

**SECRETARIAT OF THE PACIFIC COMMUNITY****FORTY-FIRST MEETING OF THE
COMMITTEE OF REPRESENTATIVES OF GOVERNMENTS AND ADMINISTRATIONS)**

(Noumea, New Caledonia, 1– 4 November 2011)

Technical and Scientific Agenda – Work Programme Presentations

**AGENDA ITEM 4.4 – FISHERIES, AQUACULTURE AND MARINE ECOSYSTEMS DIVISION
REPORT**

(Presented by the Secretariat)

SUMMARY

1. This paper reviews the achievements of the Fisheries, Aquaculture and Marine Ecosystems Division in 2011, and outlines work planned for 2012.
2. The division has made good progress during 2011 in implementing the work programme. The achievement of higher level objectives is difficult to evaluate on an annual basis but will be analysed during a review of the strategic plan in early 2012. Some new work areas will also be developed in response to decisions by Heads of Fisheries. More emphasis on helping to understand and adapt to the impacts of climate change is planned, subject to approval of some proposed new projects. If these are approved, the division will be well supported by project funding, but the reduction in recurrent funding is a concern. It is proving difficult to provide services to territory members who are excluded from access to the main sources of project funding.

RECOMMENDATIONS

3. CRGA is invited to:
 - i. Note the results delivered by the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division and its achievements during 2011.
 - ii. Note the recommendations of the 7th Heads of Fisheries meeting and approve steps already taken to put these into action.
 - iii. Discuss the need for funding mechanisms to improve the integration of territory members of SPC into the FAME work programme.
 - iv. Approve the outline of the 2012 work programme and endorse in principle the new initiatives proposed in the area of climate change adaptation, particularly:
 - a) a proposal for AusAID climate change funding for a two-year programme to improve monitoring, develop adaptation measures and build capacity in all areas related to fisheries and climate change;
 - b) a proposal to the French Development Agency (AFD) and the French Global Environment Fund (FFEM) for the RESCCUE (Restoration of Ecosystem Services against Climate Change Unfavourable Effects) project to develop integrated coastal zone management to strengthen adaptation to climate change.
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FISHERIES, AQUACULTURE AND MARINE ECOSYSTEMS DIVISION

PURPOSE

1. This paper reviews the achievements of the Fisheries, Aquaculture and Marine Ecosystems Division in 2011, and outlines work planned for 2012. The division held its seventh biennial full Heads of Fisheries meeting (HoF7) in March 2011, which provided direction for some new initiatives. The paper presents the main recommendations of HoF7 for CRGA approval.

PRESENTATION OF THE DIVISION

2. The division consists of two programmes: the Oceanic Fisheries Programme (OFP) and the Coastal Fisheries Programme (CFP). The Director's Office provides oversight and support for both programmes.
3. The goal of the division is **the sustainable management of the marine resources of the Pacific Islands region for economic growth, food security and environmental conservation.**
4. The goals of the coastal and oceanic programmes are respectively:
**Pacific Island countries and territories (PICTs); and
management of fisheries exploiting the region's resources of tuna, billfish and related species for economic and ecological sustainability using the best available scientific information.**
5. The work that contributes to the achievement of these goals during 2011 is reported in Annex 2 by objective and result area. This will be updated at the end of the year and will form the basis of the division's annual report, which will be published after the end of the programme year on December 31.
6. Annex 1 contains the summary of results by country, providing an update on progress in implementing the fisheries sector part of the various joint country strategies, as well as resources (funding and staff time) expended.

Finance

7. The revised budget for the division for 2011 was 13,016,300 CFP units (equivalent to approximately USD 15 million at current exchange rates). The breakdown between the two programmes and the Director's office (which includes some projects which are implemented by both programmes) is shown in table 1.

Table 1: Revised expenditure budget of FAME for 2011 in CFP units

	Director	OFP	CFP	Division
Recurrent	540,600	1,156,200	1,295,600	2,992,400
Project	1,717,600 ¹	6,050,100	2,256,200	10,023,900
Total	2,258,200	7,206,300	3,551,800	13,016,300

¹ Includes CRISP (Coral Reef Initiatives for the Pacific) and DevFish 2 (Development of Sustainable Tuna Fisheries in Pacific ACP Countries – Phase II) projects for which the Director has administrative oversight.

8. Project funding was boosted by the approval of several projects in late 2010 and early 2011 (as foreseen in last year's report to CRGA), while recurrent funding was reduced by 8% when the budget was revised as a result of cuts in SPC programme funding.
9. Although total funding is at a higher level than in previous years, the cut in programme funding puts the division in the paradoxical position of having to leave key programme-funded positions vacant (they were programme funded precisely because this was thought to be a sustainable source of finance) and also causes difficulty in delivering services to some members, as much of the project funding is restricted to support for members of the African Caribbean and Pacific Group of States (ACP). This is discussed further below.

Staffing

10. As at the end of September, the division has 86 staff, of whom 34 are female (40%). The breakdown is shown in table 2.

Table 2: Staffing of FAME as at September 2011

	Director's Office	OFP	CFP	Total
Professional	3	28	18	49
Technical	3 ²	28	1	32
Administrative	1	2	2	5
Combined	7	58	21	86

11. Staffing levels have increased since 2009, with more professional (internationally recruited) and considerably more technical staff employed. The increase in technical staff reflects the recruitment of additional data control technicians, currently on short-term contracts, to enter oceanic fisheries data, particularly data collected by observers. The number of administrative staff has been reduced by one.
12. Nineteen nationalities are now represented among the professional staff, and 16 of the 49 posts are held by nationals of Pacific Island countries. The number and proportion of both Pacific Island and female professional staff employed by the division has increased since last year. As in previous years, there are technical staff seconded to national fisheries administrations (of New Caledonia, French Polynesia, Solomon Islands and Federated States of Micronesia [FSM]). The division continues to take a cautious approach to decentralisation of staff. In 2010 one professional position was placed in each of the Suva and Pohnpei offices, and before the end of 2011 they will be joined by two new professional staff (working in aquaculture enterprise development and observer training) based in Suva. In addition, two data control technicians have been recruited to work in the Pohnpei office.

PROGRESS TOWARDS ACHIEVING STRATEGIC PLAN OBJECTIVES

13. A statement of work under each strategic plan objective and result area is provided as Annex 3, which details progress in implementing the work plan for 2011. This section therefore just highlights some of the main results to date in support of the objectives of each programme.

² Includes one person replacing an officer on maternity leave.

Director's Office

Objective 1 – Develop and sustain effective relationships between the division and its stakeholders.

14. Highlights under this objective included the successful conclusion of HoF7, which provided guidance for the future direction of the programmes; and the development of fisheries components for the joint country strategies of Papua New Guinea (PNG) and New Caledonia. Relations with regional organisations involved in the management of tuna fisheries remained strong, and a new memorandum of understanding agreed with the Parties to the Nauru Agreement (PNA) formally appoints SPC to provide scientific services to this important group.
15. In the area of resource mobilisation, a joint Forum Fisheries Agency (FFA)/SPC project was signed with the New Zealand Aid Programme in March that will provide SPC with more than USD 2 million over three years to support the development of national fisheries observer programmes. Subject to a formal exchange of letters, approval was granted by the Australian Agency for International Development (AusAID) for a second phase of the Pacific Fisheries for Food Security project. This will provide AUD 4.7 million over four years for inland aquaculture development, national tuna fisheries monitoring and data management, and deepwater snapper stock assessments.

Objective 2 – Promote informed policy decisions and public awareness of marine resource issues in the Pacific.

