

GRANT AGREEMENT

BETWEEN

COMMONWEALTH OF AUSTRALIA

represented by the Australian Agency for International Development
(AusAID)

ABN 62 921 558 838

and

SECRETARIAT OF THE PACIFIC COMMUNITY (SPC)

FOR

PACIFIC FISHERIES FOR FOOD SECURITY PROGRAM

AUSAID AGREEMENT NUMBER: 57439

GRANT AGREEMENT made 30 day of November [2011]

BETWEEN:

COMMONWEALTH OF AUSTRALIA represented by the Australian Agency for International Development ("AusAID") ABN 62 921 558 838 of the Department of Foreign Affairs and Trade

AND

SECRETARIAT OF THE PACIFIC COMMUNITY, BP D5 98848 Noumea, NEW CALEDONIA ("SPC").

RECITALS:

- A. AusAID wishes to provide the SPC with Funds to undertake a Program.
- B. The SPC wishes to accept the funds subject to the terms and conditions in this Agreement.

OPERATIVE:

AusAID and the SPC promise to carry out and complete their respective obligations in accordance with this Grant Agreement and in accordance with **Partnership Arrangement Number 58833** between AusAID and the SPC.

IN WITNESS whereof this Agreement has been executed by the Commonwealth, by an authorised officer, and has been executed by the SPC by its authorised officer.

SIGNED for and on behalf of the
COMMONWEALTH OF AUSTRALIA
represented by the Australian Agency
for International Development by:

in the presence of:



Signature of FMA Act s44 Delegate

James Gilling Octavia Borthwick

Name



Signature of witness

Jessica Dixon

Name of witness

(Print)

A/g **First Assistant Director General, Pacific Division**

Position, Section

SIGNED for and on behalf of
Secretariat of the Pacific Community by:

DR JIMMIE RODGERS
DIRECTOR GENERAL

Name and Position

(Print)



Signature



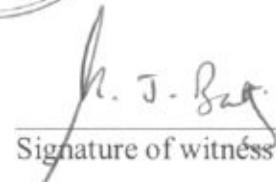
By executing this Agreement the signatory warrants that he/she is duly authorised to execute this Grant Agreement on behalf of the SPC.

in the presence of:

Michael Batts

Name of witness

(Print)



Signature of witness

AGREEMENT CONDITIONS

1. INTERPRETATION

1.1 Definitions

In this Agreement, including the recitals unless the context otherwise requires:

“Program” means the Program [Pacific Fisheries for Food Security Program – including Part 1 and Party 2] described in the Proposal for which the Funds are provided.

“Proposal” means the specific tasks and budget associated with the Program included as **Schedule 1** to this Agreement.

“Agreement” means this Agreement including all Parts and any schedules and annexes as issued under the terms and conditions of the Partnership Agreement..

“Agreement Material” means all material created or required to be developed or created as part of, or for the purpose of undertaking the Program, including documents, equipment, information data, sounds and images stored by any means.

“Business Day” means a day on which AusAID is open for business.

“Commonwealth” means Commonwealth of Australia or AusAID, as appropriate.

“Fraudulent Program”, “Fraud” or “Fraudulent” means dishonestly obtaining a benefit by deception or other means.

“Funds” means the amount of money as specified in clause titled ‘Funds and Payment’ of this Agreement that has been approved by AusAID and paid to the SPC subject to the conditions outlined in this Agreement.

“Independently Audited” means financial records audited by a certified financial professional that is in no way linked or associated with the Program or the Parties to this Agreement.

“Party” means AusAID or the SPC.

“Personnel” means including Personnel, whether employed by the SPC or engaged by the SPC on a sub-contract basis or agents or volunteers of SPC, engaged in the provision of the Program

“Prior Material” means all material developed by SPC or a third party independently from the Program whether before or after commencement of the Program.

“Relevant List” means the lists of terrorist made under Division 102 of the *Criminal Code Act 1995* (Cth) and the *Charter of the United Nations Act 1945* (Cth) posted at:<http://www.nationalsecurity.gov.au/agd/www/nationalsecurity.nsf/AllDocs/95FB057CA3DECF30CA256FAB001F7FBD?OpenDocument> and http://www.dfat.gov.au/icat/UNSC_financial_sanctions.html#3

“**Similar List**” means any similar list to the World Bank List maintained by any other donor of development funding.

“**World Bank List**” means a list maintained by the World Bank in its “Listing of Ineligible Firms” or “Listings of Firms, Letters of Reprimand” posted at:

<http://web.worldbank.org/external/default/main?theSitePK=84266&contentMDK=64069844&menuPK=116730&pagePK=64148989&piPK=64148984>

1.2 Agreement prevails

If there is any inconsistency (whether expressly referred to or to be implied from this Agreement or otherwise) between the provisions of the Agreement Conditions and those of the schedules and any annexes, the schedules and any annexes are to be read subject to the Agreement Conditions and the provisions of the Agreement Conditions prevail to the extent of the inconsistency.

2. TERM OF THE AGREEMENT

2.1 The term of this Agreement commences upon execution by both Parties being the date indicated at the front of this Agreement and continues until all obligations have been fulfilled under this Agreement, unless terminated earlier in accordance with this Agreement.

2.2 The SPC must complete the Program by 30 November 2015, with the Final Independent evaluation Report to be provided in accordance with Clause 12.7.]

3. NOTICES

3.1 For the purpose of serving notices to either Party of this Agreement, a notice must be in writing and shall be treated as having been duly given and received:

- (a) when delivered (if left at that Party’s address);
- (b) on the third Business Day after posting (if sent by pre-paid mail); or
- (c) on the Business Day of transmission (if given by facsimile and sent to the facsimile receiver number of that Party and no intimation having been received that the notice had not been received, whether that intimation comes from that Party or from the operation of facsimile machinery or otherwise).

- 3.2 For the purposes of this Agreement, the address of a Party is the address set out below or another address of which that Party may give notice in writing to the other Party:

AusAID:

To: Director, Growth and Resources Section, Pacific Branch
Australian Agency for International Development (AusAID)

Postal Address: GPO Box 887
Canberra ACT 2602
Australia

Street Address: 255 London Circuit
Canberra
Australia

Facsimile: +61 2 6206 4242 |

SPC:

To: Director General
Secretariat of the Pacific Community (SPC)

Postal Address: BP D5
98848 Noumea Cedex
NEW CALEDONIA

Street Address: 95 Promenade Roger Laroque
Anse Vata
New-Caledonia

Facsimile: +687 26 38 18 |

4. GENERAL CONDITIONS

- 4.1 The SPC must carry out the Program in accordance with the Program Proposal and the terms and conditions of this Agreement and Partnership Arrangement.

- 4.2 The SPC must advise AusAID immediately of any difficulties or delays in implementation of the Program.
- 4.3 The SPC shall acknowledge in writing to AusAID receipt of the Funds immediately on its receipt.
- 4.4 The Funds and any interest earned or exchange rate gains must be used diligently and for the sole purpose of the Program outlined in **Schedule 1** of this Agreement. Any interest earned or exchange rate gains made on the Funds must only be expended on the Program.
- 4.5 The SPC acknowledges that Funds provided by AusAID to the SPC for this Program does not entitle the SPC to any other or further funding.
- 4.6 The SPC shall acknowledge AusAID funding assistance provided under this Agreement where appropriate and advise AusAID of matters relating to any publicity and media relations, prior to any publication or media release.
- 4.7 The SPC must not represent itself and must ensure that its Personnel participating in the Program do not represent themselves as being employees, partners or agents of the Commonwealth of Australia.
- 4.8 The SPC will use its best endeavours to ensure that in its performance of the Program all Personnel and their dependents, while in a recipient country, respect the laws and regulations in force in the recipient country.
- 4.9 The SPC is responsible for the security of all of its Personnel and for taking-out and maintaining all appropriate insurances.
- 4.10 The SPC must not assign its interest in this Agreement without first obtaining the consent in writing of AusAID.
- 4.11 No delay, neglect or forbearance by either Party in enforcing against the other any term or condition of this Agreement shall be deemed to be a waiver or in any way prejudice any right of that Party.
- 4.12 This Agreement is governed by, and is to be construed in accordance with, the law of the Australian Capital Territory and the Parties submit to the exclusive jurisdiction of the courts of the Australian Capital Territory and any court hearing appeals from those courts.

5. AGREEMENT AMENDMENTS

- 5.1 AusAID or the SPC may propose amendments to this Agreement at any time for the purpose of improving the delivery of the Program, the efficiency, cost-effectiveness and development impact of the Program.
- 5.2 Changes to this Agreement (including to **Schedule 1** and any annexes) shall only be effected if agreed in writing and signed by both Parties in the form of a Amendment.

6. PROCUREMENT OF GOODS

- 6.1 Procurement under this Agreement will be in accordance with the Partnership Arrangement.

7. MONITORING AND EVALUATION

7.1 Monitoring and Evaluation of the Services provided under this Agreement will be in accordance with the Partnership Arrangement.

8. COMPLIANCE WITH LAWS, GUIDELINES AND POLICIES

8.1 The SPC and its Personnel must have regard to and comply with, relevant and applicable laws, guidelines, regulations and policies, including those in Australia and in the recipient country. A list, as amended from time to time, of Australian laws and guidelines that may apply to the delivery of developmental aid to foreign countries can be found on the AusAID website: <http://www.aisaid.gov.au/business/contracting.cfm>. This list is not exhaustive and is provided for information only. The provision of this list does not relieve the SPC from complying with the obligations contained in this clause headed 'Compliance with Laws, Guidelines and Policies'.

8.2 The SPC and its Personnel must comply with:

- (a) AusAID's *Child protection policy*. (<http://www.aisaid.gov.au/publications/pubs.cfm?Type=PubPolicyDocuments>) and particularly the child protection compliance standards at Attachment 1 to the policy. AusAID may audit the SPC's compliance with AusAID's *Child protection policy* and child protection compliance standards. The SPC must participate cooperatively in any reviews conducted by AusAID;
- (b) The strategy 'Development for All: Towards a Disability-Inclusive Australian Aid Program 2009-2014' (http://www.aisaid.gov.au/publications/pdf/FINAL%20AusAID_Disability%20for%20All.pdf), and in particular the strategy's six guiding principles; and
- (c) *Family Planning and the Aid Program: Guiding Principles* (August 2009), accessible on AusAID's website (<http://www.aisaid.gov.au/keyaid/health.cfm>).

8.3 The SPC must use its best endeavours to ensure:

- (a) that individuals involved in implementing the Program are in no way linked, directly or indirectly, to individuals associated with terrorism; and
- (b) that Funds provided under this Agreement are not used in any way to provide direct or indirect support or resources to individuals associated with terrorism.

8.4 The SPC must have regard to the Australian Government guidance "Safeguarding against terrorism financing: a guidance for non-profit NPOs," available at <http://www.nationalsecurity.gov.au/npo>.

8.5 If, during the course of this Agreement, the SPC discovers any link whatsoever with any SPC or individual listed on a Relevant List it must inform AusAID immediately.

8.6 If, during the course of this Agreement, the SPC is listed on a World Bank List or Similar List it must inform AusAID immediately.

8.7 The SPC agrees that:

- (a) The SPC and its employees, agents, representatives or its subcontractors must not engage in any Fraudulent Program. The SPC is responsible for preventing and detecting Fraud.
- (b) The SPC must report in writing within five (5) working days to AusAID any detected, suspected, or attempted Fraudulent Program involving the Program. AusAID may direct the SPC to investigate the alleged Fraud and the SPC must undertake an investigation at the SPC's cost and in accordance with any directions or standards required by AusAID.
- (c) Following the conclusion of any investigation which identifies acts of a Fraudulent nature, the SPC shall:
 - (i) make every effort to recover any AusAID Funds, the subject of Fraudulent Program;
 - (ii) refer the matter to the relevant police or other authorities responsible for prosecution of Fraudulent Program; and
 - (iii) be liable for the repayment of any Funds amounts misappropriated by the SPC, its agents, representatives or subcontractors.
- (d) The obligations of the SPC under **Clauses 8.7(b) and 8.7(c)** shall survive the termination or expiration of this Agreement.
- (e) The SPC warrants that the SPC shall not make or cause to be made, nor shall the SPC receive or seek to receive, any offer, gift or payment, consideration or benefit of any kind, which would or could be construed as an illegal or corrupt practice, either directly or indirectly to any party, as an inducement or reward in relation to the execution of this Agreement. In addition, the SPC shall not bribe public officials and shall ensure that its delivery contractor's comply with this provision. Any breach of this clause shall be grounds for immediate termination of this Agreement by notice from AusAID.

9. TERMINATION

- 9.1 This Agreement can be terminated by mutual agreement between both Parties subject to written notice given three (3) months in advance.
- 9.2 In the event of any termination, the SPC must provide an Independently Audited statement of expenditure of the Funds within thirty (30) days of the date of the notice to terminate, signed by the head of the SPC, and return any uncommitted unspent Funds to AusAID.
- 9.3 In the event that a notice to terminate is given by either party AusAID shall not be liable to pay compensation in an amount which, in addition to any amounts paid or due or becoming due to the SPC under this Agreement, together would exceed the amount of the total financial limitation of this Agreement.

10. ACCOUNTS AND RECORDS

- 10.1 The bank account used by SPC must be in the name of the SPC and must not be a personal bank account.

- 10.2 The SPC must maintain a sound administrative and financial system capable of verifying all statements of acquittal. In addition, the SPC must:
- (a) keep proper and detailed accounts, records and assets registers along with adequate Program management records providing clear audit trails in relation to expenditure under this Agreement;
 - (b) afford adequate facilities for audit and inspection of the financial records referred to in this Agreement by AusAID and its authorised representatives at all reasonable times and allow copies and extracts to be taken;
 - (c) if requested by AusAID, provide an acquittal, certified by the senior financial officer or the head of the SPC, of Funds spent to date against the budget in the Program Proposal; and
 - (d) if reasonably requested by AusAID, provide an Independently Audited statement of Program expenditure by an auditor nominated by AusAID and which may be payable from the funds.

