Agency (SPIFDA). The aim of the SPIFDA was to coordinate programmes designed to develop and utilise aquatic resources, with a specific reference to reef and lagoon resources; to advise and assist individual territories in the

formulation and implementation of development projects; to find funding and expertise to implement projects; and to establish and operate a service through which information relevant to the fisheries of the area may be collected, collated, analysed and disseminated in the region. The SPIFDA was established in 1969 and came into operation in 1970.

Training was also highlighted in the 1968 meeting as an area needing assistance from SPC. This should cover both vocational training for adults, and broader-based training for youths. Some of the topics for training included: outboard and diesel engine operation, maintenance and repair; fish handling and processing; and the operation of cooperatives including accounting skills. It was also highlighted that the countries preferred the visit of specialists to the territories to teach by demonstration on-site, rather than transporting trainees to a set location.

It was during the late 1960s that more interest was being generated by the territories in development of the offshore tuna fishery, more at an industrial level, as well as coastal fisheries, and there became a split in the focus between the two very different fisheries. The tuna fishery and its development and history is covered in a separate 'story';² so the rest of this article will remain focused on coastal fisheries and aquaculture.

² See article by Paul Judd on page 61 of this Newsletter.

SPC's coastal fisheries and aquaculture activities in the 1970s

There were eight Fisheries Technical Meetings convened in the 1970s, most held in Noumea, with Fiji and Tonga both hosting a meeting. The main focus of the 1970 meeting was on suitable small-scale fishing vessel designs to be used for fisheries development by the different territories. Both monohull and catamaran designs were discussed as well as construction materials, including ferro-cement.

The role of the SPC Fisheries Officer in the early 1970s was one of being a clearing house for information and sharing this amongst the territories, and training on organising the location, cost requirements and data of all training programmes in the region, in addition to locating funding to allow the territories to participate in these trainings. In support of sharing information, the 'South Pacific Islands Fisheries Newsletter' was established with its first issue published in April 1970. This was a collaboration with SPIFDA, UNDP³ and FAO⁴ as the executing agencies, and SPC as the cooperating agency on behalf of participating governments. The SPC Fisheries Officer was also involved in arranging consultant services in 1970, which covered marine turtles, spiny lobsters, boat building, mollusc culture, and reef

and lagoon ecology. The success of the Newsletter would depend on fisheries staff from the territories sharing their experiences and development activities, by providing this information to the SPC Fisheries Officer.

In 1971, issue 2 of the Fisheries Newsletter was published, issues 3 to 7 were published in 1972, and issues 8 to 10 in 1973, using the same standard format and layout. However, in 1972 there was some disagreement over the SPIFDA's usefulness, it was therefore terminated in 1973 and the Fisheries Newsletter for its 11th issue became the 'SPC Fisheries Newsletter', a name that still stands today. At the 1972 Fisheries Technical Meeting, it was recommended that adequate financial and other support be given to the SPC Fisheries Officer so he could coordinate ongoing projects and disseminate information, such as through the Newsletter, and that funding be included in the SPC budget for ongoing training and funding participants to different training. Several proposals were also being considered for developing outer reef fisheries, and in 1974, several projects continued to be supervised by SPC (such as the lobster and beche-de-mer projects in the Solomon Islands and turtle farming in Fiji).