16. This objective is the basis of much of the work of the Fisheries Information Unit, which continued to produce a range of high quality publications, including the SPC *Fisheries Newsletter* – now in full colour. Other 'routine' work included improvements and regular updating of the website, incorporation of new publications in the fully searchable digital library (available on the Web or on CD), and the 2011 Fisheries Address book providing over 1,700 fisheries related regional contacts. An inventory of all print materials held at SPC was completed, and distribution of these to member countries is a priority. A large order of training materials was recently supplied to the National Fisheries College in PNG.
17. A new initiative has been the production of a series of fact sheets for community workers on important groups of fish and invertebrates. These provide accurate, easily understood information for use when developing community based management measures. This has drawn on the expertise of CFP staff as well as that of non-government organisations (NGOs) working in marine conservation, who are looking forward to getting this resource out to their fieldworkers. Communications targets for the year have been achieved, with several articles in regional and national print media and a number of radio interviews given to inform the wider public on fisheries issues. It has recently been decided to outsource the communication of the results of some of the division's major projects, and a specialist has been selected following international tender to develop material using print and video media.

Coastal Fisheries Programme

Objective 1 – Assist governments and administrations in the development of scientifically informed and socially achievable coastal fisheries management policies and systems in line with the guiding principles of the Apia Policy.³

18. This largely involves improving the ability of PICTs to evaluate and manage coastal fisheries resources, with a focus on beche-de-mer, which has been widely overfished. Following in-country practical training missions, two countries, Marshall Islands and Vanuatu, now have the capacity to

³ The Pacific Islands Regional Coastal Fisheries Management Policy 2008–2013 ('the Apia Policy') was endorsed by the 4th Ministerial Forum Fisheries Committee (FFC) in 2008.

carry out invertebrate resource assessments, with similar capacity building underway in Solomon Islands. In Tonga, where this field training was carried out in 2010, national fisheries administration staff worked with SPC counterparts to analyse the results and develop management advice. It is strongly recommended that Tonga close its beche-de-mer fishery in 2012, joining three other countries that have already taken this step so that stocks can rebuild.

19. Improved legislation and management measures have also resulted from work under this objective. Tuvalu has a draft Fisheries Management Bill with the Crown Law Office for submission to Cabinet. (FFA provided support for oceanic fisheries components, while SPC helped to develop the coastal measures). Assistance in developing national management plans for specific fisheries was provided in Tonga, Marshall Islands, Kiribati, PNG, Solomon Islands and Cook Islands. Tonga, Samoa, Nauru and Kiribati have all been able to expand the range of their community based management arrangements with SPC help.
20. Climate change represents a major threat to coastal fisheries resources, and PICTs need baseline data to monitor its impact. Teams in Marshall Islands and Tuvalu can now conduct baseline surveys for finfish and invertebrate resources and their habitats thanks to support provided through the climate change project, with the same surveys and capacity building to take place in Kiribati and FSM before the end of the year. This project uses work with SPC as a career building step, and the two trainers will themselves return to Samoa and Fiji with new skills and experience after the end of their 12 month contracts as junior professionals.

Objective 2 – Provide a regional framework for sustainable aquaculture, in the areas of planning, research, development and trade, for Pacific Island governments, private enterprises and other stakeholders.

21. Beche-de-mer was also a focus of the Aquaculture Section at the start of the year, when SPC co-hosted with the Australian Centre for International Agricultural Research (ACIAR) an international meeting to review experience with the culture and stock enhancement of sandfish (one of the more valuable species). Fisheries staff members from Cook Islands, Fiji, FSM, Kiribati, PNG, Samoa, Solomon Islands, Tonga and Vanuatu are now fully up to date regarding opportunities and constraints in this area. There was also strong interest from New Caledonia, where there are ambitious plans to restock and farm sandfish. As usual, technical advice was provided across a wide range of aquaculture activities – from the design of a milkfish hatchery in Nauru to the compilation of an aquaculture development plan for the Northern Mariana Islands. The completion of a risk assessment for the introduction of Nile tilapia into Solomon Islands will allow the government to make an informed decision on whether to use this species to boost production for food security.
22. Building skills in aquaculture is essential for the development of this fledgling industry. SPC staff completed a training needs assessment for PNG – a country that has many more inland fish farmers than the rest of the PICTs put together – and will help develop the curricula for the necessary courses, which will be delivered mainly by the National Fisheries College. Two MSc students completed their projects under the supervision of SPC aquaculture staff, and two more are in progress.
23. A major study on the opportunities and constraints to development of mariculture in the Pacific Islands was underway when this report was prepared, and the results will be presented at a regional meeting jointly organised with the UN Food and Agriculture Organization (FAO). This is expected to provide some new directions for the future of this sector, which has previously been slow to take off in most SPC members.

Objective 3 – Develop sustainable nearshore fisheries in PICTs to provide food security, livelihoods and economic growth.

24. To increase sustainable fishing opportunities, Solomon Islands, FSM (Pohnpei) and Kiribati have been provided with the necessary skills to construct and deploy fish aggregating devices (FADs); associated with this programme has been training in new fishing skills to enable dozens of fishermen to increase their effectiveness fishing around FADs. As part of this capacity building, fishers and government staff are also being made more aware of sea safety issues. Experimental fishing trials will soon be conducted in Marshall Islands targeting community-based fishing for small pelagic fish for food security – another opportunity to increase fish production in a sustainable manner.
25. Fishing associations have been supported in Cook Islands, Tuvalu and Solomon Islands under the EU-funded Development of Sustainable Tuna Fisheries in Pacific ACP Countries – Phase II (DevFish2) project, providing stakeholders with a voice in the formulation of tuna fishery development and management arrangements, and providing a direct channel for support to the private sector. Two new services provided by in support of this objective have also been greatly in demand: economic analysis has been provided for a number of projects, including the FAD programme in Niue, and longline fishing trials in Wallis and Futuna to inform future development; and the authorities involved in certifying seafood exports to Europe (‘competent authorities’) in Solomon Islands, Fiji, PNG and Vanuatu have received the first parts of an extended programme of technical assistance to help meet the demanding requirements.

Oceanic Fisheries Programme

Objective 1 – Provide high-quality scientific information and advice for regional and national fisheries management authorities on the status of, and fishery impacts on, stocks targeted or otherwise impacted by regional oceanic fisheries.

26. Region-wide stock assessments were completed on all four of the major tuna stocks and accepted by the Scientific Committee of the Western and Central Pacific Fisheries Commission (WCPFC). These will form the scientific basis of a new management measure, aimed at further reducing catches of bigeye tuna; as well as establishing exploitation targets for skipjack and yellowfin tuna. Analysis of existing measures has shown that, while not sufficient, the three-month closure of fishing on FADs is having some effect, and this will probably be continued and possibly extended. In terms of non-target species that are of concern, good progress was also made in the implementation of the shark research plan. Management measures at WCPFC are largely driven by the FFA member countries and the subregional groupings, which also develop measures for application in their own areas of jurisdiction. Considerable effort was devoted to providing these groups with the scientific advice and support that they require, including provision of a scientist to work full-time on such initiatives, with support from other programme staff.
27. The programme released two new products during the year to assist national fisheries administrations. Secure national webpages for each member now provide regularly updated analysis of the key features of the tuna fishery in their waters. This supplements, but of course does not replace, direct national-level advice – which has recently focused on supporting the development of a new tuna management plan in Solomon Islands. A second product – the TUNA Management Simulator (TUMAS) can be downloaded from the Internet and – based on the current stock assessments for skipjack, yellowfin and bigeye – allows anyone to model the effects of expanding or reducing the various fishing fleets. This allows fisheries managers to test for themselves the likely impacts of management measures. The capacity of national tuna managers to interpret stock assessments was developed with workshops both at the advanced level and for less experienced staff – part of the ongoing series of stock assessment training workshops. Twenty-one of SPC’s twenty-two members participated in this training, with many sending extra participants at their own expense.

