

Secretariat of the Pacific Community

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**Coastal Fisheries Programme  
Workplan Report for 2008 and Work Plan Summary for 2009**

Marine Resources Division  
Secretariat of the Pacific Community  
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# **Coastal Fisheries Programme**

## **Secretariat of the Pacific Community**

**Report against workplan for the year 2008  
under the CFP Programme Plan triennium 2006–8**

**Report on year three (2008) activities**

**December 2008**



## **Report against workplan for the year 2008 Under the Programme Plan Triennium 2006-8**

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## **Report against workplan for the year 2008 Under the Programme Plan Triennium 2006-8**

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### **Part I: Introduction**

#### **(a) The Plan**

1. This is the third report against workplan under the Coastal Fisheries Programme's Strategic Plan 2006–09 and the current three-year cycle of programme funding for the activities under the Plan. The report format includes all AusAID, Core and member donor programme (Australia, French and NZAID) funded activities, and also includes the special project activities under specific objectives being addressed by the integrated Coastal Fisheries Programme, and that are funded by SPC member, or other donors.
2. The Coastal Fisheries Programme has moved from a sectional approach to a focal area approach to its work, with the direction of the new Strategic Plan based on the Ecosystem Approach to Fisheries. This new approach is reflected in this workplan and the activities undertaken in member countries.
3. The Coastal Fisheries Strategic Programme Plan is a living document, and may change details during the course of the triennium, as approved by sectoral and governing councils, and in consultation with donor and client stakeholders. Objectives evolve as constraints and estimates are evaluated. This Workplan is essentially a “tactical” Plan, and its main aim is to make all of the evolving activities of the Programme clear and accountable to all its direct stakeholders.

#### **(b) The Programme**

4. The SPC Coastal Fisheries Programme (CFP) is made up of 26 staff (Appendix A) in five sections: Aquaculture, Development and Training, Coastal Management, the Reef Fisheries Observatory (RFO) and Information. These sections work jointly to implement the overall programme, which addresses the three main objectives of the Coastal Fisheries Programme Plan. It should be noted that three coastal fisheries scientists left the EU-funded PROCFish/C project during 2008 as the project is in its final year, and possibly another five scientific positions within the RFO will also be lost during 2009 from this project unless alternative funding can be located.
5. More detail about the CFP itself can be gained from the Strategic Programme Plan ([www.spc.int/mrd/plans](http://www.spc.int/mrd/plans)) and from the CFP website ([www.spc.int/coastfish](http://www.spc.int/coastfish)) as well as from the documentation provided at regular meetings of the SPC Governing Council and Heads of Fisheries, but briefly:

*“The top priority of the region within the CFP mandate area is “to manage not just coastal fisheries, but the entire coastal ecosystem upon which coastal fisheries and aquaculture depend. Fisheries managers need to drive this new Ecosystem Approach to coastal management because fisheries are heavily dependent on the integrity of coastal ecosystems, and fishers are still the primary user group impacted by land-based and other developments. As well as income-earning development from fisheries, subsistence fisheries are still a primary source of protein food security in many Pacific Islands, whilst recreational fisheries and non-fishery ‘users’ of fish, such as tourism, are increasing in importance” (CFP Strategic Programme Plan)*

### **(c) Working with other regional organisations**

6. The aims of CFP fall within an area that is defined not only by the expressed priorities and needs of member governments and administrations, but also by the functionality of other regional agencies and SPC programmes working on ocean issues. At the regional intergovernmental level:

- the SPC Oceanic Fisheries Programme (OFP) addresses highly migratory fisheries and associated pelagic ecosystem scientific objectives (see the OFP Strategic Programme Plan);
- the Pacific Islands Forum Fisheries Agency (FFA) addresses regional highly migratory fisheries (principally tuna) management objectives and supports member governments in international fisheries negotiations and domestic oceanic fisheries policy planning. FFA has recently restructured its operations to include a major focus on developing Pacific Island tuna fisheries;
- the Secretariat of the Pacific Islands Regional Environment Programme (SPREP) addresses endangered marine species and environmental protection objectives;
- the University of the South Pacific (USP) addresses ocean-related higher education objectives, academic ocean research and, where specific expertise is held, the general provision of commercial consultancy support towards the objectives of other agencies;
- the Western and Central Pacific (WCP) Fisheries Commission provides a forum within which fishing states can meet with coastal states and agree on enforceable management measures for tuna fisheries in the entire WCP area, including high seas;
- the SPC Regional Maritime Programme addresses objectives specifically relating to seafarers and shipping (including seafarers aboard industrial fishing vessels); and
- the Pacific Islands Applied Geosciences Commission addresses objectives in oceanography, marine minerals management and coastal protection, and generally covers the non-living ocean and coastal environment.

7. Most of these agencies are part of the CROP Marine Sector Working Group (MSWG), along with NGO (non-governmental organisation) observers as appropriate. MSWG is currently convened by the SPC Marine Resources Division, and provides an informal mechanism for improving dialogue and mutual awareness between regional programmes working on ocean issues, defining the boundaries between work programmes, and developing collaborations as appropriate. CFP, through SPC, also has specific Memoranda of Understanding (MoU) with agencies where there is an especially close working relationship, particularly FFA, SPREP and USP. There are also formal linkages with national and international bodies, including the Food and Agriculture Organization of the United Nations (FAO), L’Institut de recherche pour la développement (IRD) and the Programme Group on the Western Pacific (WESTPAC). This Strategic Plan takes into account these various linkages and the changing pattern of interrelationships between organisations.

## **Part II: Outputs planned for the triennium 2006–8**

8. This Part II of the report is essentially a reiteration of the CFP Strategic Programme Plan, included here for the purpose of providing context and clarity to parts III and IV, which are the main “operative” parts of the report. This Part II describes the longer-term objectives, outputs and generic activities of the Programme over the course of the entire triennium 2006-8, while the following Part III provides more specific details about the actual activities planned and implemented in the current year, 2008.

### **Component 1 – Reef fisheries**

#### **General Comments**

9. Reef (including lagoon) fisheries in the region target a broad range of invertebrate and finfish species. These fisheries are immensely significant from a range of perspectives: cultural, social, nutritional and economic. These fisheries have traditionally been targeted predominantly for subsistence needs (for direct consumption or non-monetary exchange). Their contribution to the welfare of coastal communities in the region in terms of health, food security and social stability is enormous, with many communities directly dependent on them for their main source of protein. Reef fish fisheries in the region support far more livelihoods per tonne produced than industrial scale fisheries such as tuna.

10. These fisheries are vulnerable to a range of natural and human induced impacts. The continued increase in island populations has placed enormous pressure on the marine environment over the past years. The introduction of modern equipment and materials such as gill nets, scuba diving gears and bleaching agents and refrigerated storage has made fishing more efficient and destructive. Urban expansion and infrastructure development have damaged and destroyed many marine habitats and nursery areas. These impacts, coupled with natural events like cyclones and coral bleaching, are affecting the natural ability of the marine environment to sustainably cater for human needs. We are also seeing a trend towards increasing commercialization of nearshore resources at the small- to medium-scale enterprise level, to supply local and urban markets and for export, e.g. live reef fish trade (food and aquarium), beche-de-mer, clam and trochus, with resulting impact on subsistence food security.

11. Until recently, relative to other regional fisheries such as tuna, those associated with coral reefs have been lacking the management attention that is needed. These fisheries and reef systems at the national level are generally under-managed, under-funded, under-monitored, and as a consequence, poorly understood.

12. There is growing feeling within the international community that conventional methods of fisheries management have been unable to predict or cope with change, or indeed that they have ‘failed’. Pacific Island coastal fisheries management is still very much an ad hoc affair, ‘fire-fighting’ challenges as they arise, but thankfully most food-fisheries still have a large component of traditional or community oversight, unbroken over the millennia in many islands. Rather than continuing to try to develop management plans for individual fisheries — management plans that can control only the activity of fishers and that are helpless to control or even predict other impacts on coastal ecosystems — SPC intends to assist the Pacific Islands to ‘skip’ the next step in conventional fisheries management and start implementing the more holistic Ecosystem Approach to Fisheries (EAF) through the development of coastal ecosystem management plans.

13. It is not possible, at the current level of scientific knowledge, to build a reliable predictive model of a whole coastal ecosystem, and if the Ecosystem Approach is to be implemented it will have to be done using a 'bootstrap' approach. The lack of scientific information is being addressed to some degree (covering socio-economics, finfish and invertebrate species) through an ongoing project in the CFP. The approach now will be to use existing systems and knowledge and provide a framework of linkages and interrelationships for integrating them into a broader system. This is not much different from the concept of Integrated Coastal Zone Management, which has been tried, without great success, in some Pacific Islands — but this time there is a definite economic imperative and the approach is expected to have substantial international backing.

### **Overall workplan by output**

**CFP Objective 1** - Assisting governments and administrations in the development of scientifically informed and socially achievable coastal ecosystem management systems, including coastal living resource components of national ocean policies

***Output 1.1 Assessments of the status of national coastal living marine resource user groups, impacts on resources, existing impact management systems, and the current status of resources themselves.***

The main activity areas planned to achieve this output over the triennium are:

- Establish and progressive improvement of surveys and quantitative assessments of the status of reef fisheries at the local, national and regional levels with special attention on socio-economic data;
- Assist Pacific Island countries and territories incorporate stakeholder input and environmental or ecosystem information to the development of baseline assessments of inshore resources; and
- Support member countries and other SPC fisheries work areas in the dissemination of fisheries information, the development of various fisheries-related publications and marine awareness materials, and the setting up of a document repository or archiving system for fisheries data and publications.

Output performance indicator: *21 national coastal fishery ecosystem governance baseline assessments produced over the plan period using the best available knowledge (NB: It is assumed that the main need here will be from countries, rather than territories, some of which already have related processes under way).*

***Output 1.2 Assistance to members in developing or adapting cross-sectoral consultation processes to produce a scientifically and socially realistic national vision, or island visions, of the desired state and balance of usage of their coastal marine areas.***

The main activity areas planned to achieve this output over the triennium are:

- Assist Pacific Island fisheries administrations with policy, socio-economic and scientific advisory or analytical input to reef fisheries problems; and
- Assist Pacific Island fisheries administrations through institutional strengthening and stakeholder participation to identify realistic national visions and missions for ocean policy development.

Output performance indicator: *14 national ocean policy social consultations supported over the course of the plan period (NB: It is assumed that there will be a CROP-wide multi-agency process involved in developing ocean policy applications).*



***Output 1.3 Practical assistance to members, as necessary, in designing and implementing adaptive frameworks for the application of the Ecosystem Approach to coastal fisheries and aquaculture.***

The main activity areas planned to achieve this output over the triennium are:

- Capacity development of Pacific Islanders in a range of areas including, fisheries science, development, management and others, through a range of training activities and initiatives;
- Assistance to Pacific Island countries and territories in developing fisheries policies, strategies or plans, including the development of coastal fisheries legislation through promoting maximum participation and input from all stakeholders; and
- Assistance to Pacific Island countries and territories to develop specific reef fishery or species management plans, and/or community-based fisheries management programmes.

Output performance indicator: *Every Pacific community island member has EAF policies, plans or legislation in place by 2010.*

**Highlights for 2008**

14. The Pacific Islands Regional Coastal Fisheries Management Policy known as the Apia Policy was developed by 18 Pacific Island countries and territories (PICTs) during the special session of the SPC Heads of Fisheries held in Apia in February 2008. The implementation of the strategic actions under the regional policy is guided under 6 principles, which PICTs decided as principal issues to successful management of coastal fisheries and its environment. The policy was endorsed by the Forum Fisheries Ministers in their Ministerial meeting held in Koror, Palau, in May 2008. For successful implementation of the policy, donor contributions are required. JICA is now using the Apia Policy as the basis of its regional fisheries programme to the Pacific region.

15. FFA and SPC are now working as a team to develop national Fisheries legislations for Pacific Island countries. This joint effort started with the development of Samoa's new Fisheries Bill where SPC is working on the Coastal and Aquaculture components of the bill, while FFA focuses on the Oceanic. All the components of the Samoa Fisheries Bill will soon be put together by the Legal Section of FFA. This joint effort will continue, with work scheduled on the Fisheries legislation for Kiribati, Marshall Islands and others.