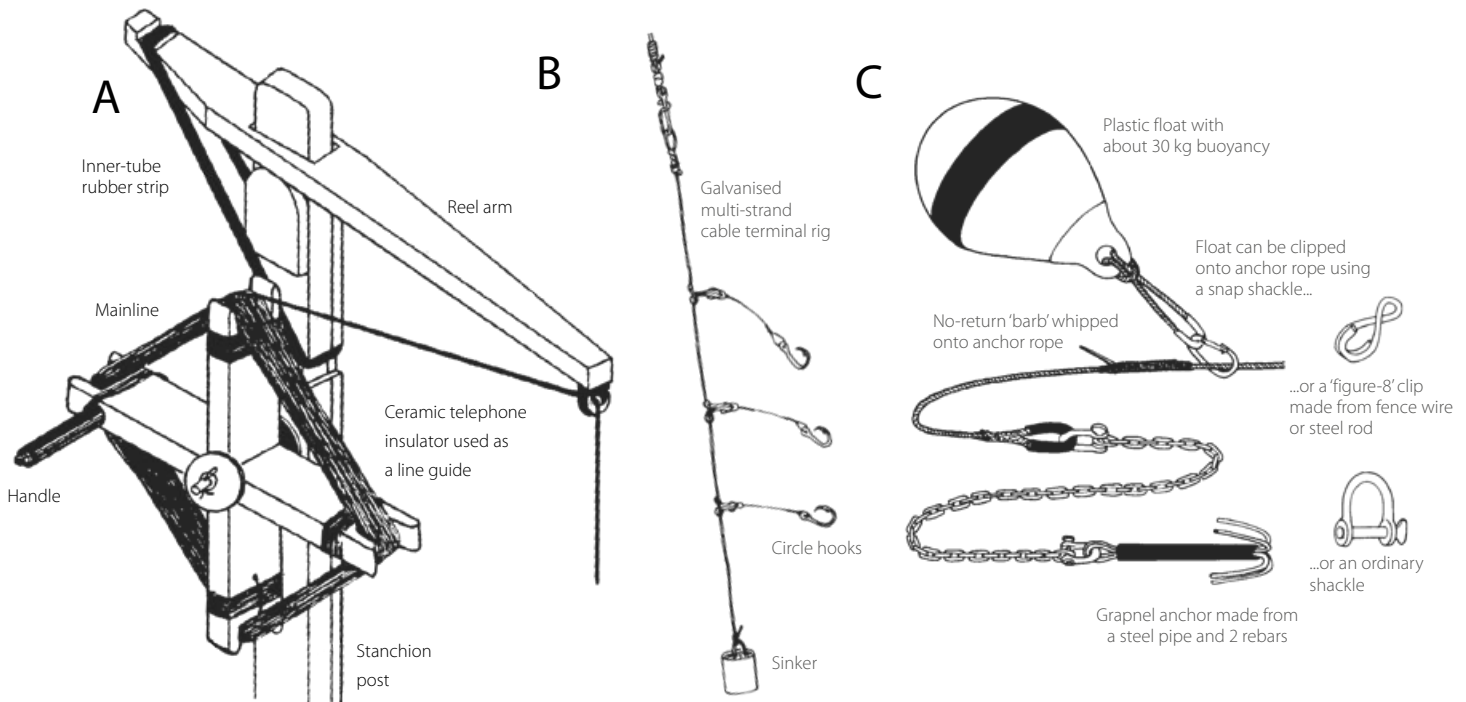
Also in 1974, the first main project implemented by SPC for coastal fisheries development, the 'Outer Reef Artisanal Fisheries Project (ORAFP)' commenced. The project had



Preparing wild oyster spat collectors, Fiji, May 1971 (image SPC).

³ United Nations Development Programme (UNDP).

⁴ Food and Agriculture Organization of the United Nations (FAO).



The 'Western Samoan handreel' (A), was adapted from a model developed by FAO. It allowed fishers to target deep bottom snappers from small crafts and canoes. The fishing line terminal rig (B) was often made of galvanised wire. The anchor buoy system developed by SPC (C) allowed fishers to easily retrieve the mooring from depths (illustrations: Steven J. Belew, ©SPC).⁵

four vessels that were purpose built for trialling; two with petrol engines and two with diesel engines, with three having jet propulsion system and one having a conventional shaft and propeller drive. The project had a manager, a master fisherman, and four volunteers with different skills and backgrounds. The project ran from late 1974 to the end of 1977, targeting the untapped deep-water snapper resource with some trolling for tuna for bait and food. The objectives of the projects were to survey local resources and assess the economic feasibility of commercial fishing in each location, to determine and demonstrate fishing techniques suitable for the area, and to train local fishers. The project worked in the New Hebrides (Vanuatu), Western Samoa, Cook Islands, Tuvalu and the Solomon Islands.

Many problems were encountered with the boats built for the project, such as the jet drives not being suited to the conditions, and mechanical problems with the engines, resulting in lost fishing time. Good catches of fish were taken from 100–400 metres with line fishing, although in some locations up to a quarter of the catch was considered poisonous (ciguatera species). Many sharks were also caught and released as there was no market for shark flesh in most locations.