11. AusAID USE OF AGREEMENT INFORMATION

- 11.1 AusAID may disclose matters relating to this Agreement, including this Agreement, and other relevant information, except where such information may breach the *Privacy Act 1988* (Cth), to Commonwealth governmental departments and agencies, Commonwealth Ministers and Parliamentary Secretaries, and to the Commonwealth Parliament, including responding to requests for information from Parliamentary committees or inquiries. In addition, AusAID may publicly report information regarding this Agreement. This clause shall survive termination or expiration of this Agreement

12. REPORTS

- 12.1 The SPC shall submit annual financial acquittal statements of all AusAID approved funding in Australian dollars certified by the appropriate SPC Financial Manager, refer **paragraph 8.5** of the Partnership Arrangement.
- 12.2 The SPC shall submit an annual report for the Program to SPC Fisheries, Aquaculture and Marine Ecosystems (FAME) management (Heads of Fisheries) and governing body (the Committee of Representatives of Governments and Administrations (CRGA)) against the implementation of the SPC FAME Strategic Plan and Annual Work Plan.
- 12.3 The SPC shall submit an Annual Report to AusAID, prepared in accordance with Clause 12.4 below:
- (a) for Part 1 of the Program by the 31 October 2011; and
 - (b) for Part 1 and 2 of the Program by 31 October 2012 and 31 October 2014.
- 12.4 The Annual Reports will:
- (a) review implementation progress to date (describing achievements, problems and action taken to address risks); and

- (b) incorporate lessons from the assessment of Program progress;
 - (c) outline the expected outputs and development results of the proposed program of work; and
 - (d) describe the inputs, work and outputs of both the SPC and any other key stakeholders.
- 12.5 Where applicable, reporting to partner agencies on joint work including through: the annual Forum Fisheries Agency/ SPC colloquium and the six monthly FFA/SPC round table to monitor progress and develop work plans for the EU funded DevFish 2 Project.
- 12.6 **Mid-term and Final Independent Evaluation Reports** shall be provided by SPC in accordance with the Project Proposal. The Mid-term Evaluation Report shall be provided by **31 October 2013**. AusAID may nominate one or more representatives, at AusAID's expense, to participate in the Mid-term and Final Independent Evaluation Reviews.
- 12.7 The Final Independent Evaluation Report for the Program will be provided in a format suitable for distribution or representation to relevant organisations regional organisations, regional governments and donor agencies. The Final Independent Evaluation Report shall be provided within two months of the completion of the Program (no later than 31 January 2016).
- 12.8 Attached to the final report will be a statement acquitting all of the Funds ('final Funds acquittal'). The statement must acquit the Funds against the budget referred to in the Program Proposal and must be signed by the senior financial officer or the head of the SPC, indicating that the Funds have been spent in accordance with the terms of this Agreement. Any unspent Funds, interest earned or exchange rate gains must be repaid to AusAID with the final report and final Funds acquittal. The final Funds acquittal must include details of any interest earned or exchange rate gains on the Funds. The final Funds acquittal acquitting all Funds shall be subject to the internal and external auditing procedures laid down in the rules and regulations applicable to the SPC and must also be Independently Audited and certified. The cost of an independent external audit required by this clause may be payable from the Funds.
- 12.9 The annual report, mid-term evaluation report and final independent evaluation report with attached statement acquitting all Funds should be sent to:
- Pacific Fisheries Manager
 - Pacific Division, AusAID
 - PO Box 887
 - Canberra ACT 2602
 - Australia

in the following format:

- (a) one electronic version in PDF (Portable Document Format).

13. FUNDS AND PAYMENT

13.1 AusAID will pay SPC an acquittable Grant up to a maximum of **AUD 9,578,105** in tranches divided as follows:

| Indicative Date | Tranche Number | Phase 1 (AUD) | Phase 2 (AUD) | Total Amount of Grant Funds (AUD) |
|---|-----------------------|----------------------|----------------------|--|
| Completed | 1 | 1,338,392 | | 1,338,392 |
| Completed | 2 | 1,220,692 | | 1,220,692 |
| Refer to Clause 13.23 below | 3 | | 1,183,420 | 1,183,420 |
| 30 November 2012 (Refer to Clause 13.4 below) | 4 | 1,140,442 | 1,359,970 | 2,500,412 |
| 1 June 2013 (Refer to Clause 13.4 below) | 5 | 1,120,824 | | 1,120,825 |
| 30 November 2013 (Refer to Clause 13.4 below) | 6 | | 1,017,570 | 1,017,570 |
| 30 November 2014 (Refer to Clause 13.4 below) | 7 | | 1,196,795 | 1,196,795 |
| TOTAL | | 4,820,350 | 4,757,755 | 9,578,105 |

13.2 Tranche 1 and Tranche 2 have already been paid in full to SPC.

13.3 AusAID will pay Tranche 3 within thirty (30) days of the date of this Agreement and subject to receipt of a valid invoice.

13.4 AusAID will pay subsequent tranches for each Phase at the date indicated above subject to SPC:

- (a) providing an Acquittal Statement of **75%** of the previous tranche for the Phase (and 100% of acquittal and expenditure of earlier tranches for the Phase), signed by the senior financial officer or the head of SPC indicating that the Grant funds being acquitted have been expended in accordance with the terms of this Agreement;

- (b) submitting a valid invoice; and
- (c) making satisfactory progress with the Activity as determined by AusAID.

14. CLAIMS FOR PAYMENT

14.1 Invoices must be submitted when due in accordance with this Agreement, in a form identifying this Agreement title and **Agreement number 57439** Invoices must also contain the Payment Event number(s) notified by AusAID.

14.2 All invoices must be **made** to:

Chief Finance Officer
Australian Agency for International Development
GPO Box 887
CANBERRA ACT 2601 AUSTRALIA

14.3 Invoices should be sent to the above address. Alternatively AusAID will accept electronic invoices. These can be sent to accountsprocessing@ausaid.gov.au

14.4 Where Australian GST applies to this Agreement all invoices must be in the form of a valid tax invoice. Invalid tax invoices will be returned to SPCs. Information on what constitutes a valid tax invoice can be found at <http://www.ato.gov.au/businesses/content.asp?doc=/content/50913.htm>

SCHEDULE 1

PROGRAM NAME: PACIFIC FISHERIES FOR FOOD SECURITY PROGRAM

BACKGROUND

The Pacific Fisheries for Food Security Program is being funded from Australia's Food Security through Rural Development Initiative in recognition of the importance of fisheries to food security and rural development in the Pacific. Australia's Food Security through Rural Development Initiative was announced on 12 May 2009 and will provide AUD 464 million over four years to assist in lifting agricultural and fisheries productivity, improve rural livelihoods and build community resilience.

A range of activities in support of food security are already in progress by SPC's Division of Fisheries Aquaculture and Marine Ecosystem's (FAME's). This *Pacific Fisheries for Food Security Program* (the Program) however, addresses a number of gaps and priorities, aligned to the Division's approved Strategic Plan (2010-13) and identified in consultation with member countries and territories and AusAID. The Program has been developed in the context of recent regional commitments, studies and lessons learnt in Pacific fisheries and food security – including the recent FFA/SPC Report on "The Future of Pacific Fisheries Report" (April 2010) and the Draft "Towards a Food Secure Pacific: Framework for Action on Food Security 2011-2015".

In November 2010, AusAID entered into an Exchange of Letters 57439 with SPC to support Part 1 of FAME's Fisheries for Food Security Program. In August 2011, SPC FAME submitted additional concept notes to AusAID for consideration as Part 2 of the Program.

This Grant Agreement (Amendment 1 to Agreement Number 57439) replaces the Exchange of Letters 57439 in its entirety. This Grant Agreement incorporates Part 1 and Part 2 of the Program and aligns our obligations with the new Partnership Agreement Number 58833 between AusAID and SPC.

OBJECTIVE

The objective of this funding support is to improve food security in the Pacific region by lifting fisheries productivity, improving rural livelihoods and building community resilience from the sustainable management of fisheries.

Australia's support aligns to SPC's and AusAID's broader goals for fisheries related assistance in the Pacific region:

- FAME's goal: "*in line with the priorities of member countries and territories: the marine resources of Pacific islands region are sustainably managed for economic growth, food security and environmental conservation.*" (Division's Strategic Plan, 2010-13).

- AusAID's aim: "To assist Pacific Island countries to increase the contribution of fisheries to reducing poverty and achieving sustainable development." (Valuing Pacific Fish: A Framework for Fisheries Related Development Assistance in the Pacific, 2007).
 - Contribute to AusAID's Strategic Goal of Sustainable Economic Development, which includes improving food security; improving incomes, employment and enterprise opportunities; and reducing the negative impacts of climate change and other environmental factors (as stated in the 2011 Government response to the independent review of aid effectiveness 'An Effective Aid Program for Australia).
 - Contribute to AusAID Food Security through Rural Development policy outcomes: increased productivity for poor households from sustainable fisheries; increased food produced from sustainable fisheries; increase in net income of poor women and men from sustainable fisheries; creation of jobs for poor women and men from sustainable fisheries.

TASKS

SPC shall implement, manage and monitor the Program in accordance with the Partnership Arrangement, this Grant Agreement and any amendment thereto as agreed by the parties in writing.

The Program shall be undertaken by FAME in accordance with FAME's Project Proposals dated June 2010 (Part 1) and August 2011 (Part 2), Annexes 1 and 2 respectively.

Part 1 of the Program includes the following four components, as outlined in Annex 1:

1. Scientific advice for the development of Oceanic Fishery Management Measures;
2. Management and development of export fisheries for aquarium fish;
3. Development of mariculture (saltwater aquaculture) opportunities; and
4. Assistance to meet export requirements for marine products.

Part 2 of the Program includes the following three components, as outlined in Annex 2:

1. Enhance national tuna fishery monitoring and data management with emphasis on artisanal and subsistence fisheries;
2. Support the development of inland aquaculture, particularly in Melanesia; and
3. Improve the management of deepwater snapper resources in Pacific island countries.

SPC shall keep SPC member countries and territories and AusAID informed of the proposed countries of focus for the above Components of the Program, including through annual reporting to SPC's management and through SPC's Joint Country Strategies.

PERFORMANCE INDICATORS

FAME shall finalise a Monitoring and Evaluation Framework for each Part of the Program, within one year of commencing each Part of the Program. The Monitoring and Evaluation Framework will be aligned to the FAME's Strategic Plan, and identify

baseline data for each Part of the Program. The Monitoring and Evaluation Framework shall be available to SPC member countries and territories and a copy provided to AusAID within the first year of the Program.

AusAID will work with FAME to strengthen the Monitoring and Evaluation Framework to: clarify each component's sustainability (FAME's future role and limits, ongoing support requirements and exit strategies); include AusAID's Pacific Partnership outcomes; strengthen reporting on Gender Equity in the Program; and aligning reporting measures, through the Program's Monitoring and Evaluation Framework, with Australia's Strategic Goal of 'Sustainable Economic Development' and Food Security through Rural Development Policies.

REPORTING

Program reporting requirements are outlined in Section 12 of the Grant Agreement. Key reporting activities for the Program comprise:

- annual financial acquittal statements of all AusAID approved funding, certified by the appropriate SPC financial manager;
- annual report to SPC FAME Heads of Fisheries;
- annual report to the Committee of Representatives of Governments and Administrations;
- where appropriate, reporting to partner agencies on joint work;
- annual reporting to AusAID as outlined below and in Section 12;
- mid-term evaluation report, to be provided to AusAID by 31 October 2013; and
- final independent evaluation report.

Program Reporting Timeline

| Reporting to AusAID | 31 October 2011 | 31 October 2012 | 31 October 2013 | 31 October 2014 | 31 January 2016 |
|----------------------------|-----------------|-----------------|----------------------------|-----------------|-------------------------------------|
| Part 1 | Annual Report | | | | |
| Part 1 and Part 2 Combined | | Annual Report | | Annual Report | |
| Program Combined | | | Mid-term Evaluation Report | | Final Independent Evaluation Report |

BUDGET SUMMARY (detailed budgets for Part 1 and Part 2 outlined below)

| Pacific Regional Canberra Fund | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | Total |
|------------------------------------|-----------|-----------|-----------|---------|---------|-----------|
| Fisheries for Food Security Part 1 | 1,338,392 | 1,220,692 | 2,261,266 | | | 4,820,350 |

| Pacific Regional Canberra Fund | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | Total |
|---|------------------|------------------|------------------|------------------|------------------|------------------|
| Fisheries for Food Security Part 2 | | 1,183,420 | 1,359,970 | 1,017,570 | 1,196,795 | 4,757,755 |
| Total Spending Proposal | 1,338,392 | 2,404,112 | 3,621,236 | 1,017,570 | 1,196,795 | 9,578,105 |

Fisheries for Food Security Part 1

| Item | Cost AUD | | | | |
|---|------------|------------|-----------|-----------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | |
| Component 1: Scientific advice for the development of oceanic fishery management measures | 259,375 | 256,875 | 251,875 | 259,375 | 1,027,500 |
| Component 2: Management and development of export fisheries for aquarium fish | 304,375 | 301,875 | 241,875 | 234,375 | 1,082,500 |
| Component 3: Development of mariculture opportunities | 377,708 | 275,208 | 270,208 | 244,375 | 1,167,500 |
| Component 4: Assistance to meet export requirements for marine products | 309,375 | 306,875 | 301,875 | 309,375 | 1,227,500 |
| Subtotal – operation costs | 1,250,833 | 1,140,833 | 1,065,833 | 1,047,500 | 4,505,000 |
| SPC project management fee @ 7% | 87,558 | 79,858 | 74,608 | 73,324 | 315,350 |
| Total | 1,338,392* | 1,220,692* | 1,140,442 | 1,120,824 | 4,820,350 |

Fisheries for Food Security Part 2

| Item | Cost AUD | | | | |
|---|-----------|-----------|-----------|------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| | 2011/12 | 2012/13 | 2013/14 | 2014/15 | |
| Component 1: Artisanal tuna data & tuna data management | 518,500 | 598,500 | 418,500 | 501,000 | 2,036,500 |
| Component 2: Inland aquaculture | 280,000 | 330,000 | 275,000 | 332,500 | 1,217,500 |
| Component 3: Deepwater snapper | 307,500 | 342,500 | 257,500 | 285,000 | 1,192,500 |
| Subtotal – operation costs | 1,106,000 | 1,271,000 | 951,000 | 1,118,1500 | 4,446,500 |
| SPC project management fee @ 7% | 77,420 | 88,970 | 66,570 | 78,295 | 311,255 |
| Total | 1,183,420 | 1,359,970 | 1,017,570 | 1,196,795 | 4,757,755 |

Annex 1

Fisheries for Food Security Programme Part 1

Project Proposal

to AusAID

by

Secretariat for the Pacific Community

4 June 2010

Introduction

Pacific Island countries and territories (PICTs) are unusually dependent on capture fisheries for food security. Annual per capita fish consumption in all Pacific Islands is above the global average of 16.5 kg; and in several small island countries the figures are among the highest in the world. Much of this is supplied by subsistence fishing, with a high proportion of coastal households directly involved in catching fish. Catches from inshore subsistence fishing (people fishing to supply their families) are estimated at 110,000 tonnes, making an annual contribution to GDP of the PICTs of over US\$166 million (2007 data). This is often undervalued in official statistics. A further 45,000 t. is landed annually from commercial coastal fisheries, much of it for sale on local markets.

