

ORIGINAL : ENGLISH

## **SOUTH PACIFIC COMMISSION**

### **TWENTY - FIFTH REGIONAL TECHNICAL MEETING ON FISHERIES** (Noumea, New Caledonia, 14-18 March 1994)

#### **SPC COASTAL FISHERIES PROGRAMME**

#### **POST-HARVEST SECTION ACTIVITIES AUGUST 1992 - MARCH 1994**

##### **General**

1. This section operates under the technical supervision of the SPC Post-harvest Fisheries Adviser (PFA) and comprises three projects, the Fish Handling and Processing Project (FHPP), the Women's Fisheries Development Project (WFDP), and the Regional Post-Harvest Fisheries Centre (RPF), as shown in figure 1. Of these three components, the RPF has not yet succeeded in attracting the funding required for its implementation, and is not active. This project is discussed in more detail below.
2. The FHPP was established in 1986, with the objectives of increasing the value of fisheries products being produced in the region, reducing losses in the post-harvest fisheries sector, enhancing the income of fishermen, processors and traders, and reducing health problems associated with the consumption of improperly handled and preserved seafood. The project, which finances the post of PFA as well as providing half the costs of a Project Assistant position, continues to be funded by the UK Government. Funding for the FHPP has been extended until June 1994 following an internal review of the UK funded fisheries projects which was undertaken in September 1993 by the UK Aid Management Office in Suva. Funding for CFP projects in the post-harvest fisheries sector beyond June 1994 is the subject of a new project submission to the UK Government which is currently under consideration.
3. The WFDP was established in May 1991 in response to growing interest by SPC member countries in enhancing the participation of women-in-fisheries activities. The project assists women from coastal fishing communities to more effectively participate in and benefit from fisheries activities in the region by developing and implementing a programme of activities, mainly in post-harvest fisheries, directed specifically towards women. Funding was provided for two years by the Canadian Government under the Canadian-South Pacific Ocean Development Programme (C-SPODP). Although implementation is by the CFP, the project is channelled through the Pacific Women's Resource Bureau, which is located at SPC.
4. The WFDP comprises one professional staff position (Women's Fisheries Project Officer, WFPO) which became vacant in May 1992 when the incumbent left the Commission early after only one year in post. Insufficient funds remained in the budget to allow recruitment of a replacement WFPO for a full contract period. Difficulties have been experienced in securing top-up funds to be able to offer a two-year contract to a replacement candidate. The post therefore remains vacant until additional funding can be identified.

5. The initial phase of this project was designed to provide assistance to the Women-in-Fisheries Support Project in Papua New Guinea, with activities in other countries planned to take place during the second year. With the early departure of the WFPO some of these activities have not taken place, and the responsibility for existing project commitments to Papua New Guinea has fallen to the PFA. Support activity to PNG is continuing but at a reduced level, until funds have been secured to permit a new WFPO to be recruited.

#### **National-level activities**

##### *Regional Post-harvest Fisheries Training Project - Stage Two, In-country Workshops*

6. The first SPC regional post-harvest fisheries workshop was run in 1986 in Vanuatu, and covered the whole range of tropical fish handling and processing subjects. A further regional workshop, focusing on the chilled and frozen seafood sector, and on extension and communications skills, was conducted in Suva at the University of the South Pacific during March and April 1992. The workshop was designed to provide participants with technical and teaching skills, and formed the first part of a larger project whose second phase involves a series of national-level follow-up courses organised and run by the participants themselves. This work, which is funded by the Canadian Government is being jointly undertaken by the Post-Harvest and Training Sections.

7. The programme of in-country courses is nearing completion with courses in nine countries completed so far in Cook Islands (12 trainees), Vanuatu (16 trainees), Fiji (11 trainees), Tonga (11 trainees), American Samoa (22 trainees), Solomon Islands (14 trainees), Papua New Guinea (7 trainees), Kiribati (54 trainees) and Tuvalu (11 trainees).