In the mid-1970s, the Fisheries Officer position was promoted to Fisheries Adviser, and in 1978, a second position

was created – a Fisheries Officer. By the end of 1979, a total of 19 issues of the Fisheries Newsletter had been published with the format evolving over the years, and territories started to provide articles to be included. The roles of the adviser and officer continued with the focus on information sharing, and some assignments were undertaken in the territories and reported in the Newsletter. Other activities included some assessment work on the production of 'fish silage' from fish waste, mainly for stock feed. SPC also convened a specialist group to research ciguatera fish poisoning, and this included researchers and laboratory assistance from France, the USA and Japan.

In March 1978, the Deep Sea Fisheries Development Project (DSFDP) superseded the ORAFP. The focus of the DSFDP was also on the development of the region's deep-water snapper fishery in depths of 100–400 metres, through in-country training and assessments using local fishing boats. The two master fishermen also used wooden handreels that were developed in Western Samoa by FAO, which made fishing in deeper waters more viable and less strenuous. In 1978 and 1979, 10 projects were undertaken in eight countries. Over this time the gear used for deep-water snapper fishing was improved and standardised; it became the famous 'Western Samoan handreel'. Given most of the fishing was undertaken with the boat anchored using a grapnel anchor, an anchor retrieval system was also developed.

⁵ See, for more details: http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Preston_99_DBFTforPI.pdf.

Another important feature of the 1970s was the development and expansion of fisheries departments in the countries and territories, with the University of the South Pacific (USP) providing a 'Diploma in Tropical Fisheries' course to equip new 'fisheries officers and technicians' with the skills needed to work in fisheries development. Several countries, including American Samoa, Western Samoa, Fiji, Tonga, the US Trust territories and the Solomon Islands had commenced boat building projects to provide fishers with suitable boats to fish in lagoons and outside reefs, with a focus on deep-water snapper fishing. There were also a lot of aquaculture projects underway, mainly in Fiji, the Solomon Islands, PNG, the US Trust Territories and Western Samoa, where research was the main focus. Most of these activities were geared towards increasing fish production, while focusing on reducing fishing pressure on reef and lagoon resources that were (already) considered fully exploited in many countries.

SPC's coastal fisheries activities in the 1980s

A regional training programme was established in 1979 in New Zealand and called 'the Nelson Polytechnic fishing cadet course for Pacific Islanders', which ran for 18 weeks. It combined lectures with practical work at the Polytechnic, with periods of sea time on a variety of fishing boats. The training was also modified to suit the Pacific requirements, so sea time covered the use of lines and nets rather than trawlers, and in the engineering section, outboard motor operation and maintenance were stressed. Other subjects included practical netting and seamanship, welding, navigation and chart-work, safety at sea, first aid, electronic aids (echo sounders, radar, etc.) and marine science. This very successful course ran annually through the 1980s with class sizes of 8 to 14 students, with slight changes to the curriculum to meet changing needs of the Pacific countries.

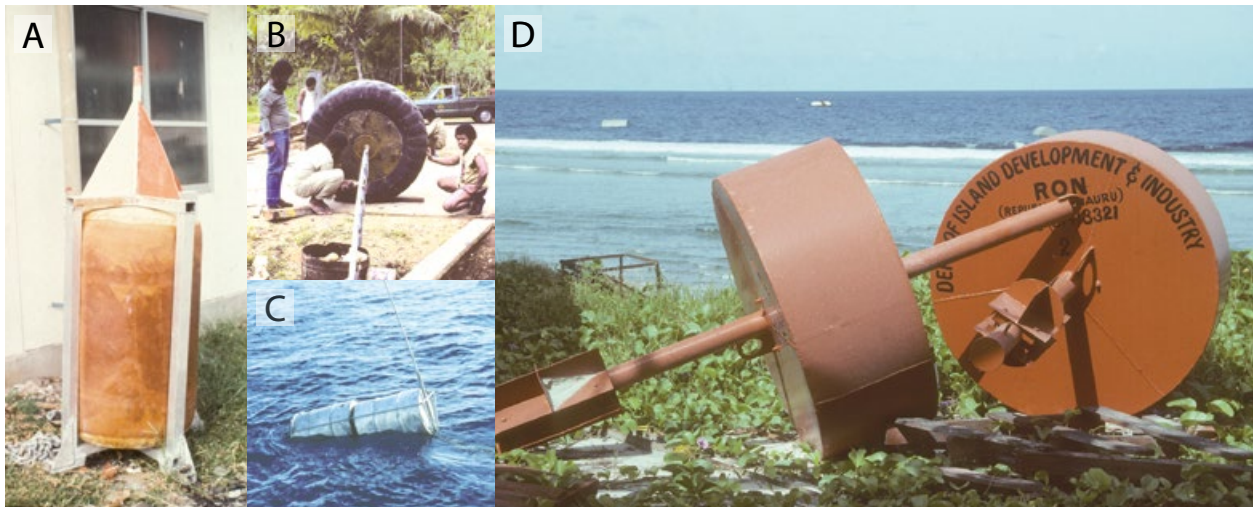
The format of the Fisheries Newsletter changed in 1981, with a new approach that involved less time and labour in the preparation and printing, which would allow quarterly issues to be produced. The aim continued to showcase the work of the SPC, and the work of national fisheries officers and researchers who provided information for the Newsletter. This also included many articles on tuna fishery development, both with SPC's activities and those of others donors and countries in the region. In the first half of the 1980s, 11 issues (numbers 20 to 31) were produced, and in the second half of the 1980s a further 20 issues (numbers 32 to 51) were produced.