While most of the 2 million tonne catch of offshore (tuna) fisheries is taken by foreign based vessels or destined for export, this sector also makes a major contribution to national food supplies. This is particularly true in urban centres where catches unsuitable for export provide a relatively low-cost source of protein. Dark meat tuna, canned for the local market, also provides an affordable and easily-stored protein food that is appreciated in several countries with tuna processing industries.

The role of fisheries in food security is not just about providing fish for consumption, of course. Income generation and employment in export-oriented fisheries and aquaculture is equally important in ensuring that people have adequate access to food – especially in some of the poorer countries in the region. It is noteworthy that FAO identifies Kiribati, Papua New Guinea, Solomon Islands, Tuvalu and Vanuatu as ‘low income food deficit’ countries.

AusAID’s strategy for food security stresses the need to promote sustainable production and improve the economic opportunities for the poor. It also identifies the need for increased trade, and assistance in meeting export standards (*Food security strategy 2004*). Similarly, the need “to maximize the flow of benefits to Pacific Islanders from sustainable commercial and subsistence fisheries” is at the heart of AusAID’s strategic objectives for the fisheries sector (*Valuing Pacific Fish, 2007*).

The SPC fisheries programmes are dedicated to ensuring that “the marine resources of the Pacific Islands region are sustainably managed for economic growth, food security and environmental conservation” (*FAME strategic plan 2010-2013*). A range of activities in support of this objective are already in progress. The aim of this proposal is to deliver results in a number of key areas that have been identified as gaps and priorities, in consultation with member countries and territories¹. These needs and priorities are highlighted in *The Future of Pacific Island Fisheries* (2010) report commissioned by SPC and FFA which considered the future of fisheries over a 25-year timeframe (2010-2035) to provide the basis for long-term strategic approaches to the development and management of fisheries at national and regional levels.

This proposal consists of four components as follows:

- Component 1: Scientific Advice for the development of Oceanic Fishery Management Measures

¹ These consultation fora include- SPC’s governing body i.e. the Committee of Representatives of Governments and Administrations (CRGA), the Heads of Fisheries (HOF) meetings, the Forum Fisheries Committee (FFC), the Marine Sector Working Group of CROP agencies as well as each PICT’s Joint Country Strategy process with SPC.

- Component 2: Management and development of export fisheries for aquarium fish
- Component 3: Development of mariculture opportunities
- Component 4: Assistance to meet export requirements for marine products

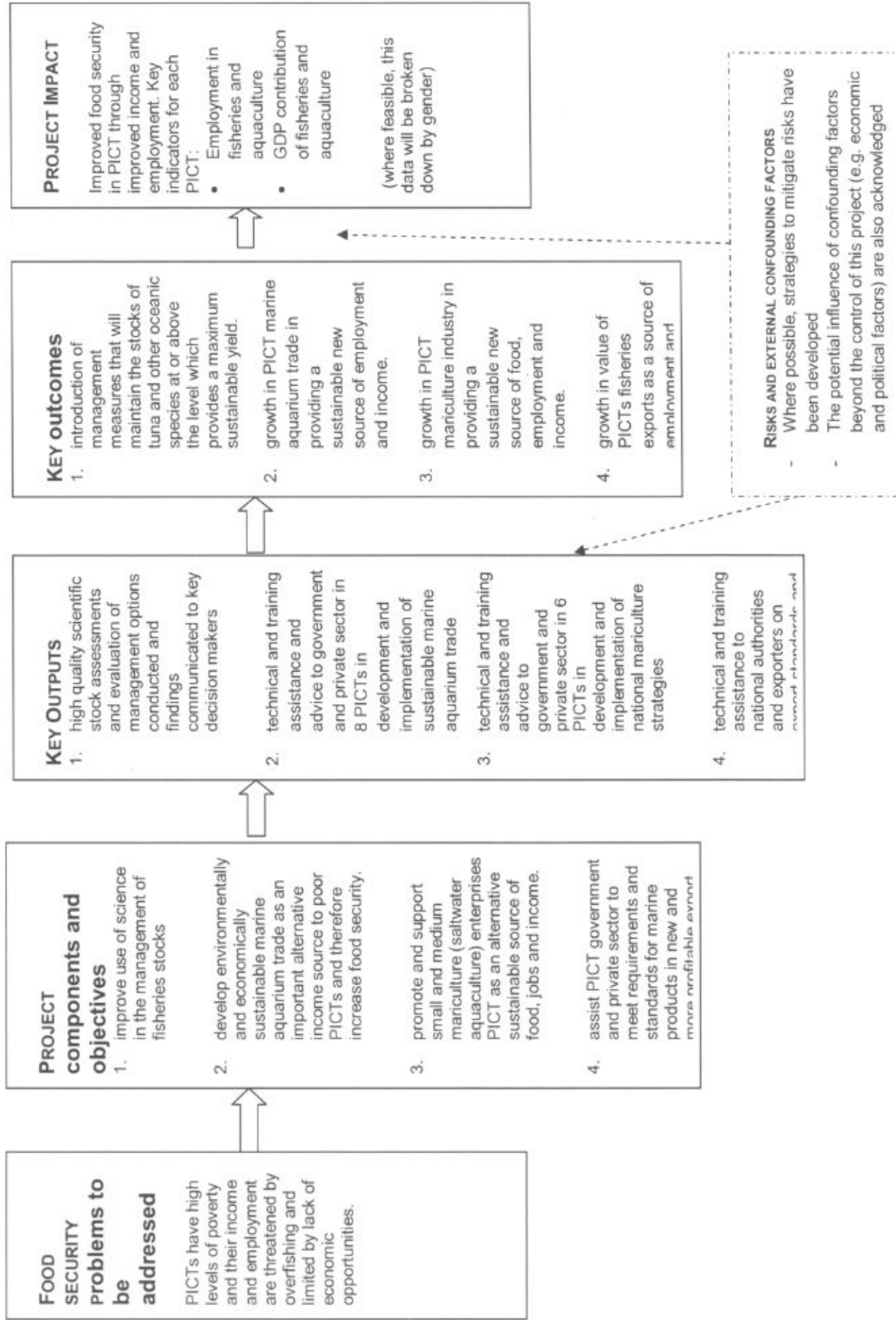
These address strategies developed by the recent Pacific Food Summit (April 2010) described in *Towards a Food Secure Pacific: Framework for Action on Food Security, 2011-2015*:

- i. Develop and strengthen policy, legal and regulatory frameworks for sustainable production and trade of agriculture, aquaculture, forestry and fisheries' products: (Components 1, 2, 3, 4).
- ii. Increase the production, productivity and resilience of agriculture and fisheries' systems. (Components 1, 3, 4).
- iii. Increase the contribution of oceanic fisheries' resources to domestic food supplies and employment. (Components 1, 4).
- iv. Enhance food processing capacity and value-adding of agriculture and fisheries' products. (Components 1, 3, 4).
- v. Increase competitiveness and trade of agriculture and fisheries' products in domestic and international markets. (Components 2, 3, 4).
- vi. Promote sustainable management of land, freshwater, agrobiodiversity and marine resources. (Components 1, 2, 3, 4).

Each of the four components addresses specific problems and could be undertaken in isolation; but there are linkages and subject to available funding a project that combines all four work areas can be expected to make a more substantive contribution to fisheries for food security. While it is difficult to assign priorities to the four components (all are regarded as very important), the first three components can be implemented by SPC immediately. Component 4 would require a few months' lead time from a funding decision.

Figure 1 on the following page presents a logic model which shows how the food security problems in PICTs drive the project's objectives and outputs, and how these outputs are linked to the expected outcomes and the ultimate impact on improving food security.

Figure 1. Fisheries For Food Security Logic Model



Component 1 - Scientific advice for the development of oceanic fishery management measures

Objective:

The objective of this component is to ensure that the fisheries management measures agreed by members of the Forum Fisheries Agency (FFA), and its two sub-groups, are based on the best possible scientific advice. This objective supports the broader goal of a sustainable fishery for tuna and associated species, contributing to food security directly by providing for healthy tuna resources for direct consumption and indirectly through economic growth and financial security to ensure access to other food sources.

Strategy:

The FFA member countries are the key players in the management of the region's tuna fisheries. About half of the tuna caught in the Western Central Pacific Ocean (WCPO) comes from their waters, and there is a long history of collaboration through the Agency. Although members can, and do, implement management measures in their own EEZs, cooperation among them is important for three reasons:

- The resources are shared, and are followed by very mobile fishing fleets, so there is a need to coordinate management measures across several zones;
- The fleets of distant-water fishing nations operate in most zones, and can 'play one country off against another' in licensing negotiations if there is no common position on management measures; and
- The FFA countries form a strong bloc in the Western Central Pacific Fisheries Commission (WCPFC) and need to work together to ensure that the Commission agrees measures that are in their interests.

After many years in which tuna catches have grown steadily in equatorial waters, overfishing is now considered to be occurring on one of the four main species (bigeye tuna) and a second species (yellowfin) is fully exploited. As a result, there is an urgent need to take management action that will effectively limit fishing mortality for these species. SPC provides the scientific advice needed to analyze a range of possible measures for their effectiveness, and works with FFA advisers to determine the economic impacts on member countries. This work is conducted mainly with the Parties to the Nauru Agreement (PNA), whose zones are important for the main fisheries for tropical tunas – skipjack, yellowfin and bigeye. A number of measures were agreed for the purse seine fishery in 2008, including a limit on the number of days fished by purse-seiners, but these need to be tightened and refined to be fully effective. A new scheme to control fishing effort in the equatorial longline fishery is also needed.

The other sub-group – the Sub-committee on Southern Tuna and Billfish Fisheries (SC-STBF) – comprises countries to the south of the main tropical tuna fishing areas, which have important domestic longline fisheries targeting albacore tuna. The major concerns in this fishery are the maintenance of stocks which will ensure the fishery remains economically viable; and the impact of a growing distant water fishery targeting swordfish. Better bio-economic modeling of albacore fisheries, to advise limits for licensing, and a comprehensive assessment of the swordfish resource are the immediate priorities for this group.

SPC has endeavoured to provide scientific advice to these groups for some years, but the volume of work now being demanded and the cost (time and money) of participating in the various meetings to present the results requires a dedicated officer to work with FFA. This will allow the scientist to establish a rapport with the representatives of member countries, and ensure that the scientific advice is relevant and delivered appropriately at the decisive meetings.

Table 1: Outputs and outcomes for Component 1

| | |
|--|--|
| <p>Objective:</p> <p>Improving the quality and use of science in the management of fisheries stocks to ensure the sustainability of fisheries which are a major source of income and employment in PICTs.</p> | |
| <p>Overall outcome</p> <p>Introduction of management measures that will maintain the stocks of tuna and other oceanic species at or above the level which provides a maximum sustainable yield (or other agreed reference points). As measured by:</p> <ul style="list-style-type: none"> ○ Number of recommendations from the scientific analyses adopted by the WCPFC Commission and implemented through management decisions in the form of Conservation and Management Measures (CMMs) ○ Improved status of these stocks by year four as determined by agreed reference points | |
| <p>Specific Outputs</p> | <p>Specific Outcomes expected by end of Y4</p> |
| <p>Evaluations of alternative management options (e.g. Management Strategy Evaluation) are presented to key fisheries management bodies (e.g. the Forum Fisheries Committee (FFC), PNA, and Management Options Consultation), and incorporated into the joint SPC/FFA bioeconomic modelling project for tropical tunas (this work is funded through EDF10) (annually- Years 1, 2, 3, 4) [minimum one paper produced and three meetings attended per year]</p> <p>Scientific analyses are provided in response to requests from the PNA for scientific information necessary to support the implementation of the Purse Seine Vessel Days Scheme (PS-VDS), e.g. estimation of parameters necessary for determining Total Allowable Effort and allocations within the Parties (annually- Years 1, 2, 3, 4) [minimum one paper produced and two meetings attended per year]</p> | <p>Improvements in the management regime for the purse seine fishery that effectively reduce fishing mortality on bigeye and constrain yellowfin mortality at or below current levels;</p> |
| <p>Detailed analyses of albacore catch and effort data are undertaken for SC-STBF members to determine factors that influence fishing success</p> | <p>Appropriate catch or effort limits in national fisheries targeting albacore that result in both profitable fishing</p> |

| | |
|---|--|
| <p>and levels of effort that should support profitable catch rates. These analyses are presented to key fisheries management bodies, (e.g. the Forum Fisheries Committee, SC-STBF, and Management Options Consultation) (annually- Years 1, 2, 3, 4) [minimum two papers produced and three meetings attended per year]</p> | <p>operations and sustainable utilization of the resource</p> |
| <p>Detailed analyses of longline effort are undertaken (with a focus on the EEZs of PNA members) to determine historical patterns of catch and effort and relative fishing power of different fleets, to support the technical design of the longline Vessel Days Scheme (LL-VDS) and determinations of Total Allowable Effort and allocations within the Parties. These are presented to key bodies, e.g. the PNA Task Force for the LL-VDS, and the PNA. (annually- Years 1, 2, 3, 4) [minimum one paper produced and two meetings attended per year]</p> | <p>The introduction of a Vessel Day Scheme that will constrain effort in the equatorial longline fishery;</p> |
| <p>Complete a swordfish stock assessment for the South West Pacific that is accepted by the WCPFC-Scientific Committee and subsequent analyses of potential management options (Years 3 & 4) [minimum one paper produced and two meetings attended per year]</p> <p>Results will be incorporated into WCPFC-Scientific Committee working papers and presented at the annual meeting of the WCPFC-Scientific Committee (Years 3 & 4) [minimum one paper produced and one meeting attended per year]</p> | <p>The introduction of management measures in the Southern fishery for swordfish as evidenced by the adoption of a new Conservation and Management Measure (CMM) by the WCPFC</p> |
| <p>Policy briefs and other 'non-technical' versions of key reports will be produced annually and presentations be made to relevant regional forums, e.g. FFC, to communicate scientific findings to wider non-technical audience (e.g. government officials, ministers, the fishing industry, community leaders and the general public) (annually- Years 1, 2, 3, 4) [minimum two papers produced and three meetings attended per year]</p> | <p>Key decision makers have the information and understanding needed to make management decisions that support sustainable fisheries, contributing to food security and economic growth.</p> |

Risks and Risk Management:

This project component is designed to address one of the key risks and lessons learned from fisheries around the world – a failure to translate scientific information on overfishing of stocks into management action to address the problem. By providing a dedicated scientist to work with FFA, PNA and the SC-STBF, this project component will provide consistent high

quality scientific advice to the organizations that drive most of the management measures adopted in the region.