16. There is now a need for FAO and SPC to work together to deliver the ecosystem approach to fisheries management (EAFM) as a result of the FAO/SPC EAF workshop held in Nadi in November 2008. The variations in the methods practiced by the two organizations to deliver the principles of EAF have compelled FAO and SPC to work together and to integrate the two approaches into one. The first attempt will be trialed during the forthcoming EAFM workshop scheduled for the Micronesian countries in early 2009.

17. Work on the development of the long overdue Live Reef Fish Trade Regional Database finally commenced at the beginning of 2008 after funding support from AusAID was approved in late 2007. Two countries, Vanuatu and Fiji are involved as case studies to pilot the project. This is a very important project as it will provide the overall data storage and data analysis support for the monitoring of these fisheries for informed management decisions to be made. It is expected that the first version of the database will be ready for trial in the second half of 2009.

18. All site reports for fieldwork undertaken as part of the Pacific Regional Oceanic and Coastal Fisheries development Programmes (PROCFish/coastal component and CoFish) were written up and placed on the projects website during the first half of the year. Three PROCFish/C country report were published and six others were compiled, edited, and sent for country clearance, with five others being compiled ready for editing and incorporation of background information. A multi variant analysis of the PROCFish/C and CoFish regional data set commenced in August 2008. A statistician from the University of Auckland was hired to assist the PROCFish/C team to undertake the analysis, which is ongoing. The analysis is looking for regional indicators of reef fishery status, with some interesting results starting to emerge.

19. Capacity building is a major component of the PROCFish/C workplan. During 2008, two series of workshops were undertaken. The first covered finfish survey methodologies, with two people from each of the 17 participating countries and territories trained in these methodologies during a series of four 10-day workshops. The second series of workshops covered basic statistics and was conducted over two, one week sessions with 17 people trained, one from each country.

20. A ciguatera and related biotoxins conference organized jointly with the Institute of Research for Development (IRD) and the New Caledonia Pasteur Institute was held in Noumea from the 27-31 October 2008. This brought together scientists from all over the world to share and discuss recent research findings and issues relating to ciguatera fish poisoning with fisheries officers and medical doctors from the Pacific Island countries and territories. The last time such a gathering was held was more than 10 years ago and therefore a lot of new information was presented and discussed. An important outcome from the conference was the strong agreement from representatives of Pacific Island countries and territories that ciguatera fish poisoning is an increasing threat to food security and that SPC should take the lead in building a stronger coordinated regional effort to address the problem.

21. A sub-regional marine ornamental workshop jointly organized with SPREP was held at the SPC headquarters in December 2008. The workshop which involved both government and industry representatives from Pacific island countries and territories was a great opportunity to get an update on the status of the marine aquarium trade in the Pacific and the current issues faced by operators in their operations as well as from the government side in trying to manage the trade in a sustainable way. Transportation and meeting international trade requirements such as the Animal Health Standards (OIE) were some of the issues of major concern. The information from the workshop was very useful and will be used to further streamline the allocation of resources and the delivery of appropriate technical assistance to member countries and territories to address their issues and concerns effectively.

22. Holothurians, or sea cucumbers, play an important role in marine ecosystems, and their dried product, beche-de-mer, is a significant source of income for many coastal communities of the tropical Pacific. But, this fishery, which almost exclusively targets the export markets of Asia, has put extreme pressure on wild stocks. Their conservation and management has become a high priority for several Pacific Island countries and territories. To facilitate the correct identification of the main holothurian species exploited in the tropical Pacific, a key element for fishery management, SPC and the WorldFish Center have produced a poster (**Commercial Holothurians of the Tropical Pacific**) showing 28 species, with details on their habitat, distribution and key identification features. Several thousand copies in English and French have been sent in late November to regional fisheries departments.

23. The 2008 version of the Fisheries Digital Library covers some 6700 fisheries and aquaculture-related documents, in French and in English, produced by, for, or in collaboration with SPC that are currently available in digital format. It includes newsletters, information bulletins, meeting papers, technical reports, field reports, posters, technical manuals, handbooks, and bibliographies. SPC's Library, Fisheries Information Section and the Reef Fisheries Observatory keep working on processing documents into a digital format. The Digital Library is also available on DVD, which is searchable by title, authors, year, country, and full text. Documents are available in PDF format. The DVD is updated every year with new references.

## **Component 2 – Aquaculture**

### **General Comments**

24. For the novice a basic definition may help clarify the scope of the sector. Aquaculture is simply any kind of farming that takes place in fresh or marine water (mariculture refers specifically to farming in seawater). Traditionally aquaculture has been placed in the domain of fisheries although technically it is an extension of agriculture. Aquaculture in the Pacific is best categorised into two forms – commercial and semi-subsistence.

25. Intensive commercial aquaculture is relatively new to the Pacific region and its development phase typically takes several decades of research and development. Over recent years, an average value of export is estimated to be somewhere in the range of USD \$130–180 million dollars per annum. Two commodities account for about 90 per cent of the total value; cultured black pearls and marine prawns. Other aquaculture products in the region include *Kappahycus* seaweed, corals, clams and fish.

26. Aquaculture may assist in replenishing over fished stocks (restocking). Currently the sea cucumber fisheries are under pandemic threat. Pioneering research is nearing completion in New Caledonia by the WorldFish Center on methods to breed and restock juveniles into the wild, and SPC Aquaculture Section is collaborating with ACIAR to transfer these techniques to Fiji. Restocking of inland reservoirs and dams with freshwater species has been carried out sporadically in the past but little information is known about the results.

27. In comparison to the neighbouring south east Asian countries, subsistence or artisanal aquaculture in the Pacific is not that well developed. But interest in freshwater fish and shrimp farming is growing amongst rural communities especially those inland with poor access to coastal fisheries.

28. Aquaculture faces its own unique challenges both as a development sector and within the mandate of the coastal fisheries programme. The systems are largely based on cultivation rather than wild harvest, as in fisheries. The technology covers the spectrum of fully automated encapsulated farming to low technology extensive culture methods. Furthermore the scope of the programme extends beyond the coastal zone, for example some aquaculture projects at SPC are located in the freshwater highlands of Papua New Guinea – 1,100 meters above sea level.

## **Proposed workplan and output**

**CFP Objective 2** - A regional support framework for economically, socially and environmentally sustainable aquaculture planning, research and development by Pacific Island governments and private enterprises

### ***Output 2.1 A regional network of contacts to exchange ideas, overviews and experience on aquaculture issues both regionally and internationally.***

The main activity areas planned to achieve this output over the triennium are:

- Expand and improve where necessary information clearing house mechanisms, such as the SPC aquaculture web-portal, special interest group bulletins, databases on expert contacts, statistics and trainees etc;
- Strengthen links to regional spheres of interest, in particular Australasia and Asia, and encourage regional collaboration where mutual benefits may occur; and
- Maintain the status quo of SPC as the regional focal point for aquaculture within CROP agencies or other agencies, and advocate on behalf and for the benefit of the region at global forums concerning aquaculture policy and administration, particularly within the United Nations, FAO system.

Output performance indicator: *Network traffic.*

### ***Output 2.2 Establishment of environmentally and economically sustainable aquaculture enterprises by Pacific government departments and/or private sector***

The main activity areas planned to achieve this output over the triennium are:

- Focus development on the key SPC aquaculture commodities accorded a priority through regional consultations<sup>1</sup>, and continue programme support to ensure immediate and long-term priority needs in the sector are being assessed and addressed;
- Assist in strengthening economic, environmental, and financial planning support to aquaculture enterprises in the region;
- Assist countries to develop the strategic framework required to sustainably manage the aquaculture sector (eg through National Sector Plans), as well as tactical interventions to overcome industry bottlenecks (eg through mini-research projects); and
- Provide technical assistance and strengthen capacity where needed on a national and regional basis through a range of activities including training, consultancies, attachments and other interventions as required.

Output performance indicator: *Positive impact on the value of aquaculture.*

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<sup>1</sup> Currently this work is guided by the SPC Aquaculture Action Plan 2002, adopted at the First SPC Aquaculture Conference.

***Output 2.3 A regional support service to help in assessing, managing and mitigating the potential impacts of aquaculture, including exotic introductions and quarantine***

The main activity areas planned to achieve this output over the triennium are:

- Develop model quarantine protocols, import risk assessments (IRAs) and strengthen inter-agency links between fisheries, quarantine and environment agencies;
- Seek implementation of the proposed USD \$600,000 Regional Biosecurity project drafted in 2005 and put in place an operational biosecurity unit with a regional perspective, initially targeting several countries being a cross-sectional representation in which to develop models; and
- Continue to develop best management practices in the aquaculture sector, and enhance capacity of veterinary and health services, disease management and response programmes and information databases.

Output performance indicator: *Regional capacity for aquatic biosecurity, and implementation to be strengthened over the plan period.*

**Highlights for 2008**

29. The SPC Aquaculture Action Plan 2007 formally endorsed at the FFC Officials and Ministers meeting in Palau in April 2008 provides an updated strategic framework to guide aquaculture in the region for the medium term. The Plan builds upon the SPC Aquaculture Action Plan 2004. The Plan has an increased scope for development and partnerships, which reflects the diverse and rapid growth of the sector in the region. Under the Plan there are twelve key commodities for priority development from a regional perspective.

30. The section has taken a lead role in aquatic biosecurity and has put considerable effort in developing a regional perspective and advocating high level support for this issue. Efforts for a broad collaboration have been made to understand risks such as invasive species and diseases, food safety issues and requirements to comply with international trade standards. To translate this topic into layman terms the section produced an SPC policy brief for Aquatic Biosecurity.

31. At a more tactical level there has been progress in seeking derogation from the European Commission for recent regulations requiring all importing countries of live aquatic products to be members of the World Animal Health Organization (OIE) and consignments to be accompanied by a disease certificate. This stringent demand may have an immediately stifling impact on the wild and cultured marine aquarium trade in the Pacific. It has highlighted a severe lack of national competency in aquatic animal health, and biosecurity in general. As a temporary reprieve the European Commission appears to look favourably on the Pacific Animal Health Information System (PAHIS) being jointly developed by OIE and the SPC Animal Health Section of the Land Resources Division.

32. There has been further reinforcement of some significant realizations about the future role of aquaculture. A project to assess the potential for GIS to identify areas for freshwater pond culture could be extended as a tool for strategic planning of aquaculture and coastal fisheries. This project highlighted the need for collaboration, for example with the forestry GIS unit based at SOPAC, and it is becoming apparent that aquaculture can provide a “bridge” between agricultural and fisheries sectors. On a grander time scale the section has been taking note of the vulnerability of the sector to climate change, and is coordinating the Aquaculture chapter for the current SPC/AUSAID “Impact of Climate Change on Fisheries in the Pacific” project. An emerging highlight of this work is the potential for aquaculture to be manipulated as a tool for adaptability against climate impacts.

33. In 2008 the section has taken a proactive role in challenge myths about the limitations of aquaculture to benefit livelihoods and food security in the Pacific. For example there have been negative views on tilapia farming which are being dispelled through entrepreneurs in the region. The section is supporting the concept of “capture based aquaculture” through projects such as the cage culture of wild caught *Signidae* (rabbitfish) fingerlings. And whilst the pearl industry faces difficult times the section has envisioned niche opportunities for small-scale rural pearl farms producing mabe pearl. In addition the section continues to promote the potential for cultured products to enhance profitability and sustainability in the marine ornamental trade and was a lead instigator and organizer for a regional ornamentals workshop bringing together private sector and government representatives.

34. One of the most interesting roles which the section has begun to undertake is to link academia and applied science and become a bridge between universities and government. In terms of human resource development this means that the skills (and employment prospects) of graduating students are known to fisheries authorities and likewise government scientists can pursue university qualifications for their research. This role has come about through the combination of two ACIAR funded programs. Firstly a mini-projects scheme which is able to release small research grants in rapid and flexible manner. Secondly, ACIAR now offers post-graduate scholarships which can be carried out at the University of the South Pacific. SPC is the regional coordinator of the mini-projects and one of the staff members participates in the scholarship selection panel and also has the capacity to supervise graduate students. Currently four master science theses are associated with mini-projects, two other theses may be associated depending on whether a scholarship is offered, and one doctorate PhD (based with CSIRO) is affiliated with a mini-project. All researchers are from the ACIAR Pacific region and several are senior government scientists.