The DSFDP continued its operations in the 1980s, further promoting the gears and methods developed for targeting the deep-water snapper resource. Assignments were usually for 4 to 6 month, with three master fishermen. Catch rates varied between locations, ciguatoxic species were caught in most locations as well as sharks, which were discarded, alive



Successful use of the 'Western Samoa handreel', Santo, Vanuatu, 1982 (images: SPC).

if possible. Atoll locations or steep reef slopes, with little area in the 100–400 metre depth range, had lower catch rates in general than locations with a more-gentle gradient, which increased the 'fishing area'. From 1980 to 1984 the project undertook 19 assignments in 14 countries and territories.



All kind of floating devices were used for the first series of FADs set in the Pacific Islands region (A–C). In 1984, SPC recommended the use of a steel spar buoy (D) designed by Lieutenant R. Boy from the US Coast Guard, which helped increasing FADs lifespan (images: SPC).

In 1983/1984, the focus of the DSFDP started to change, as catch rates for the deep-water snappers remained constant or started to decline, indicating this to be a fragile resource that could only sustain limited fishing pressure. So the focus changed towards harvesting the tuna resource through small-scale fishing methods and the use of Fish Aggregating Devices (FADs). A FAD is a floating buoy system on the sea surface that is moored, usually by rope, to the ocean floor with concrete blocks or other anchor systems, in depths of 500–2,000 metres. FADs 'attract' and hold schools of tunas and other pelagic species, and allow fishers to go to these locations and have a much better chance of a good catch.

The use of FADs was increasing in the Pacific, both in the industrial tuna fishery and the small-scale sector. While the SPC master fishermen were experimenting with designs that had been used in other locations, a study was also funded by SPC, with Lieutenant R. Boy from the US Coast Guard, which resulted in a report on FADs 'An improved FAD mooring line design for general use in Pacific island countries: a report of the SPC design study on fish aggregation devices', in 1984.⁶ This added to the range of information available, including the results from the SPC master fishermen's trials in different countries. Coupled with this was the trialling of different mid-water fishing methods to target the larger, deeper swimming tunas that were aggregated at times around FADs. These methods were being developed to reduce the fishing costs, as trolling used a lot of fuel, but was still the most used and favoured fishing method.

There were many other changes in the mid-to-late 1980s, with new funding made available to expand SPC's activities in coastal fisheries, and a 'Coastal Fisheries Programme' was established as new staff were recruited into new positions. The first was a Fisheries Training Adviser, who commenced in 1986, and focused on supporting the fisheries officer's

course in Nelson, New Zealand, as well as looking at other training opportunities in the region for Pacific Islanders. This included the development of some specific vocational workshops on topics such as refrigeration and outboard repairs. The second was a Fisheries Post-Harvest Adviser, who commenced in 1987. The aim of this position was to look at value adding to the existing catch, including tuna products as shown by the workshop on alternative products to fresh and canned tuna that was conducted in 1989.