There is a significant risk that countries will be unable to agree on measures that they perceive as disadvantageous to their national interest. FFA devotes considerable resources to coordinating regional consensus. Additional joint FFA/SPC work on the economic impact of management measures will also inform decision makers and provide the 'least cost' options.

A final risk is that scientific advice will be presented in a form that is not readily understood by decision makers. Again, having an officer dedicated to working with FFA and attending all meetings of their membership helps to inform SPC on how to frame their advice. Funds are also included in the budget for the communication of scientific findings to a wider non-technical audience.

Budget

| Item | Cost AUD\$ | | | | |
|---|----------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – Fisheries Scientist (FFA liaison) for 4 years | 164,375 | 164,375 | 164,375 | 164,375 | 657,500 |
| Specialized technical consultancies | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Travel (for the Fisheries Scientist and other OFP staff as appropriate) – to FFA/PNA/SC-STBF meetings, national consultations | 50,000 | 50,000 | 50,000 | 50,000 | 200,000 |
| Communications – drafting and publication of non-technical material | 12,500 | 12,500 | 12,500 | 12,500 | 50,000 |
| Evaluation | 7,500 | 5,000 | | 7,500 | 20,000 |
| Subtotal – operation costs | 259,375 | 256,875 | 251,875 | 259,375 | 1,027,500 |
| SPC project management fee @ 7% | 18,156 | 17,981 | 17,631 | 18,156 | 71,925 |
| Total | 277,531 | 274,856 | 269,506 | 277,531 | 1,099,425 |

Component 2: Management and development of export fisheries for aquarium fish

Objective

The objective of this project component is to establish effective management and monitoring arrangements in countries that have an existing marine aquarium trade. The component will also work with two or three countries to promote the development of the trade where it does not exist at present. The marine aquarium trade provides a sustainable source of income for coastal communities, which does not compete with fisheries supplying fish for food.

Strategy

The marine aquarium trade in the Pacific Islands is a story of successful private sector development. There are currently 12 countries involved, with at least two others wishing to enter the trade. The business is estimated to be worth USD \$40–60 million a year to Pacific Island countries and territories (PICTs) and accounts for 10–15% of the global supply. It is estimated to provide some level of income (ranging from full-time employment to occasional sales and royalty payments) to over 5,000 Pacific Island households.

The companies operating in the Pacific Islands have generally sought to establish an environmentally sustainable business, driven by the demands of their customers, and have avoided the bad practice which is prevalent in major suppliers like Indonesia and the Philippines. This can be best supported by transparent and soundly based management plans, put in place by PICT Governments, with the backing of appropriate legislation. Assisting with this is the main activity of this component.

The countries are at different stages of developing and/or managing their aquarium fishery. In Samoa and Nauru there is no fishery, but surveys have found a suitable resource and the airline links would seem to offer opportunities. In these countries this project component will assess the financial viability, and encourage linkages between the Government and suitable private sector partners. In FSM and Solomon Islands, there are active fisheries but no management arrangements, and these needs to be developed through a consultative process. Marshall Islands and Kiribati have management guidelines in place, which need to be developed into formal management plans. Palau has a management plan, but it is outdated and needs to be reviewed in the light of changes in the industry. Tonga, Fiji and Vanuatu (which account for the bulk of the trade) have well defined management plans in place, and need assistance mainly with monitoring of export volumes. Papua New Guinea has pursued a rather different approach from other PICTs, and has been subsidizing the start-up of a supposedly commercial operator. There are reports that this is not going well, and this project component may be able to assist with putting in place more commercially sound arrangements (to be discussed during the SPC joint country strategy mission in 2010).

The second cluster of activities is associated with the private sector: financial assessment of potential new operations and promoting opportunities to the private sector. This project component can also provide capacity building for local fish collectors in the areas of catching and handling. This leads to better quality and higher survival rates of fish at capture and export, giving increased financial returns and reducing waste of the resource.

This component will also take into consideration any existing efforts from other groups and will consult and develop working relationships with those groups that are relevant to learn from their experiences and to avoid duplication of work. Some of these groups include the

Marine Aquarium Council on certification for this industry, the Queensland Department of Primary Industries with their experience in managing this industry, and other projects such as the Coral Triangle Initiative with their experience with Asian based marine aquarium operators and CRISP for the application of post larval capture in the marine aquarium industry.

Table 2: Outputs and outcomes for Component 2

| | |
|--|--|
| Objectives | |
| To develop environmentally and economically sustainable marine aquarium trade as an important alternative income source to poor PICTs and therefore increase food security. | |
| Overall outcome | |
| Delivery of sustainable economic benefits to the PICTs from the development and management of the marine aquarium trade. | |
| General measures: | |
| <ul style="list-style-type: none"> • Growth in PICT marine aquarium industry as measured by: <ul style="list-style-type: none"> ○ value of production from countries with established trade is accurately recorded and sustained at current levels ○ number of new enterprises and jobs created in PICTs without a current aquarium export business ○ exports from PICTs maintain a good reputation with importers as being sustainably sourced | |
| Specific Outputs | Specific Outcomes expected by end of Y4 |
| <ul style="list-style-type: none"> • Work with at least 8 PICT governments and marine aquarium industry in developing and implementing management plans for an environmentally and economically sustainable trade (2 PICTs a year) • Provide advice, resources assessment services, to PICT governments to build capacity in monitoring, fisheries resources assessment and managing aquarium fisheries (2 PICTs a year) | Appropriate management plans implemented and operating effectively in 8 countries. |
| <ul style="list-style-type: none"> • Databases established to monitor aquarium exports in at least 4 countries, with staff training in using the database for data entry and analysis. (2 in Year 1, 2 in Year 2) | Database being used effectively to regularly and reliably monitor exports, resources assessment, and economics of the fishery. |
| <ul style="list-style-type: none"> • Sub regional workshop for training in | |

| | |
|--|--|
| <p>database management for participants from at least 6 countries (Year 2)</p> <ul style="list-style-type: none"> • Provide training to national fisheries authority staff to build local capacity for managing National marine aquarium trade (2 in Year 1, 2 in Year 2). | |
| <ul style="list-style-type: none"> • Work with 2 to 3 countries to promote the development of the trade where it does not exist at present. • Financial assessment/economic appraisal completed on potential new operations and promoting opportunities to the private sector. (Year 1) | <p>Sustainable aquarium export business established in at least 1 PICT which does not currently have aquarium export business</p> |
| <ul style="list-style-type: none"> • Training provided to local fish collectors in at least 2 PICTs in the areas of catching and handling to promote and ensure use of industry-wide best practices. (1 in Year1, 1 in Year 2, with Years 3 & 4 focusing limited training to maintain industry best practices and on exit strategy) | <p>Reduced mortality of collected aquarium fish in several enterprises in at least 2 PICT, increased profitability for established business.</p> |
| <ul style="list-style-type: none"> • Develop and distribute: marine aquarium fish identification cards for resources monitoring, database user manual and code of conduct for best practices in aquarium fish collection and handling | <p>Improved awareness of sustainable aquarium fisheries in at least 8 PICT</p> |

Risks and risk management

This component is designed to address the main risk (experienced in some producer countries) that the fishery will develop in a destructive and unsustainable way. In general, this has not been the experience in the Pacific where operators have perceived it to be in their interests to avoid this kind of image and have been very cooperative with efforts to establish and enforce management plans.

The trade faces economic risks in that expenditure on non-essential items in developed countries tends to fall during an economic recession, and that air freight may decline or become more expensive if tourist numbers fall. There is little that the project can do about these risks, but the efforts to ensure a sustainable fishery with improved returns may mitigate the impact.

Aquarium fish exports to European markets are constrained by certification requirements. SPC is assisting countries in the region to meet OIE (an animal health organization) reporting

requirements. The trade facilitation component of this programme would assist in this area. There is also a trend to replace wild-caught aquarium products (fish, corals and invertebrates) with aquaculture products. Capture at the post-larval stage for rearing to maturity also shows promise. While there is always likely to be a demand for wild caught aquarium fish, this is an opportunity for some species that will be pursued under the mariculture component of the project as an alternative income-earning opportunity.

Budget

| Item | Cost AUDS | | | | |
|---|----------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – senior fisheries scientist (marine aquarium trade) for 4 years | 164,375 | 164,375 | 164,375 | 164,375 | 657,500 |
| Consultancies – economic appraisals in support of development | 40,000 | 10,000 | | | 50,000 |
| Travel – to PICTs for fieldwork, industry training, and management plan development | 37,500 | 37,500 | 37,500 | 37,500 | 150,000 |
| Database development (yr 1) and sub-regional workshop (yr 2) | 30,000 | 40,000 | | | 70,000 |
| Equipment for field work and training | 12,500 | 12,500 | 12,500 | 12,500 | 50,000 |
| Attachments of national fisheries staff for training | 12,500 | 12,500 | 12,500 | 12,500 | 50,000 |
| Information development and dissemination | | 20,000 | 15,000 | | 35,000 |
| Evaluation | 7,500 | 5,000 | | 7,500 | 20,000 |
| Subtotal – operation costs | 304,375 | 301,875 | 241,875 | 234,375 | 1,082,500 |
| SPC project management fee @ 7% | 21,306 | 21,131 | 16,931 | 16,406 | 75,775 |
| Total | 325,681 | 323,006 | 258,806 | 250,781 | 1,158,275 |

Component 3 – Development of mariculture opportunities

Objective:

The objective of this component is to promote and support small and medium mariculture (saltwater aquaculture) enterprises in the Pacific Island countries and territories. This will contribute to employment and economic growth, particularly in rural areas, and in the case of some products will add directly to local food supplies. Mariculture can provide an alternative to capture fisheries, relieving pressure on over-exploited coastal resources.

Strategy

On a global basis, aquaculture is growing faster than any other form of food production and is predicted to overtake capture fisheries as a supplier of fish for food in the near future. In many PICTs, however, the potential for growth of the sector has yet to be realised. In 2007 the value of production was US\$211 million dollars but it was dominated by pearls and prawns from the French territories. In the last five years or so, however, a number of new small and medium sized mariculture ventures have started in other Pacific Island countries, targeting local and niche export markets. This project component aims to build on these successes, and will also contribute directly to local fish supply by culturing sustainably trapped wild fish fingerlings in cages using local feed ingredients.

In the line with the recommendations of the 2009 AusAID funded review of the SPC Marine Resources Division; this project component will start with a critical analysis of the opportunities and constraints to mariculture development, emphasising economic and market factors. It is expected that this will refine the existing SPC Aquaculture Action Plan (2007), which has identified the key mariculture commodities (particularly pearls, prawn, seaweed and marine aquarium species). It will also inform national aquaculture strategies or legislation, which will be developed through a consultative process, with strong private sector input.

This project component will then provide advice and technical assistance with the implementation of the mariculture components of these strategies. This will include addressing issues with production techniques for some commodities, but also help to overcome other constraints, and may include assistance with developing new legislation where required. There will be an emphasis on developing skilled aquaculture scientists/technicians at the national level, and a number of projects will involve post-graduate students from the region.

This project component has strong linkages with other initiatives, notably the ACIAR mini-projects and the work of CRISP on post-larval capture and culture. There are synergies with components 2 and 4 of this programme.

Table 3: Outputs and outcomes for Component 3

| | |
|---|---|
| <p>Objectives</p> <p>To promote and support small and medium mariculture (saltwater aquaculture) enterprises in the Pacific Island countries and territories. This will contribute to employment and economic growth, particularly in rural areas, and in the case of some products will add directly to local food supplies. Mariculture can provide an alternative to capture fisheries, relieving pressure on over-exploited coastal resources.</p> | |
| <p>Overall outcome</p> <p>An increase in the number and production of sustainable mariculture enterprises in the region, providing more employment and income earning opportunities.</p> <p>Growth in PICT mariculture industry as measured by:</p> <ul style="list-style-type: none"> ○ number of new mariculture enterprises ○ number of jobs created | |
| <p>Specific Outputs</p> | <p>Specific Outcomes expected by end of Y4</p> |
| <ul style="list-style-type: none"> • Updated analysis of opportunities and constraints to mariculture development in PICTs (Year 1) • One regional mariculture workshop conducted for government staff and private sector (Year 1) • Mariculture component of 6 national aquaculture strategies or legislation completed (2 in Year 1, 4 in Year 2) • At least 2 individual training attachments organized (yearly) • Ongoing communication of project outputs to stakeholders (email, SPC aquaculture website, press releases) (yearly) | <p>Mariculture component of 6 national aquaculture strategies or legislation endorsed and implemented</p> |
| <ul style="list-style-type: none"> • Advice and technical assistance to facilitate uptake by private enterprise of commodities not currently farmed in at least 4 countries (1 in Year 2, 1 in Year 3, 2 in Year 4) | <p>Uptake by private enterprise in at least 4 countries of commodities not currently farmed for domestic sales, import substitution or export - as a direct result of project efforts</p> |
| <ul style="list-style-type: none"> • Advice and technical assistance to facilitate uptake within a rural or peri- | <p>Uptake within a rural or peri-urban community in at least 2 countries of</p> |

| | |
|---|---|
| urban community of wild capture-based mariculture of finfish in at least 2 countries (1 in Year 3, 1 in Year 4) | sustainable techniques developed by the project for wild capture-based mariculture of finfish, which contributes towards local fish food security |
| <ul style="list-style-type: none"> • In partnership with PICTs, produce and implement a plan for developing skilled aquaculture scientists/technicians at the national level. • This includes at least 4 relevant research projects for capacity development undertaken which involve post-graduate students from the region (2 in Year 3, 2 in Year 4) | 4 Pacific Island nationals obtain MSc qualifications from applied research projects supervised by the SPC mariculture officer |

Risk and risk management:

An important risk (indeed almost a certainty for many commodities) is that aquaculture products from the Pacific Islands will be unable to compete on international markets with efficient low-cost producers in Asia. This will be addressed by a thorough evaluation of economically viable opportunities, a focus on import substitution for local/tourism markets and development of a few commodities in which the region has a competitive advantage or for niche export markets.