8. A technical or extension resource person (CFP staff member or external consultant) was made available to provide guidance and support to each in-country course. The resource person's role was mainly advisory, leaving the national course coordinator to assume the major organisational and teaching responsibilities. This approach builds confidence on the part of the national course coordinator, while at the same time allowing the Commission to ensure that the participants understand the technical material being taught and that an interesting and effective teaching style is being used.

9. The feedback from all the resource persons has indicated that most of the regional workshop participants have performed well, utilising their newly-acquired teaching skills effectively and transferring a range of technical information to fishermen and traders. In those countries where national courses have taken place, most regional workshop participants are now able to organise and run more training activities with confidence and without further support being needed from the Commission.

10. Of the nine in-country workshops so far supported, a total of 158 fishermen, traders, extension officers and managers of small landing facilities have undergone training (or 174 individuals if the original 16 regional workshop participants are included). In addition to this some of the participants have conducted additional workshops as part of a programme of in-country training activities (e.g. Fiji Kiribati and Solomon Islands). There are five remaining in-country workshops to be completed if all fourteen countries are to be covered by the project. All these countries have been contacted to ask if they wish to participate in Stage Two of the project.

A questionnaire survey sent to the trained officers in August/September 1993 provided additional information about the impact of the project to date. From information provided by eleven respondents 629 individuals received some form of training. This breaks down the 249 trained informally organised workshops (SPC supported plus additional self-financed workshops) and 380 trained on an ad hoc basis at an informal level through provision of expert advice and technical information. The survey provided valuable information about where the project had made the most impact and where additional training is needed.

11. At this point in time only two of the five countries have expressed interest in organising in-country workshops. It is hoped that these can be scheduled to take place early in 1994. In the meantime a number of countries who did not participate in the project have requested assistance to run in-country workshops. Funding remaining in the project will be applied to such activities utilising as far as possible trained individuals from the original workshops who have performed well as tutors.

12. The overall project is beginning to meet its objective of providing sufficient in-depth training to individuals from the region so that in each country at least one trained person will be available who can train fishermen, market staff, retailers and exporters in the basic techniques of handling, chilling, freezing and packaging fresh marine produce.

*Trial tuna processing and marketing project - Tokelau*

13. The Post Harvest Fisheries Advisor continued to provide support to this project, which started producing marinated dried tuna in October 1990. Marketing trials continued in New Zealand over the latter part of 1992 with mixed results. The South Pacific Trade Office in Auckland has provided considerable assistance in the marketing area while the Post-harvest Section has provided logistical and technical support.

14. In late 1992 the project experienced difficulties at a number of levels. On the production side, highly variable landings of yellowfin tuna resulted in irregular supplies of product, and there is some inconsistency in product quality. On the marketing front buyers are demanding different flavoured products, e.g. sweeter versions, and curry and chili flavours, which because of the lack of facilities, funds and technical knowledge, Tokelau is unable to produce. In addition, most potential buyers are interested in larger volumes of product than Tokelau is presently able to provide. There is also a shortage of funds to continue to subsidise the processing operation while marketing trials continue. The result was that all manufacturing was temporarily halted at the end of 1992 until new funds could be identified.

15. Tokelau's experience has nevertheless provided invaluable information for, and guidance to, a collaborative initiative on processing of novel tuna products presently being developed by SPC and ACIAR (see next section). Specific assistance has since been provided through this collaborative project. At the end of 1992 IFIQ was hired to improve Tokelau's products and develop a lower-cost processing procedure. IFIQ have succeeded in doing this, and have also developed some alternative flavour formats (such as curry and chili flavours) as requested by potential buyers.

16. A new development occurred in May 1993 when a company in New Zealand indicated its interest in entering a joint venture agreement with the Tokelau authorities to produce and market marinated dried tuna. Such an agreement would probably allow processing of product to start up sooner than would otherwise be possible. The New Zealand company would primarily be responsible for providing the marketing expertise and input. The company was provided with new curry and chili flavoured samples developed by IFIQ for evaluation purposes. At the end of the year the company was still expressing interest in pursuing the joint venture idea. It is possible that SPC will be requested to provide assistance to OTA in these discussions.