The Inshore Fisheries Research Project (IFRP) was also established in 1988, with funding support from multiple sources. As an inaugural activity, a major workshop on 'Pacific Inshore Fishery Resources' was organised and run in Noumea, with over 100 fisheries scientists and marine resource specialists attending and sharing their experience and scientific results on coastal fisheries resources. This also gave the IFRP some guidance for future areas of assistance to provide to countries, with work undertaken in Palmerston Island in Cook Islands by doing a resource survey and training local fisheries scientists; beche-de-mer surveys in Vanua Levu in Fiji; some analysis of the deep-water snapper data collected over the years from the DSFDP; training on ciguatera sampling protocols in the Federated States of Micronesia (FSM); and a survey of pearl oyster resources in Kiritimati Island in Kiribati. Also, in support of producing the Fisheries Newsletter, a Fisheries Information Adviser was recruited in 1989 to relieve the workload of the Coastal Fisheries Manager and Coastal Fisheries Coordinator. All of this expansion was in response to the direction set through the Regional Fisheries Technical Meetings (RTMF), which were held annually in the 1980s (RTMFs 12–21).

The DSFDP also continued during the rest of the 1980s, with another 18 assignments undertaken by the three master fishermen. Again, these projects moved away from

⁶ http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Boy_84_FADs.pdf.

deep-water snapper fishing, although this was undertaken on some occasions. The focus on small-scale tuna fishing activities around FADs became prominent. This also included the trialling of gillnets around FADs, which was not considered successful, with mainly sharks taken. Bait fishing for scads and small mackerel with gillnets and small jigs were also used to provide suitable bait for mid-water fishing techniques that were under trial, such as vertical longlining and 'palu-ahi' or mid-water handlining. Trolling was also a main fishing method and a manual was developed by the master fishermen and published in 1987 'Trolling techniques for the Pacific Islands – a manual for fishermen', with technical information for fishers to improve their trolling techniques, and hopefully catches.⁷

Fisheries departments in Pacific Island countries and territories (PICTs) continued to expand in the 1980s, as new graduates from USP with the desired skills became available for employment. The focus was still on fisheries development, and many countries continued their boat building programmes as well as training programmes to support new fishers with the equipment and skills to earn a living from fishing. Some countries like Fiji and Western Samoa had extension services that would assist fishers in the field with their fishing operations. Government operated ice plants



Among other fishing techniques promoted by SPC in the 1980s, the use of the *palu-ahi* and vertical longlines around FADs allowed to access the bigger deep-swimming tuna. Note the sea anchor used to fish while slowly drifting, facing wind and swell. Fiji, 1984 (image: SPC).

were also being established as well as rural fishing centres to spread the fishing pressure, with some countries having fish collection vessels to bring the catch from the rural centres to urban centres for marketing. Many donors were also involved in bilateral small-scale fisheries development projects, some focusing on the deep-water snapper resource and others more on tuna and the use of moored FADs. Aquaculture activities, again with more of a research focus, continued with invertebrate species and some fish, such as tilapia, however, actual production was very low.

SPC's coastal fisheries activities in the 1990s

The steady expansion of the SPC's Coastal Fisheries Programme at the end of the 1980s continued into the 1990s. It reflected the importance that Pacific Island governments placed on the domestic exploitation of their marine resources, and the assistance they needed from SPC. In 1990, the 'Coastal Fisheries Programme' consisted of the DSFDP with a coordinator and three master fishermen, the Fish Handling and Processing Project (FHPP) with one adviser, the IFRP with two scientists, the Regional Fisheries Training Project (RFTP) with an adviser and an officer, and the Information Adviser, with an overall manager for the programme and a project assistant. However, more expansion occurred during the 1990s as new project funding became available. The first project addressed information, with the establishment of 'special interest groups' and information bulletins were produced, with the first covering pearl oysters in 1990, the second on ciguatera and the third covering beche-de-mer in 1991, while *Traditional marine resource management and knowledge* and *Trochus* bulletins were added in 1992.

The DSFDP's activities continued to change in the early 1990s, and entirely moved away from deep-water snapper fishing, with the continuing focus on the design, rigging and deployment of FADs, and small-scale tuna fishing around FADs, with eight countries visited. The RFTP continued with a range of regional and national training activities in the 1990s, including the annual Nelson course as the main activity. In 1991, the RFTP organised a workshop in collaboration with the Western Pacific Fisheries Consultative Committee, CIDA and the French Government. The workshop also included a number of ASEAN⁸ training and education institutions, which focused on promoting greater cooperation between the two regions in fisheries training and education.