Niche markets are, unfortunately, subject to over-supply in some cases. This project component will aim to address this through realistic production targets in national strategies, and improved monitoring of market trends.

Meeting export market requirements for sanitary standards and certification is likely to be extremely challenging for some countries. Component 4 of the programme will assist countries to address this issue for some items and some markets (such as export to Europe for food products).

In collaboration with the quarantine and veterinarian programs of SPC's agriculture division this project component will address aquatic biosecurity risks. This will include disease or genetic risk analysis and developing protocols for responsible movement of live aquatic species, prior to a new activity.

A problem encountered in some Pacific Island countries has been that Government attempts to monopolise mariculture production proves unsustainable in the long term. This project component will try to emphasize the role of the private sector in the development of national strategies, and will give priority to technical assistance requests that are likely to be useful to private enterprise.

Budget

| Item | Cost AUD\$ | | | | |
|---|----------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – mariculture officer for 4 years | 164,375 | 164,375 | 164,375 | 164,375 | 657,500 |
| Consultancy – analysis of opportunities and constraints | 20,000 | 20,000 | 20,000 | 20,000 | 80,000 |
| Travel – to PICTs for fieldwork and strategy development | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Regional mariculture workshop (Government & private sector) | 100,000 | | | | 100,000 |
| Training and study visits | 15,000 | 15,000 | 15,000 | 15,000 | 60,000 |
| Specialist consultancies – legal, economic | 33,333 | 33,333 | 33,333 | | 100,000 |
| Information and communications | 12,500 | 12,500 | 12,500 | 12,500 | 50,000 |
| Evaluation | 7,500 | 5,000 | 0 | 7,500 | 20,000 |
| Subtotal – operation costs | 377,708 | 275,208 | 270,208 | 244,375 | 1,167,500 |
| SPC project management fee @ 7% | 26,440 | 19,265 | 18,915 | 17,106 | 81,725 |
| Total | 404,148 | 294,473 | 289,123 | 261,481 | 1,249,225 |

Component 4: Assistance to meet export requirements for marine products

Objective

The objective of this project component is to assist national authorities and the private sector to meet requirements and standards for marine products for various export destinations. This will allow them to access the most profitable overseas markets; and so secure and increase employment in the sector.

Strategy

The value of fisheries exports from the PICTs nearly doubled in the period 1999-2007, and many of the new jobs created in the sector are in the processing of fisheries products for export. This is particularly true of tuna processing, where the number of jobs has more than doubled in the last six years and further investment is in the pipeline; but various other fishery and aquaculture products, including live fish and invertebrates for the marine aquarium trade, are also exported.

The European Union (EU) has emerged as a particularly attractive market for fishery products, but also has some of the most rigorous standards for sanitary inspection and documentation. In the case of fishery products for human consumption, only two Pacific Island countries and two French territories are able to meet these requirements at present. As a result, several countries that have products demanded in Europe, and which would yield a better return if sold there, are foregoing the opportunity to export to that market. These include Fiji, Marshall Islands, Samoa and Vanuatu. In other countries, notably the Federated States of Micronesia, potential investment in tuna processing will require access to the EU market.

To add to this, a new EU regulation intended to prevent Illegal, Unreported and Unregistered (IUU) fishing requires that fishery products must be accompanied by a validated catch certificate from the flag state of the harvesting vessel. Other documents are needed in the case of an indirect import. These certification requirements impose a sizeable challenge for the countries in the region. For aquarium exports, the EU requires that countries are members of the World Organisation for Animal Health (OIE) and participate in their disease reporting system. This is a substantial expense for countries with small export volumes, and SPC has negotiated an arrangement that can be shared between the small island countries, but they still need to handle the reporting.

As well as the EU, other importing countries have requirements that national authorities and/or individual exporters often find difficult to meet. These requirements typically become more stringent and more complex over time, with a need for regular upgrading of systems and skills in both the government authority and the private sector.

While there have been a number of short-term projects to address the problems of market access, particularly for sanitary standards for the EU, the countries that have been successful have benefited from an input of technical assistance sustained over several years. While this can be provided on a bilateral basis, the systems and training required are identical and it would be more efficient for SPC to provide a service that will roll them out in several countries at the same time. This project component will focus on the countries which stand to benefit most from improved market access, and will provide support and mentoring to the relevant authorities and private sector in those countries over a period of four years. It will

also ensure that countries already exporting to the EU do not lose that opportunity. As well as working in-country and providing office based advice from an expert, sub-regional training courses will be organised. It is not expected that the technical assistance position will be based in Noumea. Depending on the home of the person recruited, either Suva or a home-based contract will be more cost effective.

This project component has linkages with the FFA/SPC DevFish-2 project, which will provide short-term inputs to address obstacles to tuna industry development, as well as the other components of this programme.

Table 4: Component 4 outputs and outcomes

| | |
|--|--|
| Objectives | |
| To assist national authorities and the private sector in PICTs to meet requirements and standards for marine products for various export destinations. This will allow them to access the most profitable overseas markets; and so secure and increase employment in the sector. | |
| Overall outcome | |
| An increased value of fishery exports from the PICTs, through the ability to target markets which provide optimum returns. Measured by: | |
| <ul style="list-style-type: none"> - value of fisheries exports from PICTs - new jobs created in fish processing for export | |
| Specific Outputs | Specific Outcomes expected by end of Y4 |
| <ul style="list-style-type: none"> • Advice and mentoring provided to at least 4 national authorities and 8 exporters (yearly) • In-country technical assistance and training provided to national authorities and exporters in at least 4 countries (yearly) • One sub-regional training course on standards for sanitary inspection and documentation organized (Year 1, 2, and 3) • At least 4 individual training attachments organized (yearly) • Small grants for laboratory and other technical equipment provided to at least 4 national authorities and/or exporters | <ul style="list-style-type: none"> • PNG and Solomon Islands remain listed for export of fishery products to the EU and at least 2 other Pacific Island countries graduate to the list and can comply with IUU documentation requirements; • The number of listed processing establishments in PICs approved for export to the EU doubles from 5 to 10; • OIE reporting by countries is maintained and PICs are able to export marine aquarium products to Europe; • At least 5 private sector suppliers are able to export to new markets (other than EU) as a result of advice and assistance provided by the project. |

| | |
|----------|--|
| (yearly) | |
|----------|--|

Risks and risk management

This project component is designed to address the risk, already experienced, that sanitary requirements will become increasingly complex. In addition there is a growing amount of certification required for other purposes – IUU, wildlife conservation, and animal welfare - to deal with. National authorities and exporters need to be kept up to date with changes, and can never afford to become complacent.

A number of external factors may affect the attractiveness of the EU market – exchange rates, progress with free trade negotiations for the Pacific and competitor countries, changes in market demand, etc. If this occurs, the project may need to redefine its outcomes to focus more on access to alternative markets.

A significant risk is that the national authorities and/or private sector producers will lack the funding needed to achieve and sustain the improvements required for market access. This project component provides some operational funding to meet short-term requirements; but it will be necessary to focus on countries and enterprises that are able to mobilise the necessary resources, and for which it makes economic sense to go down this path.

Many Pacific governments suffer from high staff turnover which could affect sustainability of the project. Strategies will need to be adopted so that a cadre of competent officers built up by the project are retained.

Budget

| Item | Cost AUD\$ | | | | |
|--|----------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – senior specialist for 4 years | 164,375 | 164,375 | 164,375 | 164,375 | 657,500 |
| Specialist in-country consultancies – laboratory services, databases | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Travel – to PICTs for fieldwork | 37,500 | 37,500 | 37,500 | 37,500 | 150,000 |
| Training courses and attachments | 50,000 | 50,000 | 50,000 | 50,000 | 200,000 |
| Equipment and operational support | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Evaluation | 7,500 | 5,000 | 0 | 7,500 | 20,000 |
| Subtotal – operation costs | 309,375 | 306,875 | 301,875 | 309,375 | 1,227,500 |
| SPC project management fee @ 7% | 21,656 | 21,481 | 21,131 | 21,656 | 85,925 |
| Total | 331,031 | 328,356 | 323,006 | 331,031 | 1,313,425 |

Effectiveness

The objectives for each component are specified along with clear, measurable and achievable outputs and outcomes (see Tables 1-4). These objectives, outputs, and outcomes are designed to meet needs and priorities identified in consultation with PICTs and key partner agencies.

These consultation fora include: SPC's governing body i.e. the Committee of Representatives of Governments and Administrations (CRGA), SPC Heads of Fisheries meetings, Forum Fisheries Committee, Marine Sector Working Group of CROP agencies, as well as each PICT's Joint Country Strategy process with SPC.

The links between project objectives, outputs, outcomes, and impacts are shown in the logic model in Figure 1. Project outputs are essentially what the project will produce with this funding to achieve the intended outcomes, which in turn are expected to lead to impacts of improved food security.

The effectiveness of each component in achieving the outcomes and impact will be evaluated at the end of the project. The evaluation framework and plan is outlined in the section on 'Monitoring and Evaluation'.

The main risks and plans to prevent or mitigate them are identified below the output and outcomes table for each project component.

Where appropriate, key partnerships which contribute to achieving project objectives have been identified. These include FFA and PICT governments (for Component 1), and PICT governments and the private sector (for Components 2, 3, 4).

Efficiency

The development of each project component was based on consultation with relevant partner agencies, PICTs and other key stakeholders to ensure that:

- the components are well designed with relevant outputs that will be effective in achieving intended outcomes and impacts;
- where appropriate, project implementation arrangements are harmonised with other donors, relevant agencies, and aligned with partner government systems to avoid unnecessary duplication, overlap and confusion and maximize synergies. The partnership between SPC and FFA in Component 1 is a good example.
- key roles and responsibilities of all parties involved in project implementation have been identified in the descriptions for each component. Further details will be developed in collaboration with PICTs within the first month of project commencement.
- the budget for the project components are appropriate and realistic in enabling outputs and intended outcomes to be achieved effectively and efficiently.

In addition to the consultation fora listed in the previous section under 'Effectiveness', other parties/bodies consulted for particular project components include: FFA secretariat, and members of the Forum Fisheries Committee (Component 1), and Coral Reef Initiatives for the Pacific, The Queensland Department of Primary Industries, Marine Aquarium Council and the Coral Triangle Initiative (Component 2).

Programme efficiency is also ensured through an annual work programming and evaluation process carried out by SPC's Fisheries, Aquaculture, and Marine Ecosystems (FAME)

Division, and international experts are periodically commissioned to undertake independent reviews of the Division (most recently in 2009).

Monitoring and evaluation

Purpose

A framework for monitoring and evaluation of the Fisheries for Food Security programme has been developed. The key purpose is to:

- a. provide accountability to donors and other key stakeholders on programme outputs and outcomes, including meeting AusAID reporting and evaluation requirements, and
- b. identify what has worked well and what has not, lessons for improvement and future direction for the project.

Logic model

A logic model of the project is presented in Figure 1 to show how the food security problems in PICTs drive the project's objectives and outputs of individual project components, and how these outputs are linked to the expected outcomes and the ultimate impact on improving food security. The logic model also notes the potential impact of risks to the project outcomes and impacts. The main risks and plans to prevent or mitigate them are identified below the output and outcomes table in each project component section. However, there are also external risks beyond the control of the project such as national and international economic and political factors, and the impact of these will be taken into account in project monitoring and evaluation.

Performance indicators

This logic model provides a framework for the monitoring and evaluation of the programme's outputs and outcomes. From this framework, a list of key performance indicators for each project component has been developed. This includes indicators on the impact of each project component on the higher level objectives of the project, i.e. improving food security through poverty alleviation and economic development (e.g. measures of growth in income and employment). Where feasible, these income and employment indicators will be gender-disaggregated to measure impact on men and women. Only the most important indicators were selected to minimise burden on data collection and reporting.

One of the first key tasks during the first project phase (i.e. within the first 6 months) is to work in consultation with PICTs (and partner agencies, where relevant) to further develop the details of this monitoring and evaluation plan, including refining the performance indicators, identifying baselines, and setting up or improving data collection systems for output and outcomes. This collaborative work will help strengthen the capacity of PICT's local monitoring and evaluation systems.

Timing and approach

- **Start of Year 1:** Work with PICTs to refine performance indicators, identify baselines, and set up/improve data collection systems for outputs and outcomes
- **Ongoing:** Monitoring of project activities, outputs and finances will be undertaken by programme management to ensure each project component is on track to achieving its outputs, outcomes, and within budget. This will be undertaken with the organisation's existing resources.
- **End of Year 2:** A mid-term evaluation will be conducted to:
 - assess project operation- how well is it going, whether on track to meeting objectives, and outputs; and
 - get feedback from key partner agencies and clients (SPC members) on satisfaction with quality of project outputs and delivery
- **End of Year 4:** An end of project evaluation will be undertaken to assess achievement of project outcomes and impact based on the indicators listed in Tables 1 to 4 as well as any additional indicators developed in Year 1.
 - data gathered to assess the indicators will include objective quantitative data (e.g. statistics on income and employment) as well as qualitative feedback (e.g. surveys and interviews) from participating PICTs and key partner agencies.
 - this evaluation will be undertaken by external consultant(s).