35. The section maintains a wide ranging operational program providing a variety of technical support. One indicator of just how active it has been is that 125 trips have been organised (and largely funded) through the section administration for travel of SPC staff and participants. Whilst the section strives to maintain a regional balance there is a disparity in the amount of in-country activities conducted between the southern and northern Pacific. In part this reflects the lack of a physical base for the section in the northern Pacific which hopefully may be redressed through the SPC Pohnpei office. It also is due to a lack of funds from donors operating in this region and the limitations of project sourced by donors such as France and Australia whom emphasize south Pacific countries which are in their immediate sphere of interest.

### **Component 3 – Nearshore pelagic fisheries**

#### **General Comments**

36. Domestic nearshore pelagic fishing operations can be split into small-scale and medium-scale sectors. There are thousands of small-scale boats and canoes trolling and mid-water handlining close to the reef or around fish aggregating devices (FAD)s in their respective country or territory. It is impossible to put an accurate number together as many of these boats and canoes are used for subsistence and artisanal purposes, rather than commercial or semi-commercial, and many are in the outer islands within each country.

37. There is a large contrast between countries in regard to fishing activity, and this generally revolves around the availability of markets to sell the catch. In countries like Tokelau, there is basically no market to sell fish, so the catch is distributed amongst the community. In contrast to Tokelau is the situation in Kiribati, where there are over 200 small-scale vessels fishing from South Tarawa to sell their catch on the local market. Many small-scale operators rely on fishing around FADs, when these are available, as they increase catches, cut operating costs, and increase sea safety.

38. A few countries are involved in small-scale tuna longlining, and it was successful in Samoa and American Samoa, from 1997 to 2001. In more recent years though, the catch rates have dropped off, resulting in reduced numbers of small-scale vessels in these countries. Charter fishing for pelagic species is an area that is slowly starting to pick up in the region. Five PICTs have no charter fishing vessels at present, and these are the countries with very little tourism, or are remote and difficult for people to get to. In the countries with charter boats, they are generally located in the main urban centres or tourist hotels.

39. Medium-scale tuna fishing operations are the main focus of many countries in the region for economic development. Most PICTs are looking to promote private sector development, while a couple have opted for a mix of private and public sector development. In 2001 the number of domestic vessels increased from 450 to 500, and it has hovered around this number to the present.

40. In line with the development of medium-scale tuna fishing operations, companies have established shore-based facilities to process and pack high-quality tunas and associated species for export to markets in Japan, Hawaii, the US mainland, Europe, and to a lesser extent, Australia and New Zealand. In addition to packhouses, industrial processing facilities include two tuna canneries in American Samoa, one tuna cannery in Papua New Guinea, one tuna cannery in the Solomon Islands, one tuna cannery in Fiji, a tuna loining plant in the Marshall Islands, an arabushi (smoked tuna loins) plant in the Solomon Islands and a tataki (seared and frozen tuna loins) plant in Fiji.

41. The implementation of the Ecosystem Approach to nearshore pelagic fisheries is likely to be more difficult, than the implementation of the Ecosystem Approach to oceanic fisheries. In oceanic fisheries the main impacts upon the fisheries ecosystem are from fisheries themselves, which are relatively easily controlled by more conventional management systems, or from long-range climate processes, which are either uncontrollable or can be addressed only through global action. The main requirement for implementing the Ecosystem Approach to oceanic fisheries, now that an implementing mechanism is in place through the new WCP Fisheries Commission, is better information about pelagic ecosystem functioning and species relationships. This will be addressed by the SPC Oceanic Fisheries Programme. For coastal fisheries, the main requirement at this stage is to build institutional systems that can consider all of the human impacts on coastal ecosystems, and get different agencies working together to achieve a common vision of how the coastal ecosystems that currently support fisheries should be maintained, and how usage should be allocated and controlled.

### **Proposed workplan by output**

**CFP Objective 3** – Governments and administrations develop domestic nearshore commercial fisheries within a sustainable ecosystem context

***Output 3.1 The output of economically viable Pacific Island commercial fishing enterprise matches the sustainable production capacity of the natural resource allocated.***

The main activity areas planned to achieve this output over the triennium are:

- Promote the establishment or enhancement of national tuna fishing association in member countries and encourage their participation with fisheries administrations, other government departments and tuna fishery stakeholders in the drafting of sustainable development and management arrangements for domestic nearshore fisheries;
- Conduct training needs assessments, assist with human resource strategy development, and coordinate training opportunities in priority fisheries areas not presently covered by local or regional training institutions, with an emphasis on vocational training for enterprise development;
- Strengthen stakeholder networks at the national and regional level for disseminating information and maintain a database on training providers, fisheries personnel training history, and people trained in the private sector; and
- Develop fishery performance indicators that take into account the economic, social and environmental impacts of nearshore fishing operations.

Output performance indicator: *Fishery performance indicators that take into account the status of stocks and ecosystems as well as profitability and contribution to national accounts (to be developed at the start of the Plan period) remain at optimum levels.*

***Output 3.2 Resource materials and case-specific advice, training and mentoring on appropriate fisheries and fishing techniques.***

The main activity areas planned to achieve this output over the triennium are:

- Experiment with different small- and medium-scale nearshore fishing activities to develop new economically viable, sustainable and environmentally friendly fishing activities;
- Provide technical assistance and hands-on training to promote economically viable domestic nearshore fishing operations, including sea safety and safe vessel operations, in line with the ecosystem approach to fisheries principals, especially in regard to bycatch and other environmental issues; and
- Develop and disseminate awareness raising materials and resource materials to promote sea safety, new fishing initiatives, the results of fishing trials and experiments, and environmental issues (bycatch, pollution etc) targeting the fishing sector, other stakeholders and coastal communities at large.

Output performance indicator: *Significant augmentation of the body of available and useful practical information accessible to Pacific Island fisheries authorities and fishing enterprises on sustainable fishing methods, new initiatives and the results of fishing trials and experiments.*



***Output 3.3 Improvement in the per-unit value of Pacific Islands fisheries production.***

The main activity areas planned to achieve this output over the triennium are:

- Promote and assist with the proper handling, processing and preservation practices to ensure high quality product is landed from domestic nearshore fisheries to maximise the value of the fishery and the returns to domestic fishermen;
- Promote and assist with the value-adding to products landed from nearshore fisheries, including the operation of domestic shore facilities, so that they meet international health standards or requirements for exporting high quality marine products; and
- Using fishery performance indicators that are to be developed, assess the value of domestic nearshore fisheries to ensure the returns to Pacific Island countries and territories from these fisheries, is increased.

Output performance indicator: *Value of fisheries.*

**Highlights for 2008**

42. The practice of dumping waste from processed fish in the municipal landfill has raised concerns in Lifou Island in New Caledonia's Loyalty Islands group, and subsequently, in 2007, the Loyalty Islands provincial fisheries department sought SPC's assistance to turn local fish waste into a commercially valuable byproduct. Fish silage was quickly identified as the most suitable option, due to the presence in Lifou of a number of organic farms and the large amounts of imported fertilisers, including fish silage (4,400 litres sold at USD\$ 11 per litre in 2007). The primary goals of the project were to source and supply the equipment and materials needed to carry out the trial production of silage, produce silage that was liquid enough to be mechanically sprayed onto food crops, and advise the local seafood retail shop and provincial fisheries department on the specifications of a fish silage facility, including processing equipment, and the procedures required for medium-scale commercial production. The project's promising results tend to demonstrate that fish silage production may be one step towards balancing the growing nutritional and livelihood requirements of Pacific Island countries with the production capacity of their terrestrial and coastal fisheries ecosystems. Initial funding for the project came from the French Pacific Fund, the Loyalty Islands Province and SPC.

43. Recent inspections in the Pacific region by the Food and Veterinary Office of European Union (EU) have highlighted a lack of understanding of EU sanitary requirements in governments and industries, as well as a need for further training of inspectors. In response to this situation, SPC coordinated a short training course in New Zealand for ten inspectors of Competent Authorities in Fiji, Papua New Guinea, Samoa and Niue in April 2008. The training was delivered through a collaborative arrangement between the New Zealand School of Fisheries and seafood quality specialists from the consultancy firm Solutions in Seafood. The course programme covered compliance of existing national legislations with EU seafood quality requirements; registration and auditing of premises; non-compliance and corrective actions; product testing and laboratories; inventory and traceability; and vessel hygiene and catch handling. The training course was funded by the EU through the Development of Tuna Fisheries in the Pacific-ACP countries (DevFish) project which also provided short-term consultancy services for in-country follow-up, training and mentoring to Competent Authority inspectors in each of the four countries.

**Part III: Summary table of workplan activities for 2008 with annual report on progress**

<b>Component 1 – Reef fisheries</b>		
<b><i>Triennium Objectives &amp; Outputs</i></b>	<b><i>2008 Activities and indicators</i></b>	<b><i>Assessment</i></b>
<p><b>CFP Objective 1 - Assisting governments and administrations in the development of scientifically informed and socially achievable coastal ecosystem management systems, including coastal living resource components of national ocean policies.</b></p> <p><i>Output 1.1 Assessments of the status of national coastal living marine resource user groups, impacts on resources, existing impact management systems, and the current status of resources themselves.</i></p> <p><b>Generic activities</b> Establish and progressive improvement of surveys and quantitative assessments of the status of reef fisheries at the local, national and regional levels with special attention on socio-economic data.</p>	<ul style="list-style-type: none"> <li>• Conduct finfish, invertebrate and socioeconomic surveys as required as part of the PROCFish/C programme to assess stock status in survey locations</li> <li>• Complete all site reports for each area surveyed by discipline and make this information available to the country or territory by June 2008.</li> <li>• Compile individual country reports combining the finfish, invertebrate and socioeconomic data collected for all countries and territories by 28 February 2009.</li> <li>• Conduct an assessment of the regional data set to try to identify indicators for reef fishery status.</li> <li>• Conduct live reef fish or aquarium fish surveys in at least 2 countries in the region</li> <li>• Produce reports on this work with recommendations within 6 months of the survey work being done</li> </ul>	<ul style="list-style-type: none"> <li>• Specific survey work completed in New Caledonia, Tonga, Vanuatu, FSM and Cook Islands. Only Fiji to do in early 2009 is logistically possible.</li> <li>• All surveyed sites written up by discipline and placed on website, with all outstanding site reports completed as well.</li> <li>• 9 of 11 PROCFish reports completed, 3 published and 6 gone for country clearance, several other reports progressed.</li> <li>• Assessment commenced with a consultant statistician hired to provide assistance, with work ongoing.</li> <li>• Surveys conducted in the Marshall Islands and Samoa</li> <li>• Reports produced for these two countries including an assessment of the resource.</li> </ul>