28. An encouraging result in terms of OFP's overall objective is the recent recommendation for a large part of the purse-seine fishery for skipjack in PNA waters to be certified as a sustainable fishery by the Marine Stewardship Council (MSC). If this proceeds through the rest of the process satisfactorily, it will be the first major tuna fishery in the world to get MSC certification. OFP staff have assisted the certification process by providing information to the assessment team, and will work with PNA to develop the additional measures that have been specified as conditions of the certification.

Objective 2 - Collect and analyse accurate and comprehensive scientific data for regional and national fisheries management authorities on fisheries targeting the region's resources of tuna, billfish and other oceanic species.

29. The programme continued to tackle the huge volume of data entry and analysis needed to maintain an accurate picture of the region's oceanic fisheries. The volume of data processed has grown enormously with increased observer coverage, and additional data entry staff have been employed in Noumea and Pohnpei to handle this workload as well as staff to manage data quality. To give an idea of the work involved, in the last 12 months the following data have been entered: 191,663 fishing operation records on **logsheets** (includes catch by species, effort and positional information); information from 156,773 events recorded by **observers** (includes detailed catch by species, detailed effort and position information); and 1,723,996 individual fish measurements collected by **observers and port samplers**.
30. While nearly all the work focuses on SPC members, fishing in neighbouring countries impacts on the resource and the data on these fisheries is in need of improvement. Technical assistance from SPC has been provided to Indonesia, the Philippines and Vietnam, funded by the Western Pacific East Asia Oceanic Fisheries Management Project (a project funded by the Global Environment Facility and being implemented by WCPFC and the three countries mentioned), resulting in considerable refinement of catch and effort estimates.
31. The analysis of this data is provided to countries and regional groupings on a regular basis through the Catch and Effort System (CES). Training was provided to FFA fisheries managers to improve their skills in using the CES system, which itself has been upgraded by including data from the region's vessel monitoring system. The system for management of data at the national level, TUFMAN, also continues to be refined and now incorporates new routines to help detect illegal fishing. TUFMAN training was conducted at regional Tuna Data Workshop, and in-country in FSM, Fiji, Marshall Islands, Palau, Samoa, Solomon Islands, Tonga and Tuvalu. SPC has also provided data audit services to FSM and will audit data and systems in Fiji in October to identify gaps in data coverage.
32. A further 100 trained observers will be available for deployment by the end of the year, bringing the total in the region up to 660; this is a significant number of jobs and represents an improvement in the monitoring of the fishery. SPC staff are increasingly turning their attention to the personnel and systems needed to support the rapid growth of this activity, with training of trainers and debriefers delivered, as well as support to national observer coordinators in managing their national observer programmes.

Objective 3 – Improve understanding of pelagic ecosystems in the western and central Pacific Ocean

33. The 'flagship' project in support of this activity in 2011 was the new PNG-funded tagging project, which completed its first year of activities, including tagging operations from April to July with 40,000 tuna tagged and released. This will be supported by two central Pacific cruises in October and November, targeting the tagging of bigeye tuna in particular. Since the start of the current programme of tagging operations, over 312,000 tuna have been tagged, and 43,700 tags (14%) have been returned. Of course, despite the widespread publicity, rewards offered, and a network of tag

recovery officers, not all of the tagged tuna captured are reported back to SPC – a tag may simply not be seen when large volumes of fish are being handled, for example. To estimate the level of under-reporting, a series of trials have been set up in which observers insert tags into fish that have already been caught onboard the vessel. The proportion that are returned to SPC, and whether they come from the vessel crew, stevedores unloading the catch, or workers in fish factories processing it, both allows estimates of reporting rates from different fisheries and pinpoints where more awareness-raising may be needed. Data from the tagging programmes were used this year to improve the stock assessments of skipjack, yellowfin and bigeye tuna.

34. SPC has, for some time, been working with *Collecte Localisation Satellites* of France (CLS) on the development of a new tuna population modelling programme called SEAPODYM. This system relies less on information from the fishery, but estimates the abundance and distribution of tuna from knowledge of their behaviour in response to the availability of food and oceanographic conditions. This allows prediction of the impacts of changes in climate, as well as the opportunity to look at what will happen in relatively small areas of ocean (national exclusive economic zones [EEZs] or even parts of an EEZ). The system is now fully functional for three species (skipjack, bigeye and South Pacific albacore) and should include yellowfin by the end of this year or early 2012. The model has already been used this year to predict climate change impacts on tuna, as well as to produce two national tuna resource profiles.
35. This objective also covers the work to improve knowledge of the basic biology of tuna and related species – growth rates, reproduction, and diet – through a programme of sampling and analysis. These parameters are used to improve the models used for stock assessment. Important new information on the growth of bigeye tuna was provided during the year. Work on understanding the food chains of tuna continues.

Coral Reef Initiatives for the Pacific (CRISP)

The aims of the CRISP project are to develop a vision for the future of coral reefs and of the people who depend on them and to introduce strategies and projects to conserve their biodiversity while developing the economic and environmental services that they provide both locally and globally.

36. As the programme is officially ending in December 2011, the year was mainly dedicated to synthesising the results and outputs and obtaining new funding for the continuation of several successful activities that have been developed under CRISP. Some existing activities were, however, still ongoing in 2011.
37. The synthesis of outputs of the CRISP programme draws on four round-table meetings that were held in New Caledonia (March 2011), French Polynesia (March 2011), Fiji (April 2011) and Vanuatu (April 2011) to gather lessons learned and discuss future directions. An important output will be an interactive DVD that will be released in October 2011; this will allow access to more than 800 CRISP products.
38. The ongoing CRISP activities in 2011 were essentially the capture and culture of postlarvae (focusing on French Polynesia, FSM and Kiribati), economic studies (Vanuatu and regional), a shark connectivity study in the Coral Sea and support to the sustainable management of reef fish spawning aggregations in partnership with the Society for the Conservation of Reef Fish Aggregations (SCRFA) (including presentations at the International Coral Reef Initiative meetings and HoF7).

Cross-cutting initiatives

Gender

39. The Scientific Support for the Management of Coastal and Oceanic Fisheries in the Pacific Islands Region (SciCOFish) 'Gender in Oceanic and Coastal Fisheries Science and Management' assessment was conducted through a consultancy and benchmarked the current situation in Solomon Islands (Melanesia), Marshall Islands (Micronesia) and Tonga (Polynesia). The report and four-page summary brochure outlines some steps that can be taken to break down the barriers to gender equality in the sector, which include raising the profile of fisheries as a potential career and of women already working in the sector, providing a support network, and improving the work environment and conditions at the institutional level. Some of the interventions recommended include the development of promotional materials and special interest stories focusing on successful women in the sector; facilitating the dissemination of information to schools and universities covering opportunities in fisheries and marine science and management; and providing funding for scholarships, fisheries staff training and attachments, and short-term attachments for youth in the fisheries sector. The outcomes of this study are now being assessed and incorporated across the work areas of the division.

Climate change

40. Staff from all FAME work areas have contributed to the *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change* publication, and the topic formed the basis of a full day of presentations and discussion at HoF7. Both programmes are implementing specific projects in the climate change area, with a focus on predicting and monitoring impacts. The division has also worked closely with the Coping with Climate Change in the Pacific Islands Region project funded by the German Department for International Development (GIZ) to develop a work plan for climate change adaptations for the fisheries sector in most of the 12 PICTs that will benefit from this initiative.

Ocean policy

41. FAME continues to participate in the Marine Sector Working Group (MSWG), although the convener of the group during 2011 was FFA (in line with an agreement that this role alternates between the two organisations). The main task of MSWG has been to progress the Oceanscape initiative, in line with directives of the Forum Leaders. The Forum Secretary-General has now assumed the role of Ocean Commissioner, with the support of the heads of other organisations making up the Council of Regional Organisations in the Pacific (CROP) in their respective areas of expertise. Some progress has already been made in securing funding for the initiative – initially technical support for the Commissioner – and a proposal to the Global Environment Facility is in preparation.