Reporting

Project outputs, outcomes and impact will be reported and reviewed at the following levels:

- Annual reporting to AusAID
- Annual reporting to SPC management (i.e. Heads of Fisheries) and governing body (i.e. CRGA) against implementation of the FAME Strategic Plan and annual work plan.
- Where applicable, annual reporting to partner agencies on joint work, e.g. Component 1: annual FFA/SPC colloquium that reviews progress on joint work and develops annual workplans, and Component 4: six-monthly FFA/SPC round-table to monitor progress and develop workplans for the EU-funded DevFish-2 project

Gender equality

This project proposal contributes to advancing gender quality in various ways, including:

- Tuna processing for export is an industry in which women typically make up some 80% of the workforce, due to their reliability and manual dexterity.
 - Component 1 focuses on ensuring the tuna stocks are well managed which ensures sustainability of export enterprises. This offers the potential to reduce the high

proportion of women in vulnerable employment which characterizes Oceania² by providing full time sustainable jobs and income.

- Component 4 also helps expand the tuna export industry and therefore employment opportunities for women, by helping PICTs meet requirements for exporting to new and more profitable markets.
- Marine aquarium exports: Component 2 focuses on developing marine aquarium exports as a new source of employment and income opportunities. The differential impact on men and women is not clear at this stage, but will be monitored and assessed during the project.
- Mariculture: Component 3 focuses on developing the mariculture industry as an alternative source of food, jobs and income. The trading of mariculture fish for domestic consumption, is likely to benefit rural women in particular who make up a high proportion of fish sellers in local markets.

SPC has gender equality experts in-house who can advice on ways to promote employment of women in the new marine aquarium fisheries and mariculture sectors. They can also provide assistance in project monitoring and evaluation e.g. in the reporting of gender-disaggregated income and employment data to measure impact on men and women. The organisation also has policies in place to ensure that project jobs and training places are equally available to men and women.

Sustainability

This proposal focuses on improving the sustainability of fisheries as “the most significant renewable resource that Pacific Island countries have for food security, livelihoods and economic growth” (The Future of Pacific Island Fisheries, February 2010, SPC & FFA). Therefore, sustainability is a direct aim of this proposal. As summarized in Figure 1 and explained in the rest of the proposal:

- Component 1 contributes to environmental sustainability through improving sustainable management of fully and over-exploited fisheries resources through the use of high quality scientific stock assessments. This will be achieved by increasing transparency in fisheries management, thereby making it more difficult to take environmentally damaging decisions for short-term gain. This project component also complements assistance in developing sustainable tuna management arrangements at national and WCPFC level, that form a core activity of the SPC Oceanic Fisheries Programme.
- Components 2 and 3 focus on strengthening existing industries and developing new sustainable fisheries industries in countries which lack these industries (export of aquarium fish and mariculture, respectively) as an alternative source of sustainable jobs and income, and therefore reducing over-dependence and pressure on fully/over-exploited coastal fisheries stocks.
- Component 4 focuses on providing assistance to PICTs in meeting export requirements and standards for marine products that are designed to ensure no significant negative environmental impacts are likely to occur.

² Millennium Development Goals Report 2008 (United Nations, 2008)

Tables 1 to 4 in this proposal identify the specific outcomes of each project component that are designed to improve sustainability. Risks and constraints to achieving these outcomes are described in the specific Component sections, along with risk management strategies. Specific risks to the sustainability of benefits/change from the project include:

- high turnover among government officials in many PICTs- this proposal addresses this risk by working closely with both government officials as well as private sector companies in the project implementation and operation. Private sector involvement is critical as they are the engine of economic growth and have financial interests in ensuring project effectiveness and efficiency in developing the fisheries industry. This collaborative work will also strengthen the ability of PICT government agencies to provide relevant and timely response to the needs of the private sector.
- ownership, capacity and resources to maintain desired activity outcomes after the AusAID funding has ceased – this risk is mitigated by the projects' focus on working collaboratively with PICTs in developing and implementing national plans/strategies for management of particular fisheries. This collaborative work is aimed at ensuring PICTs have ownership over the plans developed. All four project components focus on building PICTs capacity to continue the work and sustain benefits and change through in-country training, technical assistance, attachments (on-the-job training).

The environmental and technical sustainability of this programme will be monitored and evaluated through the outputs and outcomes listed for each project component. The plan for monitoring and evaluation is described earlier in this proposal.

The impact of climate change on fisheries and aquaculture in the Pacific is an important issue that SPC is examining in a separate project funded by AusAID. The key threats from climate change appear to include:

- changes to the distribution and abundance of tuna;
- decline in coral reefs and associated fisheries;
- increased operating costs associated with 'climate proofing' shore-based facilities and upgrading fleets to provide improved safety at sea; and
- damage to ponds for freshwater aquaculture.

The project is guided by a Technical Working Group, comprising relevant experts and representatives from Council of Regional Organizations in the Pacific (CROP) agencies and national fisheries departments. The project will be completed around mid-2010 and will produce:

- a summary report to guide policy makers and managers on the actions needed to maintain the productivity of fisheries in face of climate change and ,
- an authoritative book that provides an up-to-date assessment of the likely impacts of climate change on fisheries in the region; the vulnerability of oceanic, coastal and inland fisheries and aquaculture; and supporting information.

Budget Summary

| Item | Cost AUDS | | | | |
|---|-----------|-----------|-----------|-----------|-----------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Component 1: Scientific advice for the development of oceanic fishery management measures | 259,375 | 256,875 | 251,875 | 259,375 | 1,027,500 |
| Component 2: Management and development of export fisheries for aquarium fish | 304,375 | 301,875 | 241,875 | 234,375 | 1,082,500 |
| Component 3: Development of mariculture opportunities | 377,708 | 275,208 | 270,208 | 244,375 | 1,167,500 |
| Component 4: Assistance to meet export requirements for marine products | 309,375 | 306,875 | 301,875 | 309,375 | 1,227,500 |
| Subtotal – operation costs | 1,250,833 | 1,140,833 | 1,065,833 | 1,047,500 | 4,505,000 |
| SPC project management fee @ 7% | 87,558 | 79,858 | 74,608 | 73,325 | 315,350 |
| Total | 1,338,392 | 1,220,692 | 1,140,442 | 1,120,825 | 4,820,350 |

Annex 2

Fisheries for Food Security Programme Part 2

Final Project Proposal

to AusAID

by

Secretariat for the Pacific Community

August 2011

Introduction

Pacific Island countries and territories (PICTs) are unusually dependent on fish for food security. Annual per capita fish consumption in all Pacific Islands is above the global average of 16.5 kg; and in several small island countries the figures are among the highest in the world. Much of this is supplied by subsistence fishing, with a high proportion of coastal households directly involved in catching fish. Catches from inshore subsistence fishing (people fishing to supply their families) are estimated at 110,000 tonnes, making an annual contribution to GDP of the PICTs of over US\$166 million (2007 data). This is often undervalued in official statistics. A further 45,000 t. is landed annually from commercial coastal fisheries, much of it for sale on local markets. Unfortunately there are few opportunities for increasing production from inshore reef and lagoon systems, and the fish needed to supply food for a growing population will have to come from other sources. It is noteworthy that FAO identifies Kiribati, Papua New Guinea, Solomon Islands, Tuvalu and Vanuatu as 'low income food deficit' countries.

While most of the 2 million tonne catch of offshore (tuna) fisheries is taken by foreign based vessels or destined for export, this sector also makes a major contribution to national food supplies. Artisanal, or small scale, fishing for tuna for subsistence and sale on local markets is a significant but poorly measured component of the catch, with potential for increase. It is particularly important in some of the smaller island and atoll countries which have few other opportunities to increase domestic food production. The first component of this project addresses the need to improve monitoring of artisanal tuna catches, and strengthening national tuna fishery databases (both for artisanal and industrial catches).

Access to fish by inland populations in Melanesia is already limited to freshwater fisheries and aquaculture. These countries will also experience some of the strongest population growth and urbanisation resulting in further deficits in coastal areas. The development of small and medium scale freshwater aquaculture enterprises represents one of the best opportunities to meet these shortfalls. Unlike capture fisheries, in which the catch (even for tuna) is near or even exceeds sustainable limits, aquaculture offers real opportunities to increase fish total supplies. This development brings some risks, requiring the introduction of new species or strains of fish to maximize production, and must be handled responsibly. The second component of this project will pursue this work.

The role of fisheries in food security is not just about providing fish for consumption. Income generation and employment in fisheries that target export and high-value local markets is also important in ensuring that people have adequate access to food. The resource of deepwater snappers provides the basis for such fisheries in a number of PICTs. Lack of accurate stock assessments is thought to be limiting the scope for sustainable development of these fisheries in such countries, and ensuring better data collection, and the development of national capacity to analyse it and develop appropriate management systems is the aim of component three.

AusAID's strategy for food security stresses the need to promote sustainable production and improve the economic opportunities for the poor (*Food security strategy 2004*). Similarly, the need "to maximize the flow of benefits to Pacific Islanders from sustainable commercial and subsistence fisheries" is at the heart of AusAID's strategic objectives for the fisheries sector (*Valuing Pacific Fish, 2007*).

The SPC fisheries programmes are dedicated to ensuring that “the marine resources of the Pacific Islands region are sustainably managed for economic growth, food security and environmental conservation” (*FAME strategic plan 2010-2013*). A range of activities in support of this objective are already in progress. The aim of this proposal is to deliver results in a number of key areas that have been identified as priorities, in consultation with member countries and territories³. In line with the 2009 review of the Marine Resources Division (now FAME) that recommended against ‘one size fits all’ projects, two components are targeted on a sub-group of countries where they are most needed. These needs and priorities are highlighted in *The Future of Pacific Island Fisheries* (2010) report commissioned by SPC and FFA which considered the future of fisheries over a 25-year timeframe (2010-2035) to provide the basis for long-term strategic approaches to the development and management of fisheries at national and regional levels.

These address strategies described in the multi-agency regional plan *Towards a Food Secure Pacific: Framework for Action on Food Security, 2011-2015*:

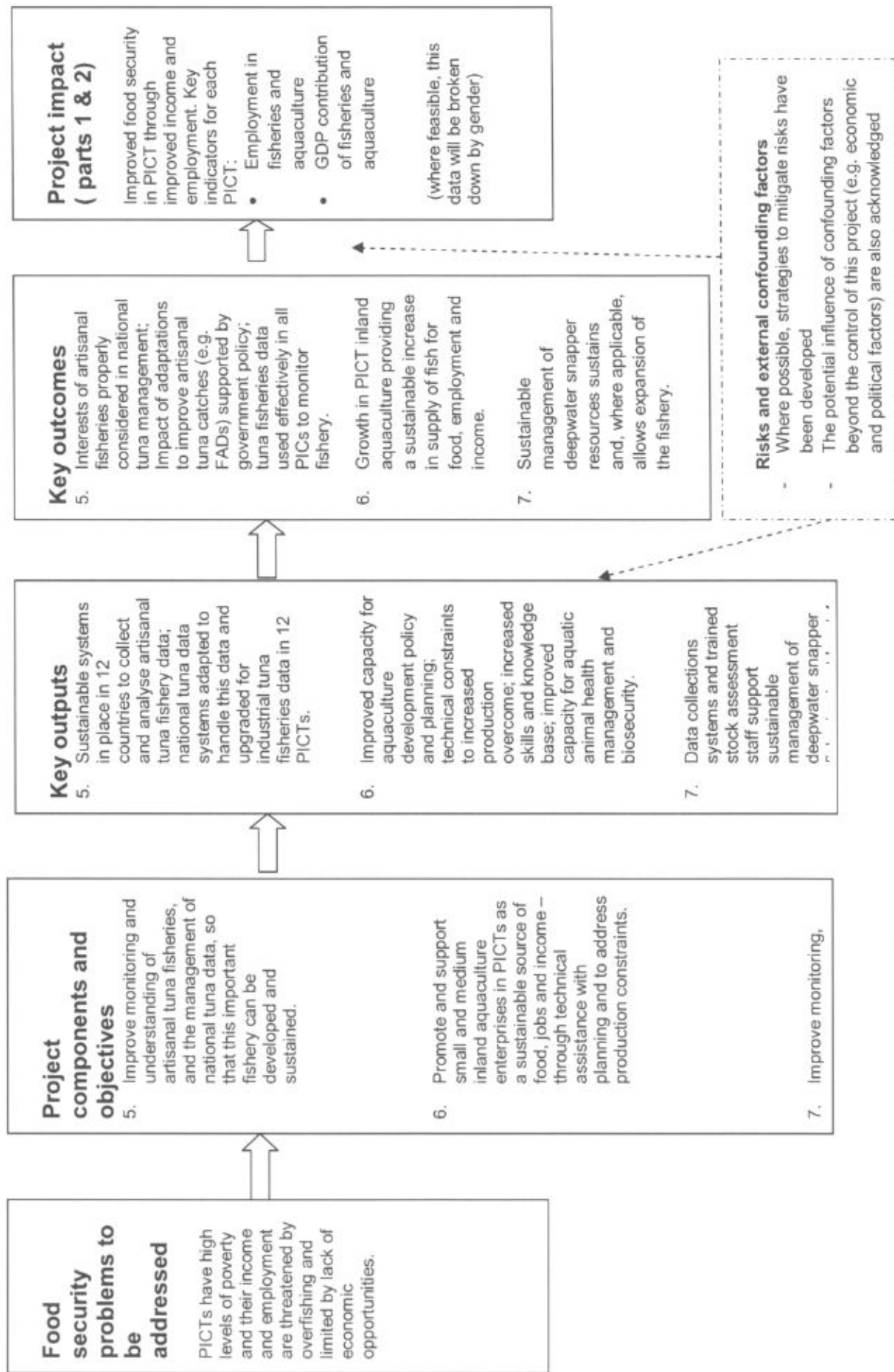
- vii. Develop and strengthen policy, legal and regulatory frameworks for sustainable production and trade of agriculture, aquaculture, forestry and fisheries’ products: (Components 1, 2, 3,).
- viii. Increase the production, productivity and resilience of agriculture and fisheries’ systems. (Components 1, 2, 3).
- ix. Increase the contribution of oceanic fisheries’ resources to domestic food supplies and employment. (Component 1).
- x. Promote sustainable management of land, freshwater, agrobiodiversity and marine resources. (Components 1, 2, 3).

Figure 1 on the following page presents a logic model which shows how the food security problems in PICTs drive the project’s objectives and outputs, and how these outputs are linked to the expected outcomes and the ultimate impact on improving food security.