The FHPP project undertook activities in: PNG and Solomon Islands on assisting women's groups with fish processing and marketing; the development of tuna jerky as a small-scale processing facility in Kivela in Tokelau, mainly for export;

⁷ http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Preston_87_Trolling.pdf

⁸ Association of Southeast Asian Nations (ASEAN).



Conducting scientific assessments to get a better understanding of reef species stock status (Aitutaki, Cook Islands, 1995; image: Tim Adams) and organising training workshops for fisherwomen (Futuna, Wallis and Futuna, 1997; image: Lyn Lambeth) were some of the activities run by SPC's Coastal Fisheries Programme in the 1990s.

and the coordination of a post-harvest fisheries study tour in the Pacific Latin American countries of Mexico, Ecuador, Peru and Chile. In late 1991, a Woman's Fisheries Programme commenced within the FHPP, to develop, coordinate and enhance post-harvest activities for women throughout the Pacific. The first activity was a workshop on fish processing and marketing held in Kavieng, PNG in 1992.

IFRP was also very busy as national fisheries departments focused more on conducting scientific assessments to get a better understanding of stock status, which could then be used for management purposes. Some of the main activities included: a survey of the pearl oyster resources in Nukulae-lae in Tuvalu; improved ciguatera case history reporting; the holding of a workshop on trochus resource planning; a survey of beche-de-mer resources in Ha'apai, Tonga; and shallow reef fish stock assessment in the outer islands of Yap State, FSM. In April 1992, a new senior fisheries scientist was recruited for the IFRP.

The Coastal Fisheries Programme was reorganised in 1993, with a specific manager for the programme. The DSFDP was renamed the Capture Section; the other sections were Post-Harvest, Training, Information, and the IFRP became the Inshore Resource Assessment and Management Section (IRA&MS), thus combining both science and management given that they are closely linked. The programme also started to produce more information on post-harvest, and training aids and handbooks to get information out to fisheries departments and fishers in the region.

The post-harvest section continued different activities, and there was an increasing focus on the harvesting and processing of sea cucumbers into beche-de-mer, with the production in 1994 of 'Sea cucumbers and beche-de-mer of the

tropical Pacific: A handbook for fishers'.⁹ Other activities included a fish drying workshop. In the following year the women in fisheries positions moved more into the IRA&MS area, and the post-harvest activities in the mid-to-late 1990s moved more into food safety with training and assessments conducted on Hazard Analysis and Critical Control Points (HACCP), as a requirement of the USA for exports of fresh chilled tunas from the Pacific. Unfortunately, funding for the post-harvest area came to an end in 1998, and SPC ceased activities in this area, but kept hiring consultants to provide HACCP training in the following years.

The Capture Section with additional funding, started branching out into small- to medium-scale tuna longlining, and in 1996, a new master fisherman was recruited with the skills to provide technical assistance in this area. A lot of FAD work also continued, but the new interest of PICTs was in developing domestic tuna longlining, with FSM, PNG, Fiji, Cook Islands, Tonga, Western Samoa and others promoting this in the late 1990s. The Capture Section also produced a range of technical manuals: 'Deep-bottom fishing techniques for the Pacific Islands – a manual for fishermen';¹⁰ 'Vertical longlining and other methods of fishing around FADs – a manual for fishermen'¹¹ in 1998. There were also several manuals produced on FAD materials, rigging and deploying, and planning an FAD programme including maintenance of FADs.¹²

The Information Section added a staff person in the mid-1990s, to keep up with the 3-monthly production of the Fisheries Newsletter, the different Special Interest Group bulletins, and a range of other publications being produced for other sections within the Coastal Fisheries and Oceanic Fisheries Programmes, as well as some countries. The Section also started the annual production of the SPC version

⁹ http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Handbook18_94_BDM.pdf.

¹⁰ http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Preston_99_DBFTforPI.pdf.

¹¹ http://www.spc.int/DigitalLibrary/Doc/FAME/Manuals/Preston_98_VLL.pdf.

¹² <http://www.spc.int/coastfish/en/publications/technical-manuals/fads.html>.

of the 'Fisheries Address Book'¹³ in the early 1990s. This has been an invaluable resource or networking tool, as it provides the names and contact details for fisheries officers in the region, researchers and consultants, gear manufacturers and suppliers, fishing companies and many others. It is continually being expanded and updated, to maintain its usefulness for the region.