<b>Component 1 – Reef fisheries</b>		
<b><i>Triennium Objectives &amp; Outputs</i></b>	<b><i>2008 Activities and indicators</i></b>	<b><i>Assessment</i></b>
<p>Assist Pacific Island countries and territories incorporate stakeholder input and environmental or ecosystem information to the development of baseline assessments of inshore resources.</p> <p>Support member countries and other SPC fisheries work areas in the dissemination of fisheries information, the development of various fisheries-related publications and marine awareness materials, and the setting up of a document repository or archiving system for fisheries data and publications.</p>	<ul style="list-style-type: none"> <li>• Provide information and advice to at least 2 countries on specific fisheries or species to assist in baseline surveys that may lead to management interventions</li> <li>• Development of 2 manuals or bulletins in any area related to inshore fisheries management, and assistance to at least 2 countries in the provision of awareness materials on the EAFM</li> <li>• Production of awareness materials for PICTs fisheries administrations, including materials for schools and the general public</li> <li>• Produce at least 4 fish posters for PICTs</li> <li>• In collaboration with other CFP sections, produce a beche-de-mer poster, brochures on ciguatera in Fijian/Hindi, a deep-water snapper species ID manual for Pacific fishermen, and other ID cards as required, and initiate work on a beche-de-mer processing video</li> <li>• Produce a training manual for collecting and analysing invertebrate data.</li> <li>• Produce at least 3 fully referenced scientific papers, and make presentations at 2 or more international conferences in regard to inshore fisheries research and the results of the PROCFish/C and CoFish programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Invertebrate surveys and information provided to Yap, Pohnpei and Kosrae in the FSM, and Vanuatu, with assistance provided in management advice.</li> <li>• 2 Women in Fisheries Bulletins produced plus coordinating the development of 2 manuals (one on Fish Stock Assessment and one on Fisheries Policy and Planning) with USP and UNU-FTP.</li> <li>• Made presentation on Community-based Ecosystem Approach to Fisheries management (CEAFM) to help Solomon Fisheries during its National Fisheries Forum plus made presentation on CEAFM to help FFA during its EAF workshop in Kiribati.</li> <li>• Quiz cards on ciguatera prepared for 2008 Science Fair; production of Pacific Islands Regional Coastal Fisheries Management Policy document.</li> <li>• Fish posters produced for Yap (2) and Fiji (2).</li> <li>• Beche-de-mer poster produced, printed and distributed, both in French and English; ciguatera brochure is being translated in Fijian; Dee-water snapper ID manual completed and published; no requests received for ID cards; no progress on the BDM video due to lack of funding.</li> <li>• Manual under development and will be completed in first half of 2009.</li> <li>• Several papers prepared and submitted for publication, with two presentations (one oral and one poster) made at international meetings.</li> </ul>

Component 1 – Reef fisheries		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
	<ul style="list-style-type: none"> <li>• Production of an updated fully-searchable CD/DVD with all Marine Resources Division publications; production of a weekly Fisheries News Clippings Service; Ongoing upgrading and updating of the CFP website; and production of a regional fisheries events calendar, a Fisheries Address book, and an information brochure on PIMRIS</li> <li>• Initiate work on a regional Knowledge Exchange System for fisheries (funding permitting)</li> <li>• Assist in the organisation of small fisheries libraries or resource centres in collaboration with PIMRIS.</li> <li>• Management of Special Interest Group Networks and publication of 8 Information Bulletins in English and 8 in French. Four issues in English and 4 issues in French of the SPC Fisheries Newsletter will be produced in a timely manner</li> <li>• Publish one issue of Fork Length in English and one issue of <i>Code Longueur</i> in French</li> </ul>	<ul style="list-style-type: none"> <li>• 2008 updated fully searchable DVD produced and distributed in the region with the web-based version updated regularly, now with 6700 references, and work has started to incorporate FFA non-confidential documents; CFP website regularly updated; Fisheries News Clippings Service is functioning on a weekly basis; Regional Fisheries Events calendar updated regularly; Fisheries Address Book 2008 has been produced, distributed and is available on the web; PIMRIS brochure has been printed and distributed to PIMRIS partners and members.</li> <li>• No funding identified for this activity.</li> <li>• 7 countries visited with regards to fisheries information dissemination and organising small libraries.</li> <li>• 9 Information Bulletins in English and 9 Information Bulletins in French have been produced; 4 issues in English and 4 issues in French of the SPC Fisheries Newsletter have been produced.</li> <li>• One issue of Code Longueur has been printed and distributed.</li> </ul>

Component 1 – Reef fisheries		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><i>Output 1.2 Assistance to members in developing or adapting cross-sectoral consultation processes to produce a scientifically and socially realistic national vision, or island visions, of the desired state and balance of usage of their coastal marine areas.</i></p> <p><b>Generic activities</b> Assist Pacific Island fisheries administrations with policy, socioeconomic and scientific advisory or analytical input to reef fisheries problems.</p> <p>Assist Pacific Island fisheries administrations through institutional strengthening and stakeholder participation to identify realistic national visions and missions for ocean policy development</p> <p><i>Output 1.3 Practical assistance to members, as necessary, in designing and implementing adaptive frameworks for the application of the Ecosystem Approach to coastal fisheries and aquaculture.</i></p> <p><b>Generic activities</b> Capacity development of Pacific Islanders in a range of areas including, fisheries science, development, management and others, through a range of training activities and initiatives.</p>	<ul style="list-style-type: none"> <li>• Provide advice and assistance to at least 2 countries on specific reef fishery problems they are encountering</li> <li>• Participate and provide input to the CROP Marine Sector Working Group to encourage consistency in the regional organisation approach to assisting PICTs in the development of national ocean policies.</li> <li>• Organise and conduct at least 6 regional or sub-regional workshops or trainings covering areas of fisheries management (fisheries statistics and stock assessment, fisheries policy and planning) or collecting and analysing fisheries socioeconomic or invertebrate data, or ciguatera and related biotoxins.</li> <li>• Assist with the organisation and possibly running of conferences/workshops such as IAMSLIC (with IRD) and EAFM (with FAO and TNC).</li> </ul>	<ul style="list-style-type: none"> <li>• Specific advice provided to Palau and Yap on the beche-de-mer fisheries, with assistance also provided on developing regulations for this fishery.</li> <li>• No CROP Marine Sector Working Group meetings held in 2008.</li> <li>• Workshops held for fisheries statistics and stock assessment; fisheries policy and planning; finfish UVC methodologies; basic statistics in fisheries; and ciguatera and related biotoxins, plus special Heads of Fisheries meeting held with the meeting endorsing the Pacific Islands Regional Coastal Fisheries Management Policy, which was further endorsed by the FFC Ministerial meeting.</li> <li>• Paper prepared for the IAMSLIC conference and joint SPC/FAO/TNC workshop on implementing the EAFM in coastal fisheries run in November 2008.</li> </ul>

Component 1 – Reef fisheries		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p>Assistance to Pacific Island countries and territories in developing fisheries policies, strategies or plans, including the development of coastal fisheries legislation through promoting maximum participation and input from all stakeholders.</p> <p>Assistance to Pacific Island countries and territories to develop specific reef fishery or species management plans, and/or community-based fisheries management programmes.</p>	<ul style="list-style-type: none"> <li>• Conduct at least 2 national workshops in areas related to the management of inshore fishery resources</li> <li>• Organise and fund at least 6 training attachments to SPC or to other PICTs</li> <li>• Coordinate and participate in consultations to develop one regional short course in certain areas relating to fisheries management</li> <li>• Train local counterpart officers in at least 4 PICTs in different survey methodologies for inshore fishery resources</li> <li>• Provide assistance to at least 2 PICTs for the development and/or review of coastal fisheries legislation</li> <li>• Organise and hold a regional coastal fisheries workshop, possible covering issues such as the results of coastal fisheries science or research, EACFA, biosecurity issues, and inshore fisheries management issues etc.</li> <li>• Provide assistance to at least 2 PICTs to establish national community-based fisheries programmes and development of community fisheries management plans</li> <li>• Provide assistance through six-monthly reviews of at least 2 national community-based fisheries programmes</li> <li>• Assist at least 3 PICTs to develop management plans and regulations for specific fisheries, such as an aquarium fish fishery, live reef fishery trade fishery, bonefish fishery, or deep-water snapper fishery.</li> </ul>	<ul style="list-style-type: none"> <li>• National workshops conducted in Yap, FSM (sea cucumbers), Marshall Islands (EAFM), Palau (sea cucumbers), Samoa (fisheries legislation).</li> <li>• 1 attachment for aquarium survey data analysis for Marshall Islands, 2 for developing CBAFM model for Pohnpei, 1 for website development in the Cook Islands, 2 for 6-months training with the UN University in Iceland on fish stock assessment.</li> <li>• EAFM workshop conducted with FAO and TNC to progress implementation of EAFM in coastal fisheries, plus worked with JICA on implementing a short course on community-based fisheries management.</li> <li>• Training conducted in Marshalls, Samoa and Tonga, plus a regional workshop held covering 2 people from 17 countries and territories.</li> <li>• Assistance provided to Samoa (fisheries legislation), Marshall Islands (local government fisheries ordinances), and Yap, FSM (sea cucumber regs).</li> <li>• Several workshops held covering EAFM (covered above), presenting PROCFish/C results deferred to 2009, and no funding for biosecurity work in 2008.</li> <li>• Assistance provided to Kiribati (preliminary study) for a CBAFM programme.</li> <li>• Reviews conducted in the Solomon Islands and Tonga on national CBFM programmes.</li> <li>• Management plans developed for the aquarium fish fishery in Marshall Islands and Vanuatu, with Vanuatu plan finalised.</li> </ul>

Component 2 – Aquaculture		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><b>CFP Objective 2 - A regional support framework for economically, socially and environmentally sustainable aquaculture planning, research and development by Pacific Island governments and private enterprises.</b></p> <p><i>Output 2.1 A regional network of contacts to exchange ideas, overviews and experience on aquaculture issues both regionally and internationally.</i></p> <p><b>Generic activities</b> Expand and improve where necessary information clearing house mechanisms, such as the SPC aquaculture web-portal, special interest group bulletins, databases on expert contacts, statistics and trainees etc.</p> <p>Strengthen links to regional spheres of interest, in particular Australasia and Asia, and encourage regional collaboration where mutual benefits may occur.</p>	<ul style="list-style-type: none"> <li>• Provide core networking services among government aquaculture focal points.</li> <li>• Maintain the SPC Aquaculture web-portal and update its features as a key information clearing house. Distribute the web-portal contents as a cd-rom version.</li> <li>• Collect and distribute information for public and regional interest of market notices, general announcements, new publications, expert contacts, national statistics and etc.</li> <li>• Continue membership responsibilities for the Network of Aquaculture Centres in Asia-Pacific (NACA) and pursue relevant links to other Australasian based institutions.</li> <li>• Maintain SPC's involvement in ongoing and upcoming ACIAR funded projects. In particular coordination of the ACIAR mini-projects with at least 6 research projects undertaken in 2008 with at least another 8 project concepts under development.</li> </ul>	<ul style="list-style-type: none"> <li>• Active network of aquaculture contacts maintained of all stakeholders - govt, private sector, NGOs etc.</li> <li>• Aquaculture web-portal is updated. Approximately 130,000 hits/year and 30,000 unique visitors. Web-site has been reconfigured to CMS software (Joomla) to enable new features such as hosting workshop presentations.</li> <li>• Adviser participated in the 17<sup>th</sup> NACA Governing Council Meeting, Nepal 4-7<sup>th</sup> Mar08 and continue to collaborate on Asia-Pacific affairs. Discussion for a high level Asia-Pacific Aquaculture Officials forum in the Pacific. Received US\$50K from Taiwanese Aid for strengthening industry links with Asia region.</li> <li>• Two ACIAR min-aquaculture project leaders meetings, Fiji Feb08 and Brisbane Aug08. Is coordinating 9 approved mini-projects (AUD160K), with a further 7 approved awaiting budget finalisation.</li> </ul>

Component 2 – Aquaculture		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p>Maintain the status quo of SPC as the regional focal point for aquaculture within CROP agencies or other agencies, and advocate on behalf and for the benefit of the region at global forums concerning aquaculture policy and administration, particularly within the United Nations, FAO system.</p>	<ul style="list-style-type: none"> <li>• SPC to play a significant role in the Australasian Aquaculture Conference 2008, particularly at the Indigenous Aquaculture Session.</li> <li>• Assist in the reporting of the Pacific region in the global trends and statistics, e.g. FAO database and world status reports.</li> <li>• Participate in World Aquaculture Society (WAS) events including the World Aquaculture Conference 2008 where mutual benefits accrue.</li> <li>• Assist member countries to access regional expert agencies including USP, WorldFish Centre, SPC animal health, SPREP, SOPAC and FAO SAPA.</li> </ul>	<ul style="list-style-type: none"> <li>• Adviser was a co-chair/organiser of the AA08 Conference and Indigenous Aquaculture session, Brisbane 3-6<sup>th</sup> Aug08. Both officers made significant presentations in the indigenous aquaculture and marine ornamental sessions. Three Pacific Island presenters and one participant were funded by SPC.</li> <li>• Adviser participated in FAO ad-hoc Coordinating Working Party (CWP) on Fisheries Statistics Chile, 3-4<sup>th</sup> Oct08, towards creation of an Aquaculture Statistic Group. Also participated in the FAO Aquaculture Sub-committee meeting, Chile 6-10<sup>th</sup> Oct08.</li> <li>• Adviser participated in the WAS APC board meeting, Brisbane Aug08 and completed term as a board Director. Current Australasian membership is approx. 700 persons.</li> <li>• Officer participated in VIIIth International Symposium on Tilapia in Aquaculture (ISTA VIII), Cairo 12-14<sup>th</sup> Oct08. Updates and contacts for this important commodity were made.</li> <li>• Networking with expert agencies expanded. Adviser participated in a Pacific Ocean Threats (aquaculture) assessment, Hawaii 18-21<sup>st</sup> Aug08. On behalf of division the Adviser participated in 2 tri-lateral consultations held in Fiji (Apr08, Jun08) between SPREP-SPC-SOPAC on absorption of SOPAC. Officer is lead author for chapter aquaculture climate change impact under a AusAID project</li> </ul>