The concepts for each project component were thoroughly discussed at the SPC Heads of Fisheries meeting in March 2011; component 2 also draws on recommendations of early meetings of sectoral specialists in aquaculture, notably a technical consultation on Tilapia aquaculture in late 2009, ACIAR project FIS/2009/061 “Aquaculture and Food Security in the Solomon Islands – Phase 1” (in which SPC was a collaborator with Worldfish and SI MFMR), and ‘Tahiti Aquaculture 2010’.

³ Notably the 7th Heads of Fisheries (HOF) meeting, the Forum Fisheries Committee (FFC), and each PICT’s Joint Country Strategy process with SPC.

Figure 2. Fisheries For Food Security (part 2) Logic Model



Component 1 - Enhancing national tuna fishery monitoring and data management including artisanal tuna fisheries

Objective:

To improve the monitoring and data management of national tuna fisheries by SPC members, including the development of capacity to collect and manage data from artisanal (including subsistence) tuna fleets to support effective management of these fisheries as important contributors to local food security.

Strategy:

Tuna is increasingly seen as one of the main solutions to the food security needs of Pacific Islanders, and SPC in consultation with national fisheries administrations is actively promoting and supporting the deployment of inshore anchored fish aggregation devices (FADs) to increase the access of coastal communities to tuna resources. There is currently little factual information on the impact that industrial tuna fishing is having on artisanal catches, and the extent to which FADs or management measures (such as excluding purse seiners from coastal waters) can mitigate this and increase the availability of tuna for local consumption. Despite the important subsistence/artisanal tuna fisheries in many SPC island members, only five have basic monitoring programmes, while several others are seeking assistance to begin monitoring the catches associated with newly deployed FADs. Therefore, there is an increasing need to institute effective monitoring and data management for subsistence/artisanal tuna fisheries in a regionally consistent way to inform management and development of these fisheries at the national level. At the same time, there is a need to develop and upgrade national tuna data management for all fisheries. This will allow the analysis of artisanal tuna data in the context of the whole fishery, as well as delivering direct benefits in terms of management and control of the region's largest fishery.

SPC's strategy in assisting its members to meet evolving tuna fishery monitoring needs is two-fold. First, the SPC's Oceanic Fisheries Programme (OFP) offers assistance in the development and implementation of effective monitoring programmes. This involves a range of activities dependent on needs, but can include provision of training to fisheries staff, infrastructure such as computer hardware and software, data forms, sampling equipment and funding for the employment of contract staff. The second aspect of OFP support is to ensure high and consistent standards across the region both for the collection of data, and for its processing, management and reporting. In this regard, OFP provides expertise in the design of monitoring programmes, competency-based training standards, data processing services and/or training, auditing of national monitoring programmes and associated data systems, and customized computer software for data management, reporting and analysis. This project will support these two roles with a particular emphasis on artisanal tuna fishery monitoring.

Table 5: Outputs and outcomes for Component 1

| |
|---|
| Objective: |
| Improving the quality and use of tuna fishery data in the management of national tuna fisheries to ensure their sustainability. This will include, where appropriate, artisanal tuna fisheries, which are a major source of food and livelihoods in many PICTs. |
| Overall outcome |

| | |
|--|--|
| <p>Sustainable systems in place in 12 PICTs to collect and analyse national tuna fisheries data, including artisanal tuna fisheries data. The systems will provide accurate and timely data for:</p> <ul style="list-style-type: none"> ○ Reporting to the Western and Central Pacific Fisheries Commission; ○ Management of the national tuna fishery; ○ Evaluation of measures to safeguard and develop artisanal tuna fisheries. | |
| Specific Outputs | Specific Outcomes expected by end of Y4 |
| National tuna fishery monitoring systems based on the regional standard implemented in 12 PICTs. | Countries are using up-to-date and WCPFC compatible tuna data collection forms. (<i>Indicator – report of the biennial SPC/FFA Tuna Fishery Data Collection Committee circulated and data forms and supporting resource material available on line</i>) |
| Enhanced national tuna fisheries data management systems (TUFMAN) implemented and in-country advanced TUFMAN training delivered in 12 PICTs. The specific enhancements will include: <ul style="list-style-type: none"> - New fishery management tools, including a Vessel Days Scheme (VDS) management module; - A new sub-system to reconcile logsheet and other fishery data using Vessel Monitoring System (VMS) data; and - A comprehensive TUFMAN data query system, including generation of maps and graphs. | Countries have comprehensive information for all aspects of national tuna fisheries management and staff trained in systems use (<i>Indicator – documentation of tuna fisheries in WCPFC Part 1 Annual Reports; duty travel reports</i>) |
| Standardised data collection and management protocols for tuna fisheries, including artisanal fisheries, in place for 12 PICTs and documented in national fishery tuna data procedures documents. | Countries collect accurate data on tuna catches in the context of all tuna fishing operations in their EEZs and by their national fleets wherever they operate (<i>Indicator – revised national tuna data procedures documents, which include procedures for monitoring artisanal fisheries</i>) |
| Fishery monitoring support requirements assessed in 12 PICTs. | The short and medium term resource requirements required to sustain the national tuna fishery monitoring systems have been identified. (<i>Indicator - National Plans of Action for Fishery Monitoring available for 12 countries.</i>) |
| Data from 3 national subsistence/artisanal fleets and 3 | Impact of inshore FADs is analysed for 3 |

| | |
|--|---|
| fleets specifically utilising in-shore FADs are collected and analysed, with results included in national reports provided to the countries concerned. | countries and results used to demonstrate value of national FAD programmes (<i>Indicator – Number of Fisheries departments with budget to support FAD deployment</i>) |
| TUFART (subsistent/artisanal tuna database and reporting system) is installed and operationalised in 12 countries, or as required | Countries can manage, retrieve and analyse data to support national management planning (<i>Indicator – Number of countries submitting artisanal data as part of their annual reports to WCPFC</i>) |
| Audits completed for 12 national tuna monitoring systems | Action taken by countries to remedy weaknesses and gaps in tuna fishery monitoring shown by audits (<i>Indicator – improved data coverage following audit reports</i>) |
| Eight national and two regional tuna data workshops conducted, with focus on subsistence/artisanal tuna fisheries where appropriate | Monitoring team trained in 8 countries and skills of tuna data coordinators in 12 PICTS enhanced (<i>Indicator – workshop reports and evaluation of workshops by participants available</i>) |

Risks and Risk Management

SPC has been providing technical support to member countries for many years and is therefore familiar with many of the problems that can arise. The project is designed to address the risk that ‘what is not measured is not valued’ and the emphasis on artisanal fisheries responds directly to the concern that these important activities are undervalued simply because they have not been well quantified.

At an operational level the project design recognizes that work will be carried out with national fisheries administrations that often lack the resources needed to invest in equipment and operational costs for new areas of work. The project budget caters for these, and countries will be required to take over these expenses as the project is implemented.

A further risk with capacity building activities is that trained staff will leave the fisheries service. The project emphasizes in-country training with groups of fisheries staff, so that capacity is not developed exclusively in one or two individuals.

Linkages

The project builds on many years’ work at SPC to develop the capacity to collect and manage tuna fisheries data at the national level. It will complement work under the EU SciCOFish and DevFish 2 projects to improve the functionality of national databases for both fisheries management and combating IUU fishing. It directly complements a project that will be financed under the AusAID fisheries for food security programme at FFA to support artisanal tuna fisheries, and improved data collection is recommended by the same consultancy report that recommended the FFA project.

Budget

| Item | Cost AUD\$ | | | | |
|--|----------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – fisheries monitoring supervisor | 142,000 | 142,000 | 142,000 | 142,000 | |
| Personnel – fisheries database administrator | 124,000 | 124,000 | 124,000 | 124,000 | 1,064,000 |
| Data collection and entry – staff in country, fieldwork costs, forms, in-country workshops | 150,000 | 150,000 | 50,000 | 50,000 | 400,000 |
| Travel – to PICTs for fieldwork | 75,000 | 75,000 | 75,000 | 75,000 | |
| Meetings – 2 regional tuna data meetings | | 75,000 | | 75,000 | 450,000 |
| IT equipment for national fisheries departments | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Information development and dissemination | 2,500 | 2,500 | 2,500 | 2,500 | 10,000 |
| Evaluation | | 5,000 | | 7,500 | 12,500 |
| Subtotal – operation costs | 518,500 | 598,500 | 418,500 | 501,000 | 2,036,500 |
| SPC project management fee @ 7% | 36,295 | 41,895 | 29,295 | 35,070 | 142,555 |
| Total | 554,795 | 640,395 | 447,795 | 536,070 | 2,179,055 |

Exchange rate assumed throughout – AU\$1 = CFP 85

Component 2 – support for the development of inland aquaculture

Objective

To support the development of inland aquaculture in PICTs, particularly in Melanesia, by providing technical advice for planning and to overcome constraints to production.

Strategy

Aquaculture presents many opportunities for economic and social development, with new activities being pursued throughout the region. Part 1 of the 'Fisheries for Food Security' project targeted the development of mariculture (seawater aquaculture); this component focuses on opportunities for aquaculture in inland areas, encompassing freshwater and brackish-water aquaculture. Clearly the greatest opportunities exist in the large Melanesian islands with abundant land and freshwater resources. These are also the islands with large inland populations that lack access to coastal fisheries resources; and which will see most of the population growth and urbanization. With coastal fisheries resources facing over-exploitation in many areas, causing rising fish prices, aquaculture provides these countries with a real prospect of putting more fish on the table. They thus have both the need and the opportunity for development, which will build on progress already made.

The project will address constraints to sustainable development of aquaculture in four main areas, which have been identified from various regional consultations and country visits:

- Support for strategic policy development and planning for aquaculture at the national level, including management of biosecurity risks;
- Development of technical solutions to aquaculture production constraints in the key areas of 'feed and seed';
- Development of more skilled Pacific Islander aquaculture specialists through training and supervised research;
- Establishment of a regional aquatic animal health programme that makes best use of limited resources across the region and beyond.

A clear **plan** is seen as important to guide development of the sector, to establish the roles of Government and private sector and the priorities for assistance. Papua New Guinea is the most recent member to request SPC's help in designing a strategic development plan for aquaculture (in August 2011). Vanuatu, Solomon Islands and Fiji have plans that were developed with SPC assistance, but periodic review and updating and assistance with implementation will be needed as well as assistance to other countries.

Feed and seed are the universal requirements for aquaculture development. Many farmers rely on imported feed which is more costly and can be difficult to obtain. Most or all of the necessary ingredients for producing suitable feeds, particularly for tilapia, can be obtained in the target countries. The materials available vary from one location to another and there is a need to develop appropriate formulations and feed-making capacity at a district level. Because demand is still at fairly low levels, commercial animal feed producers (where they exist) have sometimes been reluctant to set up production at this time. Smaller-scale manufacturing thus still requires technical assistance. Meeting the growing demand for '**seed**' – the juveniles for stocking ponds - requires the

development of hatchery facilities at different levels. Generally a government-run hatchery would maintain the genetic lines of broodstock and serve as a quarantine facility for necessary importation. Multiplier hatcheries to supply farmers can be managed by local entrepreneurs – particularly for tilapia which use low-tech systems. SPC currently has requests to support development of both types of hatchery, through assistance with the design and training of staff in operations. Developing the **skills** needed to support aquaculture development: a key output will be at the MSc. level, by supporting supervised research. SPC has also been requested to help with curriculum develop for farmer training and extension workers, however, and will support the development of these programmes through the National Fisheries College in PNG, and elsewhere as needed. Finally the ability to address problems of disease will be important in ensuring the increased production is not derailed by this problem. This is discussed further in the section on ‘risks’.

While the concept of ‘subsistence aquaculture’ to provide food security for poor rural communities is attractive, global experience analysed at a meeting in late 2009⁴ has shown that this approach is not successful without ongoing subsidies, which are unlikely to be sustained in PICs. This project recognises that private enterprise, at all scales, will drive aquaculture development – providing food but also employment and income to meet the cost of inputs needed to sustain viable production levels. The project will therefore work with member governments to promote private sector development of small and medium-scale aquaculture ventures supplying local and urban markets as a sustainable means of meeting the growing demand for fish. For freshwater fisheries development the project will focus particularly on Fiji, Solomon Islands, Papua New Guinea and Vanuatu as countries with potential; but it is expected that activities will also assist Samoa and other high island countries. The aquatic animal health network will provide a service more widely and will involve some Pacific Island Territories in the role of service providers to their neighbours.

Table 2: Outputs and outcomes for Component 2

| | |
|--|--|
| Objective: | |
| To support the development of inland aquaculture in PICTs, particularly in Melanesia, by providing technical advice for planning and to overcome constraints to production. | |
| Overall outcome | |
| Sustainable development of small scale and medium aquaculture enterprises (both existing and new) supplying local and urban markets. These will provide: | |
| <ul style="list-style-type: none"> ○ increased supplies of cultured fish for food; ○ increased employment and income-earning opportunities in aquaculture enterprises. | |
| <i>This overall outcome will be measured primarily by the increase in annual fish production from inland aquaculture. Employment and income for men and women will also increase but can probably only be measured through sample surveys.</i> | |
| Specific Outputs | Specific Outcomes expected by end of Y4 |
| 4 national aquaculture plans developed or updated; 4 biosecurity risk or environmental impact assessments for new aquaculture developments completed. | Plans defining policies and roles of Government and private sector in place to support development; risk assessments and |

⁴ See http://www.spc.int/aquaculture/index.php?option=com_docman&task=cat_view&gid=54&Itemid=32

| | |
|--|--|
| | EIAs needed before development can take place are completed and provide appropriate safeguards (<i>Indicator – Project progress reports</i>) |
| Technical advice on design, construction and operation of 2 new hatcheries provided; Feed formulation for 3 locally produced feeds developed and tested. | 2 new hatcheries operational and meeting needs for juveniles; Locally produced feed substitutes for imported feed in at least 3 production systems (<i>Indicator – National reports</i>) |
| 12 aquaculture MSc students supervised through practical and nationally relevant projects. | 12 new qualified technical staff with at least 50% employed in aquaculture enterprises or in aquaculture extension by end of project (<i>Indicator – tracer study on students</i>) |
| Network for aquatic animal disease diagnosis and testing established and in use by member countries. | Countries using regional network to monitor and control disease (<i>Indicator – requests to network for diagnostic services</i>) |

Risks and Risk Management

A key risk that the project is designed to address is the risk of undesirable ecological impacts of species that have been introduced for aquaculture becoming pests in the wild, as well as the risks of introducing new parasites and diseases that can impact both cultured and wild species. The incorporation of biosecurity measures in national aquaculture planning and the capacity to assist with risk assessments will help to manage these risks while still allowing controlled importation necessary for development of the sector.