17. A socio-economic study of the community on Atafu, where the processing facility is based, was undertaken in August 1993 to investigate the social, cultural and economic factors that affect the day to day running of the tuna processing operation. The final version of the report should be ready by the end of 1993. This study will be used to help develop a more appropriate way of managing the project.

*Collaborative project between SPC and ACIAR on developing and extending novel tuna products (selected countries)*

18. At the end of 1991 SPC and the Australian Centre for International Agricultural Research (ACIAR) began to evaluate a collaborative approach to support the manufacture of novel tuna products in the region. This initiative was a response to the need to provide additional support to Tokelau's trial tuna processing and marketing project, as well as to other countries wishing to develop their own small-scale tuna processing enterprises.

19. The aim of this project is to develop a systematic and integrated approach to establishing small-scale processing operations within isolated Pacific Island countries that would be income generating, provide employment, and utilise tuna, the region's single most important and abundant natural marine resource. Based on the Tokelau experience, there is a clear need to develop a range of products that this and similar operations can easily manufacture, and to extend the range of products to be exported.

20. In early 1992 two desk studies were commissioned by ACIAR as a first step to evaluate the feasibility of the project. These two studies were:

- an overview of the marketing potential for non-canned, novel tuna products; and
- an evaluation of the range of novel tuna products that can technically be manufactured in a Pacific context.

21. Following a review of these two reports by ACIAR and SPC, two Australian institutes were commissioned in mid-1992 to undertake product development studies on flavoured dried tuna products utilising sliced tuna flesh (International Food Institute of Queensland - IFIQ) and minced tuna (University of New South Wales - UNSW). Both studies were completed at the end of 1992.

22. A further meeting took place in February 1993 between the various technical and development specialists and representatives of the project's initial target countries, which include Tokelau, Kiribati and Tuvalu. A representative from the Marshall Islands also attended the meeting. This meeting reviewed the product development work and considered the future direction of the project. Based on these discussions a plan of action was developed for the remainder of the year.

23. Under the action plan an informal Working Group was established as a consultative and advisory body to provide direction to future project activities. Other activities in the action plan include continued support to existing novel tuna processing operations (Tokelau, Kiribati and Marshall Islands), a refinement to some of the product development work carried out by UNSW and IFIQ, improvements to packaging design and formats, marketing studies at retail outlets in Australia, and future publications based on the results of the studies undertaken by the project.

24. Action plan activities completed or in progress include:

- mercury content analysis of products from Kiribati and Tokelau, and from IFIQ's studies, which showed that these products are within import regulation limits currently in force in Australia;
- advisory visit to Kiribati to evaluate the two tuna processing operations there;
- development of a new packaging format and label for Kiribati, with marketing studies at retail outlets in Australia;

- a socio-economic study on Atafu, Tokelau to establish the constraints to tuna processing at the community level;
- updating of the SPC's leaflet on Home Made Recipe for Dried Marinated Tuna so as to include modified processing procedures.

25. Marketing trials of the dried tuna product manufactured by the Outer Island Project in Sydney are not progressing as well as expected. Although there is interest expressed in the product per se, potential buyers require assurances about consistency in quality of the product and guaranteed export volumes. These are similar to the problems encountered with marketing trials undertaken in New Zealand with the Tokelau Marinated Dried Tuna product. Emphasis will now be placed on assisting those countries wishing to set up a dried marinated tuna operation using the valuable results from these and other ACIAR-funded investigations.

#### *Women-in-Fisheries Support Project - Papua New Guinea*

26. The PNG Women-in-Fisheries Support Project (WFSP) aims to promote income-earning opportunities for rural women in Papua New Guinea based on marine resources, through a programme of training and technical support activities coupled with the operation of a rural credit scheme. The project is funded by Canada, through the Canadian South Pacific Ocean Development Project (C-SPODP) for a two-year period which corresponds to the funding cycle of the SPC Women's Fisheries Development Project (WFDP). Approval has been provided to extend the project to end of 1994.