OUTCOMES OF THE 2011 HEADS OF FISHERIES MEETING

42. The seventh SPC Heads of Fisheries (HoF) Meeting took place at SPC headquarters in Noumea from to 4 March 2011. It was chaired on behalf of PNG by Leban Gisawa. HoF is a regional meeting of the heads of SPC member country and territory fisheries departments, or their deputies, covering the entire range of interests for which they have responsibility and on which the FAME Division provides advice and assistance. As such, the HoF meeting plays a unique role in providing strategic guidance to both CFP and OFP.

43. The full report of outcomes of the meeting is presented as Annex 5. To summarise briefly, HoF reviewed the work programme of the division and expressed strong support for the continuation of services proposed. Some recent changes of emphasis also met with approval. For CFP this includes new work areas on coastal fisheries economics, support for countries in meeting export requirements for fisheries products, and a renewed focus on fisheries legislation (in partnership with FFA). For OFP the meeting noted with appreciation the new systems for delivering national level scientific advice, and the increased emphasis on managing the data collected by fisheries observers. The meeting identified the areas in which FAME support for members is an ongoing requirement, and endorsed efforts to secure more sustainable sources of funding for these. Members from the territories also expressed their concern that an increasing reliance on project funding can see them excluded from activities that target the ACP countries in particular.
44. Three new work areas were identified as priorities for FAME:
- Assisting members with stock assessment of deepwater snapper resources;
 - Support for national tuna database development, particularly for small-scale fisheries; and
 - Assistance with inland aquaculture development, with emphasis on the areas of biosecurity and aquatic animal health.
45. These three areas, with their close links to food security in PICTs, were identified as suitable for support under Part 2 of the AusAID Fisheries for Food Security project, which is currently advancing through the approval process.
46. Benefiting from expertise of the new Applied Geoscience (SOPAC) division of SPC, the meeting discussed the issue of maritime boundaries and noted the urgency of finding solutions to the long-running problem faced by many members in properly establishing their boundaries. SPC was urged to be proactive in providing support, with the assistance of other partners. A full-day session was also devoted to climate change, with presenters giving a comprehensive preview of the findings of the vulnerability assessment. The meeting provided detailed guidance on the structure of the national summaries to be developed as part of this project.

2012 WORK PROGRAMME AND BUDGET

47. The expected outputs of the division for 2012 – which can be achieved with the financial resources that have been secured – are summarised in the ‘green book’ budget. It is not always easy to separate the results of recurrent and project funding – some results require the input of resources from both, reflecting the alignment of projects with the strategic plan and a chronic shortage of recurrent funding.
48. These results are developed into a more detailed work plan in the first weeks of the year, which itself feeds into the performance appraisal system. Each member of staff is effectively assigned responsibility for delivering on relevant parts of the work programme. While the general areas of work are well defined, the benefits of detailed planning must be balanced against the need for flexibility. Fisheries issues can evolve quickly, making planned work redundant but bringing up new requirements. Member fisheries agencies often state that they value the flexibility and responsiveness of SPC in helping them deal with the unexpected; they can get help from other partners when the needs are foreseen well in advance.
49. The main work areas and projects of the division are described in the report on 2011 results. During 2012, implementation of these programmes will of course continue. This section of the report will therefore focus on some new initiatives.

Director's Office

Strategic plan

50. The year will begin with an internal mid-term review of the FAME strategic plan. It is often difficult to measure progress towards higher level objectives on an annual basis, so the review will evaluate positive developments in the region's fisheries and the extent to which FAME's work has contributed to these and lessened the impacts of unfavourable changes. It will also provide an opportunity to incorporate some of the new emphasis in FAME's work arising from direction by the Heads of Fisheries meetings and joint country strategies. A greater focus on adaptation to climate change in the fisheries sector is envisaged. The outcomes of the review will be presented for discussion and approval to a 'mini' Heads of Fisheries meeting in Honiara in May.

Communications

51. There will also be a new focus on communication of project results, following the outsourcing of this task to a professional communications consultant. A new policy brief on oceanic fisheries and a video on the requirements for a sustainable aquarium export business are planned. A second new initiative will be the development of educational materials on marine resource management for use in schools as part of the 'life skills' curriculum.

Coastal fisheries

Working with NGOs in project delivery to coastal communities

52. FAME collaborated with the Nature Conservancy (TNC) on the development of community-based fisheries management guidelines for the Pacific, with the Locally Managed Marine Area (LMMA) Network in the production of information sheets for fishing communities, and with other NGOs through a workshop on monitoring for management of coastal resources. FAME will pursue this collaboration and develop new links, including relating to the standardisation of monitoring protocols and data collected when working with coastal communities.

Moving forward with the development of mariculture commodities in the region

53. The results of the current review of mariculture development opportunities and constraints in PICTs will set the focus for SPC assistance in the coming years on the commodities that can be realistically developed in the region. This will be the first task of the new Aquaculture Officer (Mariculture) who starts with SPC in October this year, and PICT aquaculture specialists will have the opportunity to discuss this at the SPC/FAO Regional Aquaculture Workshop.

FAD technology and cost-effectiveness

54. The use of moored FADs has been identified as one of the most effective ways to improve the productivity in nearshore fisheries targeting tunas and other pelagic species. An international symposium on FADs will be held in French Polynesia in November and will bring together experts from around the world to assess FAD designs and their effectiveness, and to share experiences. This will be used to improve current national FAD programmes in the Pacific. SPC will also be undertaking cost benefit analyses of FAD programmes to highlight their importance for nearshore fisheries.

Oceanic fisheries

Stock assessment

55. In addition to the assessment of tuna, with a new assessment of the albacore resource planned in 2012, there will be a new focus on non-target species impacted by the fisheries. Assessments of striped marlin and preliminary assessments of two shark species will be completed during the year.

Reference points

56. Turning scientific advice into effective management action continues to pose a challenge at the regional level; those who are concerned about overfishing of bigeye tuna will have noticed that warnings have been given for the last five years. Currently management action is often delayed and ‘watered down’ to reach a compromise that takes account of various national interests. As a result, there is interest in developing pre-agreed ‘triggers’ that will automatically result in management measures (for example a closure of the fishery may be agreed if the stock declines below a limit reference point). This should result in more timely and effective action. Reference points are now a priority for WCPFC and will also be needed if PNA is to retain sustainability certification for a large part of its skipjack fishery. SPC will work with FFA to develop reference points, initially for skipjack and bigeye.

Observer programme

57. Training of observers will continue, with increasing emphasis on the region’s longline fisheries. With 100% coverage on purse seiners maintained, the next challenge is to have observers present for 5% of all longline operations by mid-2012. A new observer training officer will start work based in Suva and work particularly with the South Pacific countries to build observer numbers. The emphasis on training observer trainers and debriefers (who interview observers after each trip and review their reports) will continue, with four new trainers and 16–20 debriefers expected to become qualified during the year.

Use of tagging results

58. While large scale tuna tagging will continue in PNG waters (with two six-week cruises planned) as well as in the central Pacific, more effort will be devoted to analysis of the results. A report on tuna dynamics in the PNG EEZ (which has accounted for more than a third of the WCPFC purse-seine catch in recent years) will be a priority. Additional resources would facilitate this work.