The Training Section also continued with the annual Nelson course and a range of other vocational training during the mid-to-late 1990s. Staffing levels remained at two. There were regional workshops, and national training was undertaken in Samoa, PNG and French Polynesia. In addition, a sea safety campaign was undertaken with various materials produced to encourage fishers to be safe when they head out to sea on fishing boats.

The IRA&MS became the Resource Assessment Section in 1996, with a new funding source. The main project under this section was the Integrated Coastal Fisheries Management Project (ICFMP), which continued with fish and invertebrate stock assessment work and turning this into management advice. Two fisheries research associates joined the project for a year to gain work experience and assist with assessment work in-country. In 1998, the section added a Reef Fisheries Management Adviser, to strengthen advice on sustainable resource management plans for the reef environment. Activities were undertaken in many countries covering stock assessment of species, establishing monitoring protocols, the use of non-destructive fishing methods, and many other assignments looking at better management of natural resources, which was all based on the best available science.

A new section was established in 1997, the 'Women's Fisheries Development Section', which was a mix of fisheries development and fisheries management, as well as post-harvest activities, with the focus on women. The new section had two staff members – an adviser and an officer. Some of the activities undertaken included: a study on the participation of women in fisheries in Nauru; a workshop in Nauru on alternative harvesting and processing techniques for women; a gender analysis of the tuna industry in the Solomon Islands; a workshop on seafood processing and marketing techniques in the Marshall Islands; a workshop on the production and marketing of shell craft in Niue; and many other related activities.

For the PICTs in general, the 1990s was a time for further expansion of their development aspirations and reliance on fisheries for food security and small-scale livelihoods. Governments continued with rural fishing centres and the establishment of ice plants in rural areas to support small scale fishers. There was a slow-down in the boat building programmes, with some fishers preferring the imported

fibreglass or aluminium skiffs for fishing. FAD programmes were established, although these relied heavily on donors providing the FAD materials and SPC to provide assistance in training on rigging and deployment, including site selection and survey methods. Aquaculture was also promoted and run by governments, with many subsidies. Fisheries management was still overshadowed but the drive for development of coastal resources, and the overharvesting of sea cucumbers and other commercial invertebrates was becoming apparent in some countries.

The Regional Technical Meeting on Fisheries (RTMF) continued to provide the priority setting for SPC's Coastal Fisheries Programme during the 1990s, even though the number of meetings was reduced, mainly due to available funding. Five RTMFs were held from 1990 to 1996, and then the focus of these meetings changed from the technical to more management and decision making. In 1998 a trial 'Heads of Fisheries' meeting was held, and this was followed by the First full Heads of Fisheries meeting being held in August 1999. Although the format was a little different, it was still the main meeting used by SPC to get the input of PICTs to the work plan of the Coastal Fisheries Programme, to meet the PICTs priority needs.

In the Pacific Islands region, the tendency for coastal fisheries programmes to move away from technical activities that are linked to fisheries development and toward activities related to the management of fragile coastal marine resources is essential for the subsistence of most coastal communities, as well as the development of aquaculture related activities, and will slowly become more apparent, as will be shown in a follow-up article that will be published in the next issue (#151) of this Newsletter, under the title: 'A new millennium: SPC's Coastal Fisheries Programme and activities in the 21st century'.

Acknowledgements

The author would like to acknowledge the input provided by SPC fisheries staff, past and present, the fisheries officers of the Pacific Island countries and territories and all others who provided written materials, which are hosted in the SPC Fisheries Digital Library¹⁴, where most of the information in the 'story' has come from. Some of these writings date back to the early trip report of the first SPC Fisheries Officer in the mid-1950s, and a few general documents prior to this are from the late 1940s. Additional information was gleaned from the SPC publication 'Meeting House of the Pacific – the story of SPC: 1947-2007'¹⁵, many of the 149 issues of the Fisheries Newsletter¹⁶, and other regional reports from organisations, such as FAO and UNDP, especially from the early years of fisheries development in the Pacific.

¹³ www.spc.int/coastfish/doc/coastfish_docs/Address_book.pdf

¹⁴ www.spc.int/fame/en/publications/digital-library

¹⁵ www.spc.int/en/featured-publications.html

¹⁶ www.spc.int/coastfish/en/publications/bulletins/fisheries-newsletter.html