27. The WFSP, although essentially a PNG national project, is intimately linked to the WFDP, and SPC's role in it is to provide technical advice and support in the implementation of project activities, as well as to assist with some aspects of project management and administration. However, under the terms of a Memorandum of Understanding between SPC and the Papua New Guinea government, primary responsibility for project execution and conduct of field work rests with the PNG Department of Fisheries and Marine Resources (DFMR), working in collaboration with the Department of Home Affairs and Youth (DHAY), and with the guidance of the National Advisory Committee on Women-in-Fisheries Projects.

28. In line with SPC's commitment to the WFSP, technical inputs were provided by the PFA into a number of the project's activities. After organising a Workshop on Fish Processing and Marketing for women of the New Guinea Island Region in Kavieng during September 1991, in early 1992 the project began providing follow-up support to the participants in their home province. A number of shorter provincial level workshops were also organised, mainly in East New Britain and Milne Bay Provinces and provincial level activities in the New Guinea Island Region have been completed. In November 1993 the third in the series of regional workshops for women on the subject of fish processing and marketing was conducted for the Momase Region. PFA participated at this workshop in Madang as a tutor. Plans are currently being finalised to conduct follow up support at Provincial level for the participants of the Momase region workshop.

29. As part of its commitment to ICOD under the project, the Post-Harvest Section also worked with the Pacific Women's Bureau to jointly organise a mid-term review of the WFSP in November 1992. A number of the review's recommendations have already been actioned in PNG, and it is anticipated that this, plus the appointment of a Women-in-Fisheries Projects Coordinator at DFMR in April 1993, will greatly assist project goals to be met in the future.

#### *Improved processing and marketing of salted-dried fish - Marshall Islands*

30. As part of an outer island fisheries development project, the input of a technical specialist was needed to provide training in improved processing and marketing of salted dried fish in the Marshall Islands. Following a request from the Government of the Marshall Islands in September 1992, the PFA undertook a training assignment to Namorik Atoll in May 1993.

31. During the week-long stay on the atoll training was provided to about twelve fishermen and twenty women in improved salted dried fish processing. Although the training programme was affected by wet weather, sufficient time was available to run the necessary practical and theoretical classes. The project's principal investigator attended all the training sessions and is confident about extending this training to other target recipients of the project.

32. In October 1993 the principal investigator decided to concentrate activities on the second project site on Ailinglaplap. A further development in the project was the expansion of a small marinated dried fish operation in Majuro which is selling dried marinated tuna and marlin on the domestic market. Advice was provided on suitable packaging formats and sources of materials. Presently this aspect of the project

### **Regional-level activities**

#### *Regional Post-harvest Fisheries Training Project - Student Teaching Notes*

33. During the regional chilled fish sector workshop the participants started putting together a series of teaching notes specifically tailored to help run short courses for fishermen, fish traders and exporters. These represented a potentially valuable collection of material but one which required further input before they could be considered finalised.

34. To help with this task, the Australian Maritime College through a consultancy arrangement, was engaged in April 1993 to finalise the notes. The format has been modified so that they are more comprehensive, provide clear and easy to follow guidelines to the tutor, and include a full range of visual teaching aid materials that can be used with an overhead projector. This work was started at the end of March, at which time a seafood technology lecturer from AMC visited SPC for one week to examine resource materials and discuss the final format the student course notes will take.

35. Although progress has been slower than expected, two out of the five teaching modules are nearing completion. It is hoped that the full set of notes can be printed and distributed by March 1994.

#### *Regional Post-harvest Fisheries Centre*

36. The establishment of a Regional Post-Harvest Fisheries Centre (RPFC) within the Commission's Fisheries Programme was recommended by the 22nd RTMF in 1990, and subsequently endorsed by the 30th South Pacific Conference. The Centre, which will be established on the campus of the University of the South Pacific in Suva, will perform a variety of functions in support of the Post-Harvest Section, including product development, product storage trials, quality assessment and other analytical work which at present has to be commissioned at high cost from outside agencies. In addition, the Centre will provide a venue for the Commission's post-harvest training activities, as well as presenting more advanced post-harvest and food technology training opportunities to USP students. It is also anticipated that the Centre will provide analytical services to private industry and will thus be at least partly self-financing.