2012 budget

59. The 2012 expenditure is estimated as follows:

Table 3: Estimated expenditure budget of FAME for 2012 in CFP units

	Director	OFP	CFP	Division	Change on 2011 (rev.)
Recurrent	477,700	1,132,700	1,199,200	2,809,600	-6%
Project	1,357,200 ⁴	5,825,500	2,295,300	9,478,000	-5%
Total	1,834,900	6,958,200	3,494,500	12,287,600	-5%

⁴ Includes the CRISP and DevFish 2 projects for which the Director has administrative oversight

60. The decline in recurrent income, coming on top of a reduction of 8% in the 2011 revised budget and an earlier cut in 2009, obviously presents some challenges at a time of rising costs. The fall in project funding, which reflects the end of three projects in oceanic fisheries, can perhaps be partly taken up by new projects that are likely to be approved after the finalisation of the budget for CRGA.

FUTURE DIRECTION, OPPORTUNITIES AND CHALLENGES

61. There are future opportunities to develop work in two main thematic areas that will involve both FAME programmes; in both cases possible new project funding is under discussion. A significant challenge facing the division is the delivery of services to territory members when much of the project funded is reserved for other groups.

Food security

62. Part 2 of the AusAID Fisheries for Food Security project has passed through peer review and approval procedures and should be agreed before the end of 2011. This project, with a budget of AUD 4.75 million (4 million CFP units) over four years, responds directly to priorities identified by the HoF meeting:

- Assisting members with stock assessment of deepwater snapper resources;
- Support for national tuna database development, particularly for small-scale fisheries; and
- Assistance with inland aquaculture development, with emphasis on the areas of biosecurity and aquatic animal health.

Climate change

63. Three new projects are planned.
- a) A fisheries component of the CCCPIR project funded by GIZ will support: (1) further analysis of the impacts of climate change on the region's tuna resources, and (2) technical assistance to support adaptation measures for coastal communities. The budget for these totals EUR 700,000 (830,000 CFP units) over 2–3 years and should become available in early 2012.
 - b) A proposal is being developed for support under AusAID climate change funding to start to implement SPC's broader climate change strategy. This will build on earlier AusAID support for climate change work in fisheries and will raise awareness of the vulnerability of fisheries at the national level, help countries improve monitoring and develop adaptation measures, and build capacity in all areas relating to fisheries and climate change. The proposal is still at the discussion stage but envisages funding of around AUD 2 million (1.7 million CFP units) over two years starting in mid-2012.
 - c) A new proposal which would build on the results of the CRISP project – entitled Restoration of Ecosystem Services against Climate Change Unfavourable Effects (RESCCUE) – has been proposed for funding by the French Development Agency (AFD) and the French Global Environment Fund (FFEM). If approved, the proposal would see the commitment of EUR 5 million (6 million CFP units) for the development of integrated coastal zone management to aid adaptation to climate change.

Service delivery to territories

64. While the growth in project funding is extremely welcome and allows FAME to provide improved services to members, there is a downside in terms of service provision to the territories. In 2012, for

example, some 43% of the division's income will come from the European Union and is restricted to work for the 14 Pacific ACP members of SPC plus Timor Leste, the GIZ project is restricted to 12 of these countries, and so on. In the past, services to member territories have largely been financed through programme support. As this becomes increasingly constrained, the funds needed to carry out work in the field, and even support participants' attendance at meetings, are disappearing.

65. Of course, the work of SPC has always tended to be focused more on the independent countries. The territories are generally wealthier, have more capacity, and can call on the direct support of their 'mother' country. Nevertheless, FAME provides services to these territories that are not available elsewhere; while their expertise and experience means that their integration in activities and meetings benefits the whole membership. It is recommended that development partners, and particularly the metropolitan powers responsible for these territories, consider funding modalities that would further support their integration into SPC projects and programmes.

CONCLUSION

66. The division has made good progress during 2011 in implementing the work programme. The achievement of higher level objectives is difficult to evaluate on an annual basis but will be analysed during a review of the strategic plan in early 2012. Some new work areas will also be developed in response to decisions by Heads of Fisheries. More emphasis on helping to understand and adapt to the impacts of climate change is planned, subject to approval of some proposed new projects. If these are approved, the division will be well supported by project funding, but the reduction in recurrent funding is a concern.

RECOMMENDATIONS

67. CRGA is invited to:
- i. Note the results delivered by the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division and its achievements during 2011.
 - ii. Note the recommendations of the 7th Heads of Fisheries meeting and approve steps already taken to put these into action.
 - iii. Discuss the need for funding mechanisms to improve the integration of territory members of SPC into the FAME work programme.
 - iv. Approve the outline of the 2012 work programme and endorse in principle the new initiatives proposed in the area of climate change adaptation, particularly:
 - a) a proposal for AusAID climate change funding for a two year programme to improve monitoring, develop adaptation measures and build capacity in all areas related to fisheries and climate change;
 - b) a proposal to French Development Agency (AFD) and the French Global Environment Fund (FFEM) for the RESCCUE (Restoration of Ecosystem Services against Climate Change Unfavourable Effects) project to develop integrated coastal zone management to strengthen adaptation to climate change.

ANNEXES

1. Country specific activities with costings, including activities covered by a joint country strategy (JCS)
(others to be made available on the website and translated if time permits)
2. Progress against strategic plan objectives
3. Major publications
4. Main sectoral meetings and workshops
5. Outcomes of the 7th Heads of Fisheries Meeting

Annex 1

COUNTRY SPECIFIC ACTIVITIES WITH COSTINGS, INCLUDING ACTIVITIES COVERED BY A JOINT COUNTRY STRATEGY (JCS)

Note that this is a preliminary listing – costings where provided are only estimates. An accurate statement will be prepared after the end of the year, when activities have been completed and full financial records for the year are available.

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
American Samoa	Completed		
	• *Presentation of results of the large circle hook project to meetings in American Samoa	5	222,950
	JCS: Draft 2009–2013		
	• *Discussions held to set up information projects with Department of Marine and Wildlife Resources (DMWR) for the next 12 months	2	70,000
	• *1 participant funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	163,500
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting (Noumea, 28 February to 4 March 2011)	Nil	269,700
	• *Tuna data processing services	1	222,336
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	300,000
	• *Tuna fishery monitoring support	5	320,000
	Planned		
	• *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011)	Nil	300,000
• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	400,000	
Cook Islands	Completed		
	• *Technical assistance with a boat building workshop through a one-month consultancy	3	845,800
	JCS: 2007–2010		
	• *Technical assistance with the development of an aquaculture strategy for Cook Islands	8	316,000
	• *Technical assistance with funding of travel for SOPAC person to undertake GIS mapping and census of the pearl farms in Manihiki	6	438,800
	• *Assistance provided in revising the agriculture and fisheries census form, trochus management plan and sea cucumber management plan	7	Nil
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	311,200
	• Tuna data processing services	2	781,484
	• National tuna database support	58	300,000
	• National tuna webpages	2	140,000
• National tuna fisheries status report	40	400,000	
• Stock assessment training	6	400,000	

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	• Tuna data management training	3	300,000
	• Observer training	27	580,000
	• Tuna fishery monitoring support	20	1,230,000
	Planned		
	• *Continued assistance provided in finalising the trochus management plan and sea cucumber management plan and drafting a habitat map for invertebrates for ground-truthing (on-location verification of data)	8	Nil
	• Participation in mariculture review with Cook Islands as a case study for the review, plus setup of a data collection system for the Aitutaki sports fishers	8	350,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	300,000
Federated States of Micronesia JCS: 2008–2012	Completed		
	• *In-country consultations, including project priority setting for the GIZ climate change project (CCCPIR)	6	120,000
	• *Technical assistance and training with the construction and deployment of 1 surface and 3 sub-surface FADs	10	501,700
	• *2 participants funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011)	Nil	959,500
	• *2 participants funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	875,300
	• *Tuna data processing services	38	9,142,968
	• *National tuna database support	58	1,600,000
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	400,000
	• *Tuna data management training	3	400,000
	• *Observer training	80	1,555,000
	• *Tuna fishery monitoring support	33	2,000,000
	• *Tuna tagging	10	900,000
	Planned		
	• Capacity building/training in finfish, invertebrate and habitat monitoring and conducting surveys to set baseline for climate change monitoring programme	40	1,500,000
	• *Technical assistance with undertaking a review of the FSM legislation	6	450,000
	• *Technical assistance to assess the feasibility of aquaculture and mariculture commodities in Kosrae	5	450,000
• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000	
Fiji Islands JCS: Draft 2010–2014	Completed		
	• *Technical advice to Fiji Fisheries on JCS activities and seaweed paper for Cabinet	5	Nil
	• *Technical assistance with country level consultations to identify needs and priorities of tuna sector	3	150,000
	• *Technical assistance with aquaculture strategy consultations and aquaculture legislation review	5	198,000
	• *Technical assistance and scoping mission to assess and	5	142,600