The emergence of disease as aquaculture expands and intensifies has proved a significant risk for the development of the industry elsewhere in the world. There is an almost complete absence of trained aquatic veterinarians in the region, while diagnostic services are only available in a few specialised laboratories. The strategy to address the needs of what is still a very small industry in the Pacific Islands is to make best use of available resources through a network that will allow countries to seek assistance and share experience.

Plans relying on private sector involvement are always vulnerable to unfavourable changes in investment and business conditions. While these are generally beyond the scope of the project to influence, the spread across several countries with very different prospects for economic growth should allow identification of opportunities in at least some locations.

Linkages

This project will be the centre-piece of SPC work in Inland Aquaculture for the next four years, and it will provide the ability to help coordinate and further extend the outcomes of three parallel initiatives in which SPC is a collaborating partner.

An ACIAR-funded Worldfish project, FIS/2010/057 Aquaculture and food security in Solomon Islands - Phase II, is in the final stages of approval and will involve the SPC Inland Aquaculture working with Worldfish researchers. This project will address key researchable issues to assist

Solomon Islands in implementing promising directions for inland aquaculture as identified by ACIAR FIS/2009/061. The initial focus will be on researching the feasibility of milkfish farming, and then on-farm trials on husbandry and management systems for milkfish and/or Nile tilapia. Partnership building and institutional and personnel capacity strengthening will be a focus of the project. Of the PICTs Worldfish is constrained to working only in Solomon Islands, so an important role for SPC will be to extend results from this project to other PICTs (Vanuatu, Fiji, Samoa, Cook Islands) through this present Inland Aquaculture project.

In June 2011 SPC launched the EU-funded IACT project (Increasing Agriculture Commodity Trade) which has an aquaculture component, and an emphasis on export or import substitution of aquaculture commodities. This complements this proposed project - with its emphasis on technical assistance and working mainly through government systems - as a vehicle for providing support direct to the private sector, with an emphasis on larger enterprises.

SPC is also a collaborator in the ACIAR PARDI project (Pacific Agribusiness Research for Development) which can bring value chain analysis, value-adding and marketing expertise to inland aquaculture commodities.

Budget

| Item | Cost AUDS | | | | |
|---|-----------|---------|---------|---------|------------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Personnel – Aquaculture specialist | 120,000 | 120,000 | 120,000 | 120,000 | |
| Personnel – Project assistant* | 60,000 | 60,000 | 60,000 | 60,000 | 720,000 |
| Travel – to PICTs for fieldwork | 37,500 | 37,500 | 37,500 | 37,500 | |
| Meetings – 2 sub-regional meetings | | 50,000 | | 50,000 | 250,000 |
| Training – MSc research project costs | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Consultancies and diagnostic services | 25,000 | 25,000 | 25,000 | 25,000 | 100,000 |
| Equipment and communications | 10,000 | 5,000 | 5,000 | 5,000 | 25,000 |
| Information development and dissemination | 2,500 | 2,500 | 2,500 | 2,500 | 10,000 |
| Evaluation | | 5,000 | | 7,500 | 12,500 |
| Subtotal – operation costs | 280,000 | 330,000 | 275,000 | 332,500 | 1,217,500 1,217,500 |
| SPC project management fee @ 7% | 19,600 | 23,100 | 19,250 | 23,275 | 85,22585, 225 |
| Total | 289,600 | 353,100 | 294,250 | 355,775 | 1,292,725 1,292,725 |

* Position also provides support to Mariculture and Export Facilitation components of part 1 project.

Component 3 – improving the management of deepwater snapper resources in pacific island countries

Objective:

To improve the stock assessments for deepwater snapper in Pacific Island countries to allow sustainable development of the fishery, while developing national capacity to undertake this kind of work.

Strategy:

Deepwater snapper are an important fisheries resource in a number of Pacific Island countries. Caught on the outer reef slope and around seamounts, they are out of the range of many small-scale inshore fishers and have largely escaped the overfishing that characterizes the more valuable inshore resources. Snappers are good-eating, and because of their deepwater habitat they are not subject to ciguatera poisoning which makes large reef fish a risky choice in many of the small island countries. They support export fisheries, notably in Tonga, supplying a market in Hawaii. In countries with tourist industries they are sought after by hotels and restaurants, and can command relatively high prices. While there are a number of species with different characteristics, deepwater snapper are generally large but slow-growing by tropical standards. In many cases, fisheries have developed on a previously unfished resource, yielding impressive catches at first which soon declined. There is a lack of management plans in most PICTs except the US territories and Tonga, and a lack of information on the status of stocks which could be used to develop plans. In recent meetings of Heads of Fisheries, Pacific Island Countries have called on SPC to assist with stock assessments of this resource. This follows a more general request for assistance to develop national capacity for fisheries stock assessment.

A recent review of snapper fisheries management measures in PICTs⁵ identified requirements that are not being met in most. These include:

1. Application of financial and human resources to ensure collection of high quality data of sufficient coverage to meet the needs of management; and
2. Availability of scientific and technical expertise familiar with the resources, their assessment and management.

This project will address these needs, while building capacity in-country to sustain data collection systems and stock assessment skills. The project will focus on Marshall Islands, Samoa, Tonga and Vanuatu in line with priorities identified in SPC Joint Country Strategies.

Table 3: Outputs and outcomes for Component 3

Objective:

To improve the stock assessments for deepwater snapper in Pacific Island countries to allow sustainable development of the fishery, while developing national capacity to undertake this kind of work.

⁵ McCoy M.A. 2010. Overview of deepwater bottomfish fisheries and current management activities in Pacific Island countries and territories. SPC report (in press).

| | |
|--|---|
| Overall outcome | |
| Improved assessments of deepwater snapper resources are provided for at least 3 PICs with systems and staff in place to further monitor the fishery, undertake stock assessments and refine estimates over time. This will provide for: | |
| <ul style="list-style-type: none"> ○ Management of the national snapper fishery; and ○ Identification of opportunities to further develop the fishery where appropriate. | |
| Specific Outputs | Specific Outcomes expected by end of Y4 |
| A new data management system developed for deepwater snapper (SNAPMAN) with similar user interfaces to the system used for Tuna is installed and operational in at least 3 PICs | 3 functional data management systems (<i>Indicator – data supplied for backup at SPC HQ</i>) |
| Data collection systems for the deepwater snapper fishery are in place and supported in at least 3 PICs using logsheets, observers where practicable, and port samplers; data is collected and entered | At least 2 full years' data for three countries collected during the course of the project (<i>Indicator – as above</i>) |
| Data on growth rates of the major target species, providing comparisons between countries, is collected and analysed for at least 3 PICs | Growth rate information analysed and documented (<i>Indicator – SPC publication of the results</i>) |
| Maps of relevant underwater features and estimates of potential habitat for at least three major target species | Habitat analysis and potential yield estimated for at least 1 PICT (<i>Indicator – Resource profile report to country</i>) |
| At least one catch depletion experiment is carried out for an isolated seamount population of snappers to estimate key population parameters | Unexploited population size and natural mortality estimated for three target species (<i>Indicator – SPC publication of results</i>) |
| At least 3 Pacific Island fisheries graduates obtain an MSc or higher qualification including a project/thesis on the assessment of deepwater snappers in their home country, under supervision of SPC (this may be modified in countries where appropriate staff are already qualified to MSc level to focus solely on the project and attachments) | Three national fisheries administrations have qualified snapper stock assessment scientists working for them (<i>Indicator – trace on supervised graduates</i>) |

Linkages:

The project complements other work on coastal and oceanic fisheries resources by SPC, supported from a variety of sources. It responds to the fact that deepwater snapper has tended to fall between other projects – it is not tuna or a related species (on which Oceanic Fisheries Programme work is focused), but it has also not been covered by Coastal Fisheries Programme work which has focused on the shallow water fish and invertebrates that form the basis of most coastal fishing activities.

Funding for a pilot project in New Caledonia has recently been approved. This will allow development of the SNAPMAN software, as well as testing data collection and the results of this will help to inform detailed planning of this project.

Risks and risk management:

The project is designed to address the principal risk to the snapper fishery, that in the absence of credible stock assessments, managers will be under pressure to allow changes to the fishery that make it unsustainable. In Tonga, for example, there is already pressure to relax restrictions on the fishery that have been in place for many years. Conversely, in the absence of accurate assessments, there may be opportunities missed to expand the fishery creating new enterprises and jobs.

The project also strengthens the capabilities of SPC to assist with the development of Pacific Island's fisheries scientists by providing a dedicated position with a strong role in training and supervision of research. Currently this work conflicts with the need to 'get on and do the job' in delivering stock assessments and scientific advice to a range of clients.

Operational risks associated with data collection and management are largely catered for in the project design. There is some risk regarding the sustainability of these systems, but the objective to deliver improved assessments within the life of the project means that a useful result will be achieved even if systems cannot be maintained. Also by focusing on a few countries that have frequently stated strong interest in this work, there should be a better chance of sustainability than if effort was spread across the entire region. As in other training activities there is a danger that scientists qualified under the project will not remain with national fisheries administrations, but given the relatively high level of expertise and the cost of training at this level, it is not possible to expand the number of scientists trained in each country.

Budget:

| Item | Cost AUD\$ | | | | |
|---|-------------------|----------------|----------------|----------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Fisheries Scientist – Snapper (4 years) | 130,000 | 130,000 | 130,000 | 130,000 | 520,000 |
| Travel and meetings | 25,000 | 25,000 | 25,000 | 75,000 | 150,000 |
| Data collection – local staff & equipment | 50,000 | 50,000 | 50,000 | 50,000 | 200,000 |
| 3 MSc scholarships and attachments | 60,000 | 120,000 | 10,000 | 10,000 | 200,000 |
| Vessel charter and operations | 40,000 | 10,000 | 40,000 | 10,000 | 100,000 |
| Information development and dissemination | 2,500 | 2,500 | 2,500 | 2,500 | 10,000 |
| Evaluation | 0 | 5,000 | 0 | 7,500 | 12,500 |
| Subtotal – operation costs | 307,500 | 342,500 | 257,500 | 285,000 | 1,192,500 |
| SPC project management fee 7% | 21,525 | 23,975 | 18,025 | 19,950 | 83,475 |
| Totals | 329,025 | 366,475 | 275,525 | 304,950 | 1,275,975 |

Effectiveness

The objectives for each component are specified along with clear, measurable and achievable outputs and outcomes (see Tables 1-4). These objectives, outputs, and outcomes are designed to meet needs and priorities identified in consultation with PICTs and key partner agencies.

The links between project objectives, outputs, outcomes, and impacts are shown in the logic model in Figure 1. Project outputs are essentially what the project will produce with this funding to achieve the intended outcomes, which in turn are expected to lead to impacts of improved food security.

The effectiveness of each component in achieving the outcomes and impact will be evaluated at the end of the project. The evaluation framework and plan is outlined in the section on 'Monitoring and Evaluation'.

The main risks and plans to prevent or mitigate them are identified below the output and outcomes table for each project component.

Where appropriate, key partnerships (including complementary projects) which contribute to achieving project objectives have been identified.

Efficiency

The development of each project component was based on consultation with relevant partner agencies, PICTs and other key stakeholders to ensure that:

- the components are well designed with relevant outputs that will be effective in achieving intended outcomes and impacts;
- where appropriate, project implementation arrangements are harmonised with other donors, relevant agencies, and aligned with partner government systems to avoid unnecessary duplication, overlap and confusion and maximize synergies. The partnership between SPC, Worldfish and ACIAR in Component 2 is a good example.
- key roles and responsibilities of all parties involved in project implementation have been identified in the descriptions for each component. Further details will be developed in collaboration with PICTs within the first month of project commencement.
- the budget for the project components are appropriate and realistic in enabling outputs and intended outcomes to be achieved effectively and efficiently.

Programme efficiency is also ensured through an annual work programming and evaluation process carried out by SPC's Fisheries, Aquaculture, and Marine Ecosystems (FAME) Division, and international experts are periodically commissioned to undertake independent reviews of the Division (most recently in 2009). An internal review of the Division's strategic plan is scheduled for early 2012.

Monitoring and evaluation

Purpose

A framework for monitoring and evaluation of the Fisheries for Food Security programme has been developed. Reporting on Part 1 and Part 2 of the project will be integrated as far as possible. The key purpose is to:

- c. provide accountability to donors and other key stakeholders on programme outputs and outcomes, including meeting AusAID reporting and evaluation requirements, and
- d. identify what has worked well and what has not, lessons for improvement and future direction for the project.

Logic model

A logic model of the project is presented in Figure 1 to show how the food security problems in PICTs drive the project's objectives and outputs of individual project components, and how these outputs are linked to the expected outcomes and the ultimate impact on improving food security. The logic model also notes the potential impact of risks to the project outcomes and impacts. The main risks and plans to prevent or mitigate them are identified below the output and outcomes table in each project component section. However, there are also external risks beyond the control of the project such as national and international economic and political factors, and the impact of these will be taken into account in project monitoring and evaluation.

Performance indicators

This logic model provides a framework for the monitoring and evaluation of the programme's outputs and outcomes. From this framework, a list of key performance indicators for each project component has been developed. This includes indicators on the impact of each project component on the higher level objectives of the project, i.e. improving food security through poverty alleviation and economic development (e.g. measures of growth in income and employment). Where feasible, these income and employment indicators will be gender-disaggregated to measure impact on men and women. Only the most important indicators were selected to minimise burden on data collection and reporting.

One of the first key tasks during the first project phase is to further develop the details of this monitoring and evaluation plan, including refining the performance indicators, identifying baselines, and setting up or improving data collection systems for output and outcomes. This collaborative work will help strengthen the capacity of PICT's local monitoring and evaluation systems.

Timing and approach

- **Start of Year 1:** Work to refine performance indicators, identify baselines, and set up/improve data collection systems for outputs and outcomes
- **Ongoing:** Monitoring of project activities, outputs and finances will be undertaken by programme management to ensure each project