37. Funding for the project has been requested through the European Union (EU) under the Lomé IV regional assistance programme. A Technical Dossier for presentation to the EU was finalised and formally submitted in August 1991. Although the RPFC, which is now valued at about USD 3 million over five years, was assigned a high priority status, it was not originally included in the list of projects submitted for EU consideration, because in the first instance only the top priority project was accepted from each regional organisation. As noted earlier, a prioritisation exercise carried out by SPC through consultation with member countries placed the RPFC second of SPC's three marine resources projects, behind the Regional Tuna Research Project.

38. A sustained effort will be made to ensure that this project is considered under the second financial protocol of Lomé IV, as well as by other donors.

#### *Production of fish handling and processing videos*

39. Funds have been available through ICOD since 1991 for the production of nine new videos in the Fish Handling and Processing Video series. These would add to the two very popular videos on fish chilling that were produced in 1989 ("An icy tale" and "A chilling story"). Unfortunately it has not been possible to complete any of these new videos over the reporting period due to commitments to other activities which have taken priority over this project. However, a start has been made on the production of a video on the airfreighting of chilled fish. A commercial video company in Suva has been hired to develop a script, undertake filming and complete the editing, with technical advice being provided by PFA. Filming should take place in Fiji in early 1994.

#### *Publications*

40. The new edition of the very popular booklet *Beche-de-mer of the Tropical Pacific* is now being printed. A review of women-in-fisheries development projects was completed and has been included in the SPC technical document *People, Society, and Fisheries Development and Management in the Pacific Islands*. A pilot version of a *Handbook on Small Fishery Business Management for Pacific Women* has also been produced and will be trialled in Papua New Guinea before being revised for a wider release.

41. No progress has been made with the *Field Manual for Seafood Poisoning Outbreaks*, or with other tentatively planned technical manuals, mainly due to commitments to country assignments and regional projects.

#### **Evaluation**

42. Although the Section has had a very active 18 months, it has faced difficulties in accomplishing all of its objectives. The demand for the services of the Section has grown, and this increased workload has been made more difficult to accommodate by the premature departure of WFPO in May 1992 plus failure to secure top-up funds to replace this officer, and the resultant need for the PFA to devote additional attention to this area. Inevitably some activities planned for the period, in particular publications and video production, have suffered. There is no obvious solution to this problem until funds can be secured to permit the replacement of the WFPO.

43. In addition, some countries themselves have contributed to the lack of progress in certain projects, by not following through with their own inputs to ensure that activities, once started, can be completed. In at least one instance, the lack of follow-up by a member government to an initial study requested from SPC has resulted in the overall assistance package being unfinished, with little prospect of completion. This situation leads to a waste of already scarce project resources, and might be avoided if member governments were careful to undertake realistic assessments of national needs and priorities.

44. The establishment of the RPFC, a major project initiative that will provide a much-needed increase in support to the development of fishery post-harvest activities in the region, has experienced substantial delays due to difficulties in securing the required funds. The expansion of appropriate training and research opportunities in post-harvest fisheries within the region largely depends on such a facility becoming operational. The project concept has been evaluated by and discussed directly with SPC member countries and at several regional meetings, and is supported widely by the marine resource sector. However, because of the relatively high cost of the project (nearly US\$ 3.0 million over five years) funding options are limited. The procedure of requesting funds under Lomé IV regional arrangements has proven time consuming and frustrating, but alternative funding sources are not obviously available.

45. Funding arrangements for the WFDP expired during May 1993. The FHPP has had its termination date extended from 31 December 1993 to the end of June 1994 following a review of UK funded projects of the Coastal Fisheries Programme undertaken by the UK Aid Management Office in Suva in September 1993. The identification of funds for the continued activity of Post-harvest Section will need to be given a high priority during the year. The 24th RTMF expressed its concerns over the short-term nature of funding arrangements for these and other CFP projects and recommended that the Secretariat do its best to secure long-term commitments from donors, a recommendation which was endorsed by the 17th CRGA and adopted by the 32nd South Pacific Conference.

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