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	assist the Fiji Competent Authority and private sector		
	• *2 participants funded to attend Asia-Pacific aquaculture symposium and workshop on giant prawn culture in India (January 2011)	Nil	466,500
	• *5 participants (government and NGO) funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	274,900
	• *2 participants funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011)	Nil	578,400
	• *2 participants funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	545,000
	• *Tuna data processing services	4	1,650,320
	• *National tuna database support	58	200,000
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	200,000
	• *Tuna data management training	3	200,000
	• *Observer training	41	545,000
	• *Tuna fishery monitoring support	7	410,000
	Planned		
	• Technical assistance with external audit of the Competent Authority in Fiji	6	150,000
	• Participation in mariculture review with Fiji as a case study for the review	7	200,000
	• *Technical assistance and input to the feed ingredients survey for freshwater shrimp aquaculture	2	Nil
	• *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu	Nil	250,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	350,000
French Polynesia	Completed		
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	279,000
JCS: 2009–2014	• *Tuna data processing service	3	1,376,420
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	300,000
	• *Observer training	32	1,090,000
	• *Tuna fishery monitoring support	3	22,360,000
	Planned		
	• *Technical assistance in undertaking some economic assessments in the fisheries sector in French Polynesia	5	350,000
	• Assessment of markets in the Gambier Islands for the importation of fish from Pitcairn Island	2	50,000
	• *Technical assistance and training for tuna graders and processors with assistance from a consultant	5	880,000
	• *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011)	Nil	300,000

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	<ul style="list-style-type: none"> *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu 	Nil	400,000
	<ul style="list-style-type: none"> Provision of interpretation services in support of the FAD symposium held in French Polynesia 	15	1,050,000
Guam	Completed		
Draft JCS: 2010–2014	<ul style="list-style-type: none"> *1 participant funded to attend the 7th Heads of Fisheries meeting (Noumea, 28 February to 4 March 2011) 	Nil	300,100
	<ul style="list-style-type: none"> *National tuna webpages 	2	140,000
	<ul style="list-style-type: none"> *Stock assessment training 	6	300,000
	Planned		
	<ul style="list-style-type: none"> *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011) 	Nil	400,000
	<ul style="list-style-type: none"> *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011 	Nil	450,000
Kiribati	Completed		
JCS: 2008–2011	<ul style="list-style-type: none"> *Technical assistance with the review of the Kiribati coastal fisheries data for fisheries management 	8	409,700
	<ul style="list-style-type: none"> *Technical assistance through consultations on institutional strengthening of the fisheries sector 	8	403,200
	<ul style="list-style-type: none"> *Technical assistance with developing the Nonouti bonefish management plan and associated bylaws 	6	100,000
	<ul style="list-style-type: none"> *Technical assistance with input to developing a sea cucumber management plan for Kiribati 	5	Nil
	<ul style="list-style-type: none"> *Technical assistance with the review and finalisation of and LRFFT (Live Reef Food Fish Trade) access agreement for mother ships 	4	Nil
	<ul style="list-style-type: none"> *Technical assistance with FAD construction and deployment and FAD fishing skills training 	18	504,600
	<ul style="list-style-type: none"> Participation in GIZ mission to set priorities for climate change work under the CCCPIR (Coping with Climate Change in the Pacific Islands Region) project 	4	6,000
	<ul style="list-style-type: none"> *Technical assistance with country level consultations to identify needs and priorities of tuna sector 	3	150,000
	<ul style="list-style-type: none"> *Attachment training in Nauru on community-based fisheries management 	Nil	140,200
	<ul style="list-style-type: none"> *1 participant funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011) 	Nil	154,400
	<ul style="list-style-type: none"> *1 participant funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011) 	Nil	490,240
	<ul style="list-style-type: none"> *1 participant funded to attend the 7th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011) 	Nil	432,000
	<ul style="list-style-type: none"> *Tuna data processing services 	5	2,330,289
	<ul style="list-style-type: none"> *National tuna database support 	58	Nil
	<ul style="list-style-type: none"> *National tuna webpages 	20	140,000
	<ul style="list-style-type: none"> *National tuna fisheries status report 	20	400,000
<ul style="list-style-type: none"> *Stock assessment training 	12	600,000	
<ul style="list-style-type: none"> *Tuna data management training 	18	300,000	

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	• *Observer training	117	2,475,000
	• *Tuna fishery monitoring support	28	1,680,000
	• *Tuna tagging	10	900,000
	Planned		
	• Capacity building/training in finfish, invertebrate and habitat monitoring and conducting surveys to set baseline for climate change monitoring programme	40	1,500,000
	• *Technical assistance with the development of guidelines for importation of sandfish as brood stock for aquaculture	5	Nil
	• Technical assistance with developing protocols to monitor the effects of sand dredging in the lagoon	10	530,000
	• *Technical assistance with input to finalising the sea cucumber management plan for Kiribati	5	Nil
	• Technical assistance with train-the-trainer activities for MTC (Marine Training Centre) lecturers and training of students in purse seining	12	350,000
	• *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu	Nil	350,000
	• *1 participant funded to FAD symposium being held in French Polynesia in November 2011	Nil	400,000
Marshall Islands JCS: 2008–2010	Completed		
	• *Technical assistance with the review of the RMI fisheries legislation, two separate workshops – April and May	8	830,000
	• *Technical assistance with developing a sea cucumber management plan	10	Nil
	• *Technical assistance and training with sea cucumber survey methodologies	10	725,000
	• *Assistance and training for baseline assessments of resources (finfish and invertebrates) and habitats for climate change project	25	1,570,100
	• *Technical assistance and training with Underwater Visual Census UVC for finfish and review of draft aquarium fish management plan	10	665,700
	• *2 participants (government and NGO) funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	583,400
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	308,900
	• *Tuna data processing services	10	4,330,415
	• *National tuna database support	58	330,000
	• *National tuna webpages	2	140,000
	• *National tuna fisheries status report	40	Nil
	• *Stock assessment training	6	400,000
	• *Tuna data management training	17	400,000
	• *Observer training	141	2,880,000
	• *Tuna fishery monitoring support	41	2,480,000
	• *Tuna tagging	10	900,000
	Planned		
	• Technical assistance with fishing trials for small pelagic	15	2,295,000