Component 2 – Aquaculture		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><i>Output 2.2 Establishment of environmentally and economically sustainable aquaculture enterprises by Pacific government departments and/or private sector.</i></p> <p><b>Generic activities</b> Focus development on the key SPC aquaculture commodities accorded a priority through regional consultations, and continue programme support to ensure immediate and long-term priority needs in the sector are being assessed and addressed.</p> <p>Assist in strengthening economic, environmental, and financial planning support to aquaculture enterprises in the region.</p>	<ul style="list-style-type: none"> <li>• Prioritise the allocation of program funded resources towards development of the 12 key commodities identified under the SPC 2007 Action Plan.</li> <li>• Undertake programming visits to at least 6 SPC member countries to provide advice on national developments and regional linkages.</li> <li>• Assist in the formulation and production of regional development policy for at least 2 priority commodities.</li> <li>• Particular emphasis will be accorded towards supporting the marine ornamental trade.</li> <li>• Address the need for economic support identified under the CFP 2004 review.</li> <li>• Develop resources and assist countries in undertaking financial and economic analysis of aquaculture enterprises.</li> </ul>	<ul style="list-style-type: none"> <li>• SPC Aquaculture Action Plan 2007 published and distributed. The plan was presented and endorsed by delegates at the FFC Fisheries Officials and Ministerial Meeting, Palau Oct08.</li> <li>• Section staff have undertaken programming visits to 8 SPC member countries, some repeatedly.</li> <li>• New project initiatives including sea cucumber (Fiji), ornamental clown-fish (Vanuatu), mabe-pearl (Tonga), rabbitfish cage-culture (Solomon Is). Advisory support to new private sector ventures including Majuro marine fish cage farm, Rarotonga tilapia farm, Micronesia coral farm.</li> <li>• Organised regional marine ornamental workshop at SPC, Officer provide regional overviews for AA08 ornamental session, has initiated in-country projects and proposals for several countries.</li> <li>• Economic planning and business support continues to be a cross-cutting component of work programs.</li> <li>• Without a dedicated economist the section has largely provided financial and economic advice at a low level and on a case-by case basis.</li> </ul>

Component 2 – Aquaculture		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p>Assist countries to develop the strategic framework required to sustainably manage the aquaculture sector (eg through National Sector Plans), as well as tactical interventions to overcome industry bottlenecks (eg through mini-research projects).</p> <p>Provide technical assistance and strengthen capacity where needed on a national and regional basis through a range of activities including training, consultancies, attachments and other interventions as required.</p>	<ul style="list-style-type: none"> <li>• Organise a regional workshop to update the economic modelling software of aquaculture commodities.</li> <li>• Provide direct technical assistance in modelling emerging commodities such as half (mabe) pearl, sponge culture and coral culture</li> <li>• Provide support to ongoing efforts to provide institutional strengthening of aquaculture agencies in the Pacific.</li> <li>• Where invited, assist countries in bilaterally funded projects to steer these projects towards sustainable outcomes.</li> <li>• At least 2 Pacific Island countries to complete and submit national aquaculture sector plans for cabinet approval.</li> <li>• Support at least 2 Pacific Island countries in establishing peak bodies or associations which will contribute towards management of the aquaculture sector.</li> <li>• A GIS planning tool for national aquaculture development will be trialled, using Fiji as a test study. This platform will also be designed with coastal applications and all natural resource management programs in mind.</li> </ul>	<ul style="list-style-type: none"> <li>• Organised a joint SPC-QDPI Tropical Aquaculture Economics workshop, Brisbane 7-8<sup>th</sup> Aug08. Pacific Island specialists with the assistance of QDPI economist formulated new economic models for pteria mabe-pearl, sponge, tilapia, macrobrachium lar and review by New Caledonia and French Polynesia of the QDPI coral trout farming model.</li> <li>• Section continues to assist the development of SPC member countries fisheries departments and mentoring of staff. In 2008 the section received Eur30 from French Development fund for aquaculture assistance in Wallis &amp; Futuna</li> <li>• Assistance including ACIAR bilateral for <i>Pteria</i> pearl in Tonga and <i>Macrobrachium rosenbergii</i> genetics in Fiji; JICA Sustainable Coral Resources project in Vanuatu; ADECAL scallop spat collection in New Caledonia; ADF/IFREMER <i>Peneaus monodon</i> shrimp cage culture in Fiji</li> <li>• Vanuatu Aquaculture Development Plan 2008-13 printed and distributed. Final draft of Solomon Islands national aquaculture plan presented at national planning workshop, Honiara 21-24<sup>th</sup> Oct08, Revision of the Palau Bureau of Marine Resources Development Plan – aquaculture section provided.</li> <li>• Vanuatu Aquaculture Association formed in 2008; Organised a one day workshop for Tonga pearl association members to revive interest, Vavau 24<sup>th</sup> Jan08</li> <li>• A small 6 month project in conjunction with SOPAC and USP to develop Aquaculture GIS platform was completed. National workshop to demonstrate outputs was held in Fiji, Suva 18-19<sup>th</sup> Feb08. Technical report completed.</li> </ul>

Component 2 – Aquaculture		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
	<ul style="list-style-type: none"> <li>• A minimum of 8 significant projects addressing aquaculture bottlenecks will be addressed under the coordination of SPC.</li> <li>• A minimum of 3 months in-country assistance will be carried out, targeting Tonga, Fiji, Cook Islands, French Polynesia, Papua New Guinea, Samoa, Vanuatu, Kiribati, Solomon Islands, Wallis and Futuna.</li> <li>• At least 3 major consultancies organised to provide specialised advice of high regional significance.</li> <li>• A minimum of 6 new publications published under the SPC Aquaculture Technical Papers series.</li> <li>• A minimum of 6 regional and/or national training workshops or conferences organised/assisted. To include an economic training workshop coordinated in conjunction with QDPI&amp;F.</li> <li>• A minimum of 6 training attachments organised within the region.</li> </ul>	<ul style="list-style-type: none"> <li>• Section plays a coordinating role in number of projects addressing bottlenecks, particularly under ACIAR mini-project scheme.</li> <li>• &gt;4 months in-country visits to Tonga, French Polynesia, Cook Is, Fiji, Palau, Vanuatu, Solomon Is, Samoa</li> <li>• Master pearl jeweller (Cook Is) for Tonga; PCC Biologist (French Polynesia) for Cook Islands; Veterinarian biosecurity (Vanuatu) for region; section also employed 3 month GIS specialist (France) for region</li> <li>• Assessment of Post Larval Capture technology application (Mar08); GIS tools for strategic aquaculture planning (Mar08); Marine finfish regional strategies (Final Draft); SPC Policy Brief on Aquatic Biosecurity (Oct09); One issue of the SIG Pearl Bulletin published;</li> <li>• Vavau Pearl seminar Jan08 (10 pp); SPC-SOPAC GIS workshop Fiji Feb08 (25 pp); Co-chair Australisan Indigenous Aquaculture Session, Aug08 (100+pp); SPC-QDPI Tropical Aquaculture Economics workshop, Aug08 (10pp); Solomon National Aquaculture planning workshop, Oct08 (40 pp); SPC-SPREP-CRISP Marine Ornamental Workshop Dec08 (40 pp). Pearl handicraft jewellery training workshop Vavau Jul08; Fiji kappaphycus seaweed training, Kadavu Aug08</li> <li>• Training attachment for 2 persons Cook Islands to French Polynesia (post-larval capture); 1 person Vanuatu to Fiji (freshwater prawn); 1 person Solomon Islands to Fiji (tilapia)</li> </ul>

Component 2 – Aquaculture		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p><i>Output 2.3 A regional support service to help in assessing, managing and mitigating the potential impacts of aquaculture, including exotic introductions and quarantine.</i></p> <p><b>Generic activities</b> Develop model quarantine protocols, import risk assessments (IRAs) and strengthen inter-agency links between fisheries, quarantine and environment agencies.</p>	<ul style="list-style-type: none"> <li>• Organise at least 2 international study tours serving Pacific interests</li> <li>• Increase capacity within SPC, presently lacking, to provide technical and field support for mariculture developments through additional resources or co-funding arrangements.</li> <li>• SPC will take an active role support or supervision of post-graduate studies (primarily M.Sc) program of at least 6 Pacific Island students studying at tertiary institutions in the Pacific.</li> <li>• Follow up from the aquatic biosecurity meeting will be carried out with some policy directives to emerge.</li> </ul>	<ul style="list-style-type: none"> <li>• Sponsored three Pacific Island presenters to Australian AA08 conference; 1 person French Polynesia to 7<sup>th</sup> Symposium on Aquaculture Diseases in Asia-Pacific, Taipei;</li> <li>• Assisted with study tour to Vietnam for 4 persons from New Caledonia</li> <li>• Scope of mariculture work is expanding rapidly from hatchery based and wild-capture based aquaculture systems. Approx. €40K for mariculture support has been accessed through the CRISP project. Efforts to source a fully programme funded post continue.</li> <li>• Staff member (Dr Pickering) is being granted USP Adjunct-professorship status for formal supervisory of students. Auxiliary and/or supervisory support ACIAR post-graduate scholarships Mr J. Varawa - shrimp cage culture (M.Sc); Ms M. Vilisoni - pearl recruitment (M.Sc); Mr P. Kishore – half-pearl formation (M.Sc); Mr M. Lal – freshwater shrimp breeding (M.Sc) and S. Waqairatu – prawn disease (Ph.D). Support for Dec 2008 applicants, Mr S. Gerava, freshwater shrimp (MSc); Mr M. Finau, pteria pearl (MSc); Mr G. Tavake, rabbitfish farming (PGD).</li> <li>• A working group including LRD biosecurity unit staff member met and drafted a SPC policy brief. Was published and distributed at the FFC Ministerial meeting and SPC Governing Council meeting.</li> </ul>

<b>Component 2 – Aquaculture</b>		
<b>Triennium Objectives &amp; Outputs</b>	<b>2008 Activities and indicators</b>	<b>Assessment</b>
<p>Seek implementation of the proposed USD \$600,000 Regional Biosecurity project drafted in 2005 and put in place an operational biosecurity unit with a regional perspective, initially targeting several countries being a cross-sectional representation in which to develop models.</p>	<ul style="list-style-type: none"> <li>• Directly assist at least 2 countries to develop model Import Risk Analysis (IRA), quarantine protocols or Environmental Impact Assessments.</li> <li>• Assist in the documentation of introduction and translocation of species, the host pathogens of aquatic animals and geographical distributions.</li> <li>• Strengthen the Pacific regions reporting through the FAO's Aquatic Animal Pathogen and Quarantine Information System (AAPQIS) and FAO/NACA/OIE's Asia Regional Quarterly Aquatic Animal Disease Reporting System.</li> <li>• Seek funding and implementation for the proposed regional biosecurity project drafted by SPC in 2005.</li> </ul>	<ul style="list-style-type: none"> <li>• Section continues to advocate for IRA and EIA principles. Section assisted the Marshall Islands EPA to review an EIA for 10-50,000 tonne marine finfish project.</li> <li>• Adviser participated in a Expert workshop on invasive species convened by CBD Secretariat, Chicago 9-11<sup>th</sup> May08. SPC continues to take note of species movement but no formal database is in-place. Assistance provided to the Global Invasive Species Register (GRIS) project for Pacific Islands data and plans for a joint SPC collaboration. Assisted SPREP and SPC LRD for a regional strategy on for invasive species</li> <li>• Section led efforts for Pacific aquatic animal health issues to be raised with SPC member countries, Land Division and World Animal Health Organization (OIE). Adviser presented at the Commonwealth Veterinarian Association meeting, Samoa 17-21<sup>st</sup> Nov.</li> <li>• Progress made seeking a derogation for SPC member countries from the European Commission for OIE membership by regional reporting through the Pacific Animal Health Information System (PAHIS) in 2009</li> <li>• Continue to advocate for a regional biosecurity program in the Pacific. Endorsements in 2008 include the FFC Ministerial and SPC Governing Council. The original 2005 biosecurity project has been revised and submissions to ACIAR, European Union made.</li> <li>• No committed program funds have been received. The section has engaged and funded a aquatic biosecurity consultant (6 months) to provide regional advise/assistance</li> </ul>

Component 2 – Aquaculture		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p>Continue to develop best management practices in the aquaculture sector, and enhance capacity of veterinary and health services, disease management and response programmes and information databases.</p>	<ul style="list-style-type: none"> <li>• Depending on additional resources forthcoming from the proposed biosecurity project – 5 countries will be initially targeted to develop aquatic biosecurity programs.</li> <li>• Assist the Pacific region to incorporate models of best management practices.</li> <li>• Depending on the additional resources forthcoming from the proposed biosecurity project – undertake programs relating to (1) development of biosecurity policy, strategies and technical guidelines; (2) risk analysis and quarantine; (3) disease diagnostics; surveillance and reporting; (4) information, communication and networking; (5) legislation enforcement; and (6) emergency preparedness and response.</li> </ul>	<ul style="list-style-type: none"> <li>• Without dedicated programming support activities are being supported on a case-by case and ad-hoc basis.</li> </ul>

Component 3 – Nearshore pelagic fisheries		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><b>CFP Objective 3 – Governments and administrations develop domestic nearshore commercial fisheries within a sustainable ecosystem context.</b></p> <p><i>Output 3.1 The output of economically viable Pacific Island commercial fishing enterprise matches the sustainable production capacity of the natural resource allocated.</i></p> <p><b>Generic activities</b> Promote the establishment or enhancement of national tuna fishing associations in member countries and encourage their participation with fisheries administrations, other government departments and tuna fishery stakeholders in the drafting of sustainable development and management arrangements for domestic nearshore fisheries.</p> <p>Conduct training needs assessments, assist with human resource strategy development, and coordinate training opportunities in priority fisheries areas not presently covered by local or regional training institutions, with an emphasis on vocational training for enterprise development.</p>	<ul style="list-style-type: none"> <li>• Enhance 5 existing, and assist with establishing 2 new tuna fishing associations in ACP countries</li> <li>• In collaboration with FFA, assist in the drafting of tuna fishery development strategies in at least 2 ACP countries ensuring stakeholder participation</li> <li>• Assist in the drafting of fisheries HRD plans in at least 2 countries</li> <li>• At least 2 regional courses coordinated</li> <li>• A minimum of 3 national courses and workshops facilitated</li> <li>• A minimum of 3 individual training attachments</li> </ul>	<ul style="list-style-type: none"> <li>• Enhancement of Associations through funding of Office Manager positions (7 countries); office and facilities uplifting (3 countries); alia sails trial (Samoa); support for new Association (2 countries)</li> <li>• Inputs into development of Nauru Tuna Fisheries Development Plan in 2 countries plus Community-based Fisheries Development Plan for Pohnpei Conservation Society – DevFish approached</li> <li>• Bycatch mitigation regional training strategy proposed and funding secured; inputs into the development of regional CBT standards for Observers; and Palau Coastal Fisheries Action Plan</li> <li>• Start Your Fishing Business (SYFB) Refresher TOT course (Polynesia) coordinated; Course for staff of Competent Authorities coordinated; Enterprise managers course coordinated.</li> <li>• SYFB course in KIR coordinated; OBM course in Tuvalu (DevFish) facilitated; PIQFD course in Tonga facilitated; Seashell carving workshop in TUV (DevFish) coordinated with trainer from SOL</li> <li>• FIT fisheries instructor to NZ (seafood quality and value adding)</li> </ul>

Component 3 – Nearshore pelagic fisheries		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p>Strengthen stakeholder networks at the national and regional level for disseminating information and maintain a database on training providers, fisheries personnel training history, and people trained in the private sector.</p> <p>Develop fishery performance indicators that take into account the economic, social and environmental impacts of nearshore fishing operations.</p>	<ul style="list-style-type: none"> <li>• Coordinate and implement regional course on fishing methods and sea safety for 10 Fisheries Officers</li> <li>• Facilitate second SPC/FFA sub-regional course on investigation techniques for Fisheries Compliance Officers</li> <li>• Ongoing maintenance of database of training providers (Fisheries Training Directory)</li> <li>• Ongoing maintenance of trainees' database</li> <li>• Ongoing upgrading, reformatting and maintenance of the CFP website</li> <li>• Potential for innovative training delivery mechanisms (internet-based training) assessed</li> <li>• Strengthening of networks within the maritime sector</li> <li>• Ongoing updating of tuna fishing associations network</li> <li>• Indicators developed for the tuna fishery through the collaborative SPC and FFA DEVFISH project</li> </ul>	<ul style="list-style-type: none"> <li>• Course implemented for 12 Fisheries Officers</li> <li>• 2<sup>nd</sup> FETIC course facilitated</li> <li>• Database updated on an ongoing basis</li> <li>• Trainees database updated for 2008 CRGA – includes recent OFP and CFP training records;</li> <li>• Skeleton of NFDTS webpage developed using JOOMLA –platform, awaiting further development (merging of FTS and FDS materials)</li> <li>• Funds received from Tuna Commission to place recently developed regional observer course online</li> <li>• Attendance to PacMA meeting; Linking with International Pacific Marine Educators Network (attendance to 2008 IPMEN conference)</li> <li>• Ongoing e-mail contacts with tuna industry operators; lists maintained up to date (DevFish)</li> <li>• Indicators on economic impacts of sport-fishing and small-scale (troll) fisheries developed and documented in reports (DevFish)</li> </ul>



Component 3 – Nearshore pelagic fisheries		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><b>Output 3.2 Resource materials and case-specific advice, training and mentoring on appropriate fisheries and fishing techniques.</b></p> <p><b>Generic activities</b> Experiment with different small- and medium-scale nearshore fishing activities to develop new economically viable, sustainable and environmentally friendly fishing activities.</p> <p>Provide technical assistance and hands-on training to promote economically viable domestic nearshore fishing operations, including sea safety and safe vessel operations, in line with the ecosystem approach to fisheries principals, especially in regard to bycatch and other environmental issues.</p>	<ul style="list-style-type: none"> <li>• Collaborate with NMFS/Hawaii Council on hook trials in a fishery where sea turtle bycatch is an issue</li> <li>• Continue small-scale night fishing methods trials using light attraction</li> <li>• Continue to experiment with sub-surface and shallow-water FAD designs</li> <li>• Facilitate the NIWA's assessment of Tongan deep-water resources and its possible exploitation by the private sector</li> <li>• Promote the use of FADs and assist a minimum of 5 countries with their FAD programmes, including training in sea safety and FAD fishing techniques.</li> <li>• Conduct at least 2 in-country technical assistance projects and training on tuna longlining, safe vessel operations or other nearshore fishing methods</li> <li>• Promotion of bycatch and other environmental issues in nearshore fishing operations.</li> </ul>	<ul style="list-style-type: none"> <li>• Funding for hook exchange project secured (FFA/AusAID) – to be implemented mid-2009</li> <li>• No further trials conducted</li> <li>• 1 prototype sub-surface FAD deployed in NC, other prototype constructed awaiting deployment; shallow-water FAD programme in Nauru reviewed</li> <li>• Technical/advisory service coordinated</li> <li>• FAD programmes supported through field work (and advisory services) in 7 countries; Sea safety and FAD fishing techniques promoted through training projects in Wallis and Futuna and Fiji; Technical and teaching inputs into 3<sup>rd</sup> yr of JICA's regional course on FADs + establishment of email discussion group on FADs; Galapagos Islands/WWF FAD programme reviewed (externally funded)</li> <li>• Tuna longline assistance to one company + inputs into Tuna Industry Conference – CKI (September)</li> <li>• Study on cetacean interactions in Fiji longline fishery undertaken in collaboration with USP (DevFish); Bycatch mitigation and turtle release protocols promoted via FDOs' assignments; Bycatch mitigation tools purchased, distribution started; Funding for TOT course secured, training scheduled</li> </ul>

Component 3 – Nearshore pelagic fisheries		
<i>Triennium Objectives &amp; Outputs</i>	<i>2008 Activities and indicators</i>	<i>Assessment</i>
<p>Develop and disseminate awareness raising materials and resource materials to promote sea safety, new fishing initiatives, the results of fishing trials and experiments, and environmental issues (bycatch, pollution etc) targeting the fishing sector, other stakeholders and coastal communities at large.</p>	<ul style="list-style-type: none"> <li>• Sea safety awareness materials in vernacular language (minimum of two countries)</li> <li>• Pollution (marine debris) poster</li> <li>• Two information bulletins on sea safety produced</li> <li>• Move from old Fisheries Education and Training bulletin to a more dynamic/regular electronic bulletin on NFDTS training and development activities</li> <li>• Study report on role of women in tuna industry published</li> <li>• Project reports on FDO country assignments produced</li> <li>• At least 50 requests for technical information and resource materials attended to</li> <li>• Other awareness/training materials produced as needed</li> </ul>	<p>in mid-2009; Inputs into development of Regional Action Plan for Sea Turtle Mitigation through attendance to FFA turtle bycatch workshop in Nadi; Ongoing collaboration with OFP-based ERA project</p> <ul style="list-style-type: none"> <li>• NAU, NC (laminated check-lists and posters revised and printed for wide distribution as part of local sea safety campaign)</li> <li>• Poster and folded leaflet produced and distributed</li> <li>• Issue#4 produced, materials for issue# 5 gathered</li> <li>• Still using SPC Fisheries Newsletter for promotion of NFDTS activities; awaiting NFDTS webpage</li> <li>• Draft report modified by new consultant and distributed (DevFish)</li> <li>• Reports produced</li> <li>• Over 60 requests attended as of early December plus Stock of Fisheries Training videos distributed to Ministries of Education</li> <li>• Set of new materials for Observers training produced (in CBTA format) – collaboration with OFP; Several technical articles written for SPC Fisheries Newsletter (fish silage production, designs of sub-surface FADs); Funding for longline gear ID card set secured (FFA-AusAID); First draft of small-scale bait fishing methods manual produced; Contribution to OLPC project through ‘Sea safety check-list’ game; Printing and dissemination of several DevFish materials (reports, executives summaries and brochures); Inputs into development of FAO Guidelines for Best Practices in Safety at Sea.</li> </ul>

Component 3 – Nearshore pelagic fisheries		
Triennium Objectives & Outputs	2008 Activities and indicators	Assessment
<p><i>Output 3.3 Improvement in the per-unit value of Pacific Islands fisheries production.</i></p> <p><b>Generic activities</b> Promote and assist with the proper handling, processing and preservation practices to ensure high quality product is landed from domestic nearshore fisheries to maximise the value of the fishery and the returns to domestic fishermen.</p> <p>Promote and assist with the value-adding to products landed from nearshore fisheries, including the operation of domestic shore facilities, so that they meet international health standards or requirements for exporting high quality marine products.</p> <p>Using fishery performance indicators that are to be developed, assess the value of domestic nearshore fisheries to ensure the returns to Pacific Island countries and territories from these fisheries, is increased.</p>	<ul style="list-style-type: none"> <li>• A minimum of two sashimi tuna handling/grading workshops</li> <li>• On-board training on handling and preserving fish to export standards conducted in at least 3 countries</li> <li>• Expert assistance to companies or governments in the area of seafood quality management, value-adding or legislation (at least two consultancies/projects – funding permitting)</li> <li>• Once nearshore fishery performance indicators are developed, use these to measure changes in the value of the fishery</li> <li>• At least one other project or activity implemented</li> </ul>	<ul style="list-style-type: none"> <li>• Interest from CKI for training in tuna grading but firm request not yet received</li> <li>• WF (March), CKI (Sept), FJ (July and November)</li> <li>• Training assistance to staff of Competent Authorities – FJ, SAM, NIU, PNG;</li> <li>• Fish silage production project launched (NC-Lifou)</li> <li>• Pending development of economic impact indicators for offshore tuna fisheries by FFA ( Economics Indicators project)</li> <li>• Sport fishing trial project in CKI, implementation in 2009; Advisory service to Belep community in relation to scallop fishery project; Contacts made in Okinawa for giant squid fishing trials.</li> </ul>

#### **Part IV: Finances for 2008**

44. The total programme funding for the Coastal Fisheries Programme in 2008 was 168,000,000 CFP with an additional 14,730,000 CFP in core funding. In addition, the Coastal Fisheries Programme received 190,370,000 CFP in project funding in 2008 through the continuation of existing projects funded by the EU/EC, Commonwealth Secretariat, MacArthur Foundation, New Zealand, Australia, France, New Caledonia, Taiwan/ROC, FAO and ACIAR.

**Staff list for the Coastal Fisheries Programme in December 2008**

Coastal Fisheries Programme Manager	Lindsay Chapman
Nearshore Fisheries Development and Training Adviser	Michel Blanc
Coastal Fisheries Management Adviser	Ueta Fa'asili
Aquaculture Adviser	Ben Ponia
Fisheries Information Adviser	Jean-Paul Gaudechoux
Fisheries Training Specialist	Teriihauroa Luciani
Reef fisheries Specialist	Being Yeeting
Community Fisheries Scientist	Mecki Kronen
Senior Reef Fisheries Scientist (Vertebrates)	Silvia Pinca
Reef Fisheries Information Manager	Franck Magron
Fisheries Information Officer	Aymeric Desurmont
Fisheries Development Officer	Steve Beverly
Fisheries Development Officer	William Sokimi
Fisheries Development Officer	Jonathan Manieva
Coastal Fisheries Management Officer	Etuati Ropeti
Aquaculture Officer	Tim Pickering
Aquaculture Officer	Antoine Teitelbaum
Reef Fisheries Officer	Pierre Boblin
Reef Fisheries Officer	Kalo Pakoa
Reef Fisheries Officer	Emmanuel Tardy
Project Administrator	Marie-Therese Bui
Technical Support Officer	Youngmi Choi
Technical Support Officer	Sophie Mézières
Project Assistant	Jennifer Corigliano
Project Assistant	Marie-Ange Hnaujie
Project Assistant (PROCFish/C reports)	Celine Barre

## Summary Work Plan for 2009

Component 1 – Reef fisheries	
Triennium Objectives & Outputs	2009 Activities and indicators
<p><b>CFP Objective 1 - Assisting governments and administrations in the development of scientifically informed and socially achievable coastal ecosystem management systems, including coastal living resource components of national ocean policies.</b></p> <p><i>Output 1.1 Assessments of the status of national coastal living marine resource user groups, impacts on resources, existing impact management systems, and the current status of resources themselves.</i></p> <p><b>Generic activities</b> Establish and progressive improvement of surveys and quantitative assessments of the status of reef fisheries at the local, national and regional levels with special attention on socio-economic data.</p> <p>Assist Pacific Island countries and territories incorporate stakeholder input and environmental or ecosystem information to the development of baseline assessments of inshore resources.</p> <p>Support member countries and other SPC fisheries work areas in the dissemination of fisheries information, the development of various fisheries-related publications and marine awareness materials, and the setting up of a document repository or archiving system for fisheries data and publications.</p>	<ul style="list-style-type: none"> <li>• Conduct finfish, invertebrate and socioeconomic surveys as required and funds permit</li> <li>• Complete all PROCFish/C and CoFish country reports combining the finfish, invertebrate and socioeconomic data collected.</li> <li>• Conduct an assessment of the regional data set to try to identify indicators for reef fishery status and produce a report to summarise the findings.</li> <li>• If climate change funding is secured, develop monitoring protocols for detecting change to coral, habitat and resources from the effects of climate change, and trial these in 4 or 5 countries through establishing monitoring programmes with supporting database.</li> <li>• Develop database modules for the ReefDB to cover coastal fisheries export data, market surveys and other monitoring programmes as identified.</li> <li>• Conduct live reef fish or aquarium fish surveys in at least 1 countries in the region</li> <li>• Produce reports on this work with recommendations within 6 months of the survey work being done.</li> <li>• Provide information and advice to at least 1 country on specific fisheries or species to assist in baseline surveys that may lead to management interventions</li> <li>• Development of 2 manuals or bulletins in any area related to inshore fisheries management, and assistance to at least 2 countries in the provision of awareness materials on community-based ecosystem approach to fisheries management (CEAFM)</li> <li>• Production of awareness materials for PICTs fisheries administrations, including materials for schools and the general public</li> <li>• Produce at least 4 fish posters for PICTs</li> </ul>

Component 1 – Reef fisheries	
<i>Triennium Objectives &amp; Outputs</i>	<i>2009 Activities and indicators</i>
<p><i>Output 1.2 Assistance to members in developing or adapting cross-sectoral consultation processes to produce a scientifically and socially realistic national vision, or island visions, of the desired state and balance of usage of their coastal marine areas.</i></p> <p><b>Generic activities</b> Assist Pacific Island fisheries administrations with policy, socioeconomic and scientific advisory or analytical input to reef fisheries problems.</p> <p>Assist Pacific Island fisheries administrations through institutional strengthening and stakeholder participation to identify realistic national visions and missions for ocean policy development</p>	<ul style="list-style-type: none"> <li>• In collaboration with other CFP sections, produce a brochure on ciguatera in Fijian/Hindi, and produce an ecosystem approach to fisheries brochure and report.</li> <li>• Produce a training manual for collecting and analysing invertebrate data, and if time and funding permits, redo and update the finfish UVC manual</li> <li>• Produce at least 3 fully referenced scientific papers, and make presentations at 1 or more international conferences in regard to inshore fisheries research and the results of the PROCFish/C and CoFish programmes</li> <li>• Production of an updated fully-searchable CD/DVD with all Marine Resources Division publications and including FFA non-confidential documents; production of a weekly Fisheries News Clippings Service; Ongoing upgrading and updating of the CFP website; and production of a regional fisheries events calendar, a Fisheries Address book.</li> <li>• Initiate work on a regional Knowledge Exchange System for fisheries (funding permitting)</li> <li>• Assist in the organisation of small fisheries libraries or resource centres in collaboration with PIMRIS and follow-up with PIMRIS on the assistance to PICTs under the ODIN/PIMRIS project.</li> <li>• Management of Special Interest Group Networks and publication of 6 Information Bulletins in English and 6 in French. Four issues in English and 4 issues in French of the SPC Fisheries Newsletter will be produced in a timely manner</li> <li>• Publish one issue of Fork Length in English.</li> <li>• Provide advice and assistance to at least 1 country on specific reef fishery problems they are encountering</li> <li>• Participate and provide input to the CROP Marine Sector Working Group to encourage consistency in the regional organisation approach to assisting PICTs in the development of national ocean policies</li> <li>• Hold a Heads of Fisheries meeting to get member country input to the development of the new Coastal Fisheries Programme Strategic Plan that is aligned with the priority needs of members.</li> </ul>



Component 1 – Reef fisheries	
Triennium Objectives & Outputs	2009 Activities and indicators
<p><i>Output 1.3 Practical assistance to members, as necessary, in designing and implementing adaptive frameworks for the application of the Ecosystem Approach to coastal fisheries and aquaculture.</i></p> <p><b>Generic activities</b> Capacity development of Pacific Islanders in a range of areas including, fisheries science, development, management and others, through a range of training activities and initiatives.</p> <p>Assistance to Pacific Island countries and territories in developing fisheries policies, strategies or plans, including the development of coastal fisheries legislation through promoting maximum participation and input from all stakeholders.</p> <p>Assistance to Pacific Island countries and territories to develop specific reef fishery or species management plans, and/or community-based fisheries management programmes.</p>	<ul style="list-style-type: none"> <li>• Organise, conduct or participate in at least 2 regional or sub-regional workshops or trainings covering areas of fisheries management and the EAFM.</li> <li>• Conduct at least 2 national workshops in areas related to the management of inshore fishery resources</li> <li>• Organise and fund at least 5 training attachments to SPC or to other PICTs</li> <li>• Coordinate and participate in consultations to develop one regional short course in certain areas relating to fisheries management</li> <li>• Train local counterpart officers in at least 3 PICTs in different survey methodologies for inshore fishery resources or monitoring corals, habitat and resources for baselines for future effects of climate change.</li> <li>• Provide assistance to at least 2 PICTs for the development and/or review of coastal fisheries legislation</li> <li>• Provide assistance to at least 2 PICTs to establish national community-based ecosystem approach to fisheries management (CEAFM) programmes.</li> <li>• Provide assistance through six-monthly reviews of at least 2 national community-based fisheries programmes</li> <li>• Assist at least 2 PICTs to develop management plans and regulations for specific fisheries, such as an aquarium fish fishery, live reef fishery trade fishery, bonefish fishery, or deep-water snapper fishery.</li> </ul>

Component 2 – Aquaculture	
Triennium Objectives & Outputs	2009 Activities and indicators
<p><b>CFP Objective 2 - A regional support framework for economically, socially and environmentally sustainable aquaculture planning, research and development by Pacific Island governments and private enterprises.</b></p> <p><i>Output 2.1 A regional network of contacts to exchange ideas, overviews and experience on aquaculture issues both regionally and internationally.</i></p> <p><b>Generic activities</b> Expand and improve where necessary information clearing house mechanisms, such as the SPC aquaculture web-portal, special interest group bulletins, databases on expert contacts, statistics and trainees etc.</p> <p>Strengthen links to regional spheres of interest, in particular Australasia and Asia, and encourage regional collaboration where mutual benefits may occur.</p> <p>Maintain the status quo of SPC as the regional focal point for aquaculture within CROP agencies or other agencies, and advocate on behalf and for the benefit of the region at global forums concerning aquaculture policy and administration, particularly within the United Nations, FAO system.</p> <p><i>Output 2.2 Establishment of environmentally and economically sustainable aquaculture enterprises by Pacific government departments and/or private sector.</i></p> <p><b>Generic activities</b> Focus development on the key SPC aquaculture commodities accorded a priority through regional consultations, and continue programme support to ensure immediate and long-term priority needs in the sector are being assessed and addressed.</p>	<ul style="list-style-type: none"> <li>• Provide core networking services among government aquaculture focal points.</li> <li>• Maintain the SPC Aquaculture web-portal and update its features as a key information clearing house. Distribute the web-portal contents as a cd-rom version.</li> <li>• Collect and distribute information for public and regional interest of market notices, general announcements, new publications, expert contacts, national statistics and etc.</li> <li>• Continue membership responsibilities for the Network of Aquaculture Centres in Asia-Pacific (NACA) and pursue relevant links to other Australasian based institutions.</li> <li>• Maintain SPC's involvement in ongoing and upcoming ACIAR funded projects. In particular coordination of the ACIAR mini-projects with at least 6 research projects undertaken in 2009 with at least another 4 project concepts under development.</li> <li>• Assist in the reporting of the Pacific region in the global trends and statistics, e.g. FAO database and world status reports.</li> <li>• Participate in World Aquaculture Society (WAS) events including the World Aquaculture Conference 2008 where mutual benefits accrue.</li> <li>• Assist member countries to access regional expert agencies including USP, WorldFish Centre, SPC animal health, SPREP, SOPAC and FAO SAPA.</li> <li>• Prioritise the allocation of program funded resources towards development of the 12 key commodities identified under the SPC 2007 Action Plan.</li> <li>• Undertake programming visits to at least 6 SPC member countries to provide advice on national developments and regional linkages.</li> </ul>

<b>Component 2 – Aquaculture</b>	
<b><i>Triennium Objectives &amp; Outputs</i></b>	<b><i>2009 Activities and indicators</i></b>
<p>Assist in strengthening economic, environmental, and financial planning support to aquaculture enterprises in the region.</p> <p>Assist countries to develop the strategic framework required to sustainably manage the aquaculture sector (eg through National Sector Plans), as well as tactical interventions to overcome industry bottlenecks (eg through mini-research projects).</p> <p>Provide technical assistance and strengthen capacity where needed on a national and regional basis through a range of activities including training, consultancies, attachments and other interventions as required.</p>	<ul style="list-style-type: none"> <li>• Assist in the formulation and production of regional development policy for at least 2 priority commodities.</li> <li>• Particular emphasis will be accorded towards supporting the commodities which can address food security needs.</li> <li>• Address the need for economic support identified under the CFP 2004 review.</li> <li>• Develop resources and assist countries in undertaking financial and economic analysis of aquaculture enterprises.</li> <li>• Release updated economic modelling software of aquaculture commodities.</li> <li>• Provide support to ongoing efforts to provide institutional strengthening of aquaculture agencies in the Pacific.</li> <li>• Where invited, assist countries in bilaterally funded projects to steer these projects towards sustainable outcomes.</li> <li>• At least 2 Pacific Island countries to complete and submit national aquaculture sector plans for cabinet approval.</li> <li>• Support at least 2 Pacific Island countries in establishing peak bodies or associations which will contribute towards management of the aquaculture sector.</li> <li>• Provide support towards assessing the impact of climate change impacts.</li> <li>• A minimum of 8 significant projects addressing aquaculture bottlenecks will be addressed under the coordination of SPC.</li> <li>• A minimum of 3 months in-country assistance will be carried out, targeting Tonga, Solomon Islands, Fiji, Cook Islands, French Polynesia, Papua New Guinea, Samoa, Vanuatu, Kiribati, Wallis and Futuna and Micronesia.</li> <li>• At least 3 major consultancies organised to provide specialised advice of high regional significance.</li> <li>• A minimum of 6 new publications published under the SPC Aquaculture Technical Papers series.</li> <li>• A minimum of 6 regional and/or national training workshops or conferences organised/assisted. To include a workshop on CITIES certification for the ornamental trade.</li> <li>• A minimum of 6 training attachments organised within the region.</li> </ul>

Component 2 – Aquaculture	
Triennium Objectives & Outputs	2009 Activities and indicators
<p><i>Output 2.3 A regional support service to help in assessing, managing and mitigating the potential impacts of aquaculture, including exotic introductions and quarantine.</i></p> <p><b>Generic activities</b> Develop model quarantine protocols, import risk assessments (IRAs) and strengthen inter-agency links between fisheries, quarantine and environment agencies.</p> <p>Seek implementation of the proposed USD \$600,000 Regional Biosecurity project drafted in 2005 and put in place an operational biosecurity unit with a regional perspective, initially targeting several countries being a cross-sectional representation in which to develop models.</p> <p>Continue to develop best management practices in the aquaculture sector, and enhance capacity of veterinary and health services, disease management and response programmes and information databases.</p>	<ul style="list-style-type: none"> <li>• Organise at least 2 international study tours serving Pacific interests.</li> <li>• Increase capacity within SPC, presently lacking, to provide technical and field support for mariculture developments through additional resources or co-funding arrangements.</li> <li>• SPC will take an active role support or supervision of post-graduate studies (primarily M.Sc) program of at least 6 Pacific Island students studying at tertiary institutions in the Pacific.</li> <li>• Develop aquatic biosecurity initiatives..</li> <li>• Directly assist at least 2 countries to develop model Import Risk Analysis (IRA), quarantine protocols or Environmental Impact Assessments.</li> <li>• Assist in the documentation of introduction and translocation of species, the host pathogens of aquatic animals and geographical distributions.</li> <li>• Strengthen the Pacific regions reporting through the FAO's Aquatic Animal Pathogen and Quarantine Information System (AAPQIS) and the proposed SPC/OIE Pacific Animal Health Information System (PAHIS).</li> <li>• Seek funding and implementation for long term regional biosecurity support.</li> <li>• Depending on additional resources forthcoming from the proposed biosecurity project –2 countries will be initially targeted to develop aquatic biosecurity programs.</li> <li>• Assist the Pacific region to incorporate models of best management practices.</li> <li>• Depending on the additional resources forthcoming from the proposed biosecurity project – undertake programs relating to (1) development of biosecurity policy, strategies and technical guidelines; (2) risk analysis and quarantine; (3) disease diagnostics; surveillance and reporting; (4) information, communication and networking; (5) legislation enforcement; and (6) emergency preparedness and response.</li> </ul>

Component 3 – Nearshore pelagic fisheries	
Triennium Objectives & Outputs	2009 Activities and indicators
<p><b>CFP Objective 3 – Governments and administrations develop domestic nearshore commercial fisheries within a sustainable ecosystem context.</b></p> <p><i>Output 3.1 The output of economically viable Pacific Island commercial fishing enterprise matches the sustainable production capacity of the natural resource allocated.</i></p> <p><b>Generic activities</b> Promote the establishment or enhancement of national tuna fishing associations in member countries and encourage their participation with fisheries administrations, other government departments and tuna fishery stakeholders in the drafting of sustainable development and management arrangements for domestic nearshore fisheries.</p> <p>Conduct training needs assessments, assist with human resource strategy development, and coordinate training opportunities in priority fisheries areas not presently covered by local or regional training institutions, with an emphasis on vocational training for enterprise development.</p> <p>Strengthen stakeholder networks at the national and regional level for disseminating information and maintain a database on training providers, fisheries personnel training history, and people trained in the private sector.</p> <p>Develop fishery performance indicators that take into account the economic, social and environmental impacts of nearshore fishing operations.</p>	<ul style="list-style-type: none"> <li>• Enhance 5 tuna fishing associations, including associations' development plans and exit strategies for executive Officer's funded by DevFish.</li> <li>• In collaboration with FFA, assist in the drafting of tuna fishery development strategies in at least 1 ACP countries ensuring stakeholder participation</li> <li>• Assist in the drafting of a minimum of 2 fisheries training plans/strategies.</li> <li>• At least 4 regional courses coordinated (including fishing methods and sea safety for Fisheries officers; ToT course on bycatch mitigation).</li> <li>• A minimum of 5 national courses and workshops facilitated</li> <li>• A minimum of 2 individual training attachments</li> <li>• Ongoing maintenance of database of training providers (Fisheries Training Directory)</li> <li>• Ongoing maintenance of trainees' database</li> <li>• Ongoing upgrading, reformatting and maintenance of the NFDTS and DevFish web pages / website</li> <li>• Collaborate with OFP to place regional observers course online.</li> <li>• Strengthening of networks within the maritime sector and Pacific marine educators</li> <li>• DevFish communication strategy developed and implemented.</li> <li>• Ongoing strengthening of tuna fishing associations / PITIA network.</li> <li>• Indicators developed for the tuna fishery through the collaborative SPC and FFA DevFish project</li> </ul>

Component 3 – Nearshore pelagic fisheries	
<i>Triennium Objectives &amp; Outputs</i>	<i>2009 Activities and indicators</i>
<p><i>Output 3.2 Resource materials and case-specific advice, training and mentoring on appropriate fisheries and fishing techniques.</i></p> <p><b>Generic activities</b> Experiment with different small- and medium-scale nearshore fishing activities to develop new economically viable, sustainable and environmentally friendly fishing activities.</p> <p>Provide technical assistance and hands-on training to promote economically viable domestic nearshore fishing operations, including sea safety and safe vessel operations, in line with the ecosystem approach to fisheries principals, especially in regard to bycatch and other environmental issues.</p> <p>Develop and disseminate awareness raising materials and resource materials to promote sea safety, new fishing initiatives, the results of fishing trials and experiments, and environmental issues (bycatch, pollution etc) targeting the fishing sector, other stakeholders and coastal communities at large.</p>	<ul style="list-style-type: none"> <li>• Collaborate with NMFS/Hawaii on a hook exchange project in the Cook Islands swordfish fishery where sea turtle bycatch is an issue.</li> <li>• Continue to experiment sub-surface and shallow-water FAD designs.</li> <li>• Seek funding to undertake a feasibility study of giant-squid fishing in one PICT.</li> <li>• Coordinate 4-stroke OBM trials in Samoa as part of strategy to reduce fuel costs in Alia fishery (DevFish).</li> <li>• <i>Promote the use of FADs and assist a minimum of 5 countries with their FAD programmes, including training in sea safety and FAD fishing techniques.</i></li> <li>• Conduct at least one in-country technical assistance and/or training project on tuna longlining, safe vessel operations or other nearshore fishing methods.</li> <li>• Coordinate feasibility study for sportfishing in 1 PICT.</li> <li>• Promotion of bycatch and other environmental issues in nearshore fishing operations including distribution of bycatch mitigation tools and cetacean depredation study in Fiji (DevFish).</li> <li>• Sea safety awareness materials in vernacular language (minimum of two countries).</li> <li>• At least one information bulletin on Sea Safety produced.</li> <li>• Continue collaboration with FAO on development of Guidelines for Best Practices for Safety at Sea in the Fisheries Sector.</li> <li>• Produce longline gear identification card set.</li> <li>• Manual on small-scale bait fishing techniques finalised and produced.</li> <li>• Compile technical information for future manual on shallow-water FADs.</li> <li>• Project and duty travel reports produced in a timely manner.</li> <li>• Stakeholders regularly informed on NFDTS and DevFish projects and activities (e.g. via Fisheries Newsletter articles, email news, website updates).</li> <li>• DevFish technical reports printed and disseminated.</li> </ul>

Component 3 – Nearshore pelagic fisheries	
<i>Triennium Objectives &amp; Outputs</i>	<i>2009 Activities and indicators</i>
<p><b>Output 3.3 Improvement in the per-unit value of Pacific Islands fisheries production.</b></p> <p><b>Generic activities</b> Promote and assist with the proper handling, processing and preservation practices to ensure high quality product is landed from domestic nearshore fisheries to maximise the value of the fishery and the returns to domestic fishermen.</p> <p>Promote and assist with the value-adding to products landed from nearshore fisheries, including the operation of domestic shore facilities, so that they meet international health standards or requirements for exporting high quality marine products.</p> <p>Using fishery performance indicators that are to be developed, assess the value of domestic nearshore fisheries to ensure the returns to Pacific Island countries and territories from these fisheries, is increased.</p>	<ul style="list-style-type: none"> <li>• At least two DevFish technical summary reports translated into French and distributed.</li> <li>• At least 50 requests for technical information and resource materials attended to.</li> <li>• Other awareness/training materials produced as needed</li> <li>• A minimum of one sashimi-tuna handling/grading workshop implemented.</li> <li>• On-board training on handling and preserving fish to export standards conducted in at least 2 countries.</li> <li>• Expert assistance to companies or governments in the area of seafood quality management, value-adding or legislation (at least two consultancies/projects – funding permitting).</li> <li>• Promote fish silage production as a way to add value to catches from nearshore and coastal fisheries;</li> <li>• Once nearshore fishery performance indicators are developed, use these to measure changes in the value of the fishery (in collaboration with FFA).</li> <li>• At least one other project or activity implemented</li> </ul>

## **Part VI: Estimated finances for 2009**

45. The total programme funding for the Coastal Fisheries Programme in 2009 is set at 168,000,000 CFP with an additional 14,810,000 CFP in core funding, although reductions of up to 22% in programme funding are expected as a result of exchange rate variation of the Australian and New Zealand dollars. In addition, the Coastal Fisheries Programme will receive an estimated 242,000,000 CFP in project funding in 2008 through the continuation of existing projects funded by the EU/EC, Commonwealth Secretariat, MacArthur Foundation, New Zealand, Australia, France, New Caledonia, Taiwan/ROC, FAO and ACIAR.