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	fish, provision of equipment for the trials and setup of a data collection system for this activity		
	• *Technical assistance through a review of the economics of the fish market	5	225,000
	• *1 participant funded to attend SPC/FAO sea cucumber management options workshop in November 2011	Nil	450,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000
Nauru	Completed		
JCS: 2008–2010	• *Technical assistance and training with the conducting of a national community-based ecosystem approach to fisheries management (CEAFM) workshop	10	793,500
	• *Technical assistance with designing the floor plan for a milkfish nursery station for imported fry for biosecurity checks and nursery care	3	Nil
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	482,500
	• Tuna data processing services	4	1,607,839
	• National tuna database support	58	300,000
	• National tuna webpages	2	140,000
	• Stock assessment training	6	300,000
	• Tuna data management training	3	300,000
	• Observer training	24	530,000
	• Tuna fishery monitoring support	23	1,360,000
	Planned		
	• Technical assistance with setting up a holding facility for aquarium fish	10	400,000
	• *Technical assistance to review and update the aquaculture development plan for the country	6	350,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	350,000
New Caledonia	Completed		
JCS: to be developed in 2011	• Technical assistance and consultations on developing a bonefish sports fishery in North Province	2	61,200
	• Technical assistance with spat collection systems for scallops in North Province	5	72,000
	• Technical assistance with spanner crab fishing trials to assess potential for a fishery	10	1,221,200
	• Technical assistance with a pilot project on the collection and grow out of lobster larvae	3	Nil
	• Technical assistance and advice on production of silage from fish waste and the provision of equipment and promotional materials	5	250,000
	• Technical assistance with laying out fishing licence cards for South Province	1	Nil
	• Technical assistance and advice on rabbitfish culture and possible sourcing of local brood stock	5	Nil
	• Assistance and consultation as part of developing the fisheries component of the New Caledonia joint country strategy	5	Nil

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	• Tuna data processing services	2	1,016,657
	• National tuna webpages	2	140,000
	• Stock assessment training	12	Nil
	• Tuna fishery monitoring support	Nil	13,560,000
	Planned		
	• Technical assistance with the development of an information brochure looking at appropriate aquaculture species for local development	10	200,000
	• 1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011)	Nil	250,000
	• Technical assistance through funding a consultancy to train local industry in the correct handling of aquarium fish for export	2	750,000
	• 1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	350,000
Niue JCS: 2009–2013	Completed		
	• *Technical assistance with undertaking an economic assessment or cost benefit analysis of the value of FADs to the domestic fishery	5	Nil
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	463,200
	• Tuna data processing services	Nil	26,728
	• National tuna database support	58	Nil
	• National tuna webpages	2	140,000
	• Stock assessment training	6	300,000
	Planned		
	• *Technical assistance through strengthening sports fishing industry with training of local guides, provision of expendable gear and assistance with advisory services	10	1,785,000
	• *Technical assistance and training in FAD construction and deployment, FAD fishing skills and small-boat safety	10	450,000
	• *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu	Nil	350,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	400,000
Northern Mariana Islands JCS: 2009–2013	Completed		
	• *Participation at launch of aquaculture development plan and resource person for cage culture symposium	6	448,100
	• *Publication and shipping costs for CNMI's aquaculture development plan	5	65,200
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting (Noumea, 28 February to 4 March 2011)	Nil	401,200
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	400,000
	Planned		
	• *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011)	Nil	400,000
	• *1 participant funded to attend the FAD symposium being	Nil	

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	held in French Polynesia in November 2011		
Palau JCS: 2009–2013	Completed		
	• *Technical assistance and advice on institutional strengthening of the Bureau of Marine Resources (BMR), and participation of a resource person in Micronesian Challenge workshop	10	496,600
	• *Assistance with reviewing and advising on the sea cucumber regulations for Palau	3	Nil
	• *Advice provided in setting up a data collection system for FAD fishers	2	Nil
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	430,400
	• *Tuna data processing services	5	2,227,182
	• *National tuna database support	58	270,000
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	400,000
	• *Tuna data management training	3	400,000
	• *Observer training	19	505,000
	• *Tuna fishery monitoring support	21	1,290,000
	Planned		
	• 1 participant funded to attend SPC/FAO sea cucumber management options workshop in November 2011	Nil	450,000
• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000	
Papua New Guinea JCS: to be developed in 2011	Completed		
	• Technical assistance with conducting a training needs assessment in the industrial fisheries post-harvest sector	12	300,000
	• Technical assistance to the PNG Competent Authority conducting thermal process validation at RD Tuna Cannery Ltd in Madang	12	300,000
	• Technical assistance with strategic planning and surveys for aquaculture potential in PNG	6	381,000
	• Assistance and advice provided during meetings with the National Fisheries Authority (NFA) and TNC at Manus	8	466,300
	• Technical assistance with a training needs assessment in fisheries and aquaculture, three staff	30	1,386,400
	• Assistance and consultation as part of developing the fisheries component of the PNG joint country strategy	6	531,900
	• Technical assistance in assessing the status of the aquarium fish trade and revising the aquarium trade management plan for PNG	15	474,300
	• Participation in GIZ mission to set priorities for climate change work under the CCCPIR project	3	Nil
	• Technical assistance with development planning for the PNG Fishing Industry Association and consultations	10	689,500
	• Participation in mariculture review with PNG as a case study for the review	10	676,100
	• Technical assistance with NFA industry fisheries association to identify needs of tuna industry	6	521,000
	• Assistance through consultancy to install temperature	2	177,700

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	loggers at a site in Manus as part of climate change project		
	• 1 participant funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011)	Nil	473,700
	• 1 participant funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	245,500
	• 2 participants funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	699,800
	• Tuna data processing services	41	17,893,896
	• National tuna webpages	2	140,000
	• Stock assessment training	12	600,000
	• Tuna data management training	3	300,000
	• Observer training	68	4,145,000
	• Tuna tagging	480	27,000,000
	Planned		
	• Technical assistance with external audit of the Competent Authority in PNG	6	250,000
	• Technical assistance and training with bait fishing trials in association with small-scale pole-and-line fishing trials	10	600,000
	• Attachment training for one fisheries staff person with Regional Media Centre in Fiji	3	150,000
• 1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	500,000	
Pitcairn Island	Completed		
	• *National tuna webpages	2	140,000
	Planned		
JCS: 2009–2013	• *Technical assistance to look at the marketing options for Pitcairn marine products and assess options for FADs	5	700,000
Samoa	Completed		
	• In-country consultations including project priority setting for the GIZ climate change project (CCCPIR)	6	123,800
JCS: 2010–2012	• *Technical assistance provided to Samoa's CEAFM national consultations and finalisation of framework	12	498,800
	• *Technical assistance with assessing market survey needs and a workplan for market surveys for next 2 years	8	314,200
	• *Technical assistance with country level consultations to identify needs and priorities of tuna sector	3	150,000
	• *2 participants funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	218,400
	• *1 participant funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011)	Nil	328,800
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	313,400
	• *National tuna database support	58	330,000
	• *National tuna webpages	2	140,000

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	• *National tuna fisheries status report	40	Nil
	• *Stock assessment training	6	300,000
	• *Tuna data management training	3	300,000
	• *Observer training	27	440,000
	• *Tuna fishery monitoring support	18	1,100,000
	Planned		
	• Technical assistance with undertaking an economic assessment of setting up an aquarium fish fishery and reviewing the economics of tilapia farming in Samoa	5	325,000
	• *Technical assistance with reviewing tilapia aquaculture in the country	5	300,000
	• *Technical assistance and input to the feed ingredients survey for freshwater shrimp aquaculture	2	Nil
	• *Technical assistance with conducting surveys for finfish spawning aggregations planned for November 2011	10	375,000
	• *Attachment training for one fisheries staff person with Regional Media Centre in Fiji	3	400,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	425,000
Solomon Islands	Completed	12	615,200
JCS: 2009–2012	• *Technical assistance and training in FAD site surveying, and FAD construction and deployment	22	749,400
	• *Technical assistance with running a train-the-trainer workshop on FAD fishing skills	12	615,200
	• *Technical assistance with country level consultations to identify needs and priorities of the tuna sector	3	140,000
	• *Assessment undertaken of the needs of the Competent Authority and Soltai	4	275,000
	• *Assistance in the risk assessment of introducing GIFT (genetically improved farm tilapia) to Solomon Islands through a consultancy	6	650,700
	• *Technical assistance with reviewing both the fisheries legislation and sea cucumber management plan	6	Nil
	• *Technical assistance with the provision of information and graphics for a dolphin poster	2	Nil
	• *Attachment training of 1 staff person from Solomon Islands to Vanuatu sea cucumber assessment training	2	346,300
	• Participation in GIZ mission to set priorities for climate change work under the CCCPIR project	3	Nil
	• *1 participant funded to attend Asia-Pacific aquaculture symposium and workshop on giant prawn culture in India (January 2011)	Nil	468,200
	• *2 participants (government and NGO) funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	260,100
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	345,300
	• *Tuna data processing services	14	6,097,845
	• *National tuna database support	58	530,000
	• *National tuna webpages	2	140,000

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	<ul style="list-style-type: none"> *National tuna fisheries status report 	40	Nil
	<ul style="list-style-type: none"> *Stock assessment training 	6	300,000
	<ul style="list-style-type: none"> *Tuna data management training 	3	300,000
	<ul style="list-style-type: none"> *Observer training 	92	1,525,000
	<ul style="list-style-type: none"> *Tuna fishery monitoring support 	17	1,010,000
	<ul style="list-style-type: none"> *Tuna tagging 	10	900,000
	Planned		
	<ul style="list-style-type: none"> *Technical assistance with external audit of the Competent Authority in Solomon Islands 	6	250,000
	<ul style="list-style-type: none"> *Technical assistance and training in thermal processes for Competent Authority inspectors and Soltai quality assurance inspectors and retort operators 	12	450,000
	<ul style="list-style-type: none"> *Technical assistance and training in sea cucumber survey methodologies and initiate survey 	15	850,000
	<ul style="list-style-type: none"> *Technical assistance and input to the feed ingredients survey for freshwater shrimp aquaculture 	2	Nil
	<ul style="list-style-type: none"> Participation in mariculture review with Solomon Islands as a case study for the review 	7	350,000
	<ul style="list-style-type: none"> Completion of reports on Mozambique tilapia growth trials 	4	Nil
	<ul style="list-style-type: none"> *2 participants funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu 	Nil	740,000
	<ul style="list-style-type: none"> *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011 	Nil	450,000
Tokelau	Completed		
	<ul style="list-style-type: none"> National Tuna webpages 	2	140,000
Draft JCS: 2008–2010	<ul style="list-style-type: none"> National tuna fisheries status report 	40	Nil
	<ul style="list-style-type: none"> Stock assessment training 	6	500,000
	<ul style="list-style-type: none"> Tuna data management training 	3	500,000
	Planned		
	<ul style="list-style-type: none"> *Technical assistance and training in tuna longline operations, sea safety and fish handling and preservation through a consultancy 	2	1,000,000
	<ul style="list-style-type: none"> *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011) 	Nil	450,000
	<ul style="list-style-type: none"> *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011 	Nil	500,000
Tonga	Completed		
JCS: 2009–2013	<ul style="list-style-type: none"> *Technical assistance and training with the extension of the CEA FM programme in Tonga 	15	475,800
	<ul style="list-style-type: none"> *Reports completed for ACIAR mini-projects that have been completed in Tonga 	5	Nil
	<ul style="list-style-type: none"> *Funding of two attachments to Noumea to enter and analyse sea cucumber data collected and produce management advice for the sea cucumber fishery 	30	1,087,200
	<ul style="list-style-type: none"> *1 participant funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011) 	Nil	242,900
	<ul style="list-style-type: none"> *2 participants funded to attend a basic monitoring needs 	Nil	210,500

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)	
	for effective management workshop (Nadi, Fiji 26–29 April 2011)			
	• *2 participants funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	671,100	
	• *Tuna data processing services	Nil	62,003	
	• *National tuna database support	58	290,000	
	• *National tuna webpages	2	140,000	
	• *Stock assessment training	6	300,000	
	• *Tuna data management training	7	300,000	
	• *Observer training	36	470,000	
	• *Tuna fishery monitoring support	21	1,270,000	
	Planned			
	• *Technical assistance and advice on the importing requirements for GIFT tilapia and biosecurity risks	5	300,000	
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000	
Tuvalu	Completed			
JCS: 2008–2012	• *Technical assistance with the review of coastal fisheries legislation and regulations	6	324,000	
	• *Capacity building/training in finfish, invertebrate and habitat monitoring and conducting surveys to set baseline for climate change monitoring programme	60	2,902,100	
	• *Funding assistance for travel for a Tuvaluan PhD student to participate in data collection in Tuvalu	Nil	129,900	
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	366,300	
	• *National tuna database support	58	40,000	
	• *National tuna webpages	2	140,000	
	• *National tuna fisheries status report	5	Nil	
	• *Stock assessment training	12	420,000	
	• *Tuna data management training	3	300,000	
	• *Observer training	15	100,000	
		Planned		
	• *Technical assistance with an assessment of giant clam and milkfish aquaculture potential	7	250,000	
	• *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu	Nil	400,000	
• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000		
Vanuatu	Completed			
Draft JCS: 2010–2015	• *Technical assistance and training with undertaking sea cucumber surveys and assessment	20	1,722,600	
	• *Technical assistance with the review of Vanuatu's fisheries legislation	6	158,100	
	• *Technical assistance and assessment of needs for the establishment of a Competent Authority in Vanuatu	6	277,200	
	• *Technical assistance with writing, production and	30	200,000	

Country	Activities for 2011 (completed (January to August inclusive) and planned (September to December) (* indicates activities covered by JCS)	Staff time, work days	Non-staff costs (CFP)
	printing of 3 versions of the fisheries regulations booklet		
	• *Assistance with the revision and printing of two posters	8	250,000
	• *1 participant funded to attend a basic monitoring needs for effective management workshop (Nadi, Fiji 26–29 April 2011)	Nil	120,300
	• *1 participant funded to attend Asia-Pacific Aquaculture symposium and workshop on giant prawn culture in India (January 2011)	Nil	406,900
	• *1 participant funded to attend the Asia-Pacific tropical sea cucumber aquaculture symposium (Noumea, 15–17 February 2011)	Nil	182,100
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	235,400
	• *Tuna data processing services	Nil	67,333
	• *National tuna database support	58	Nil
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	200,000
	• *Tuna data management training	3	200,000
	• *Observer training	Nil	220,000
	• *Tuna fishery monitoring support	1	50,000
	Planned		
	• *Technical assistance with final sampling of freshwater shrimp as part of ACIAR mini-project and writing the report	10	300,000
	• *Technical assistance with the development of a sea cucumber management plan for Vanuatu	10	Nil
	• *Technical assistance and input to the feed ingredients survey for freshwater shrimp aquaculture	2	Nil
	• *Hire of facilities and vessels and purchase of equipment for regional fisheries officers course, Santo, Vanuatu	Nil	2,000,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	450,000
Wallis and Futuna	Completed		
	• *Technical assistance with a desktop study on the economics of the domestic longline vessel in Wallis	3	Nil
	• *1 participant funded to attend the 7 th Heads of Fisheries meeting and SciCOFish/SciFish steering committee meetings (Noumea, 28 February to 4 March 2011)	Nil	227,000
	• *National tuna webpages	2	140,000
	• *Stock assessment training	6	200,000
	Planned		
	• *1 participant funded to attend the joint SPC/FAO regional aquaculture workshop (Nadi, 11–14 October 2011)	Nil	250,000
	• *1 participant funded to attend the SPC practical safety and fishing course for fisheries officers in Santo, Vanuatu	Nil	320,000
	• *1 participant funded to attend the FAD symposium being held in French Polynesia in November 2011	Nil	300,000
JCS: 2009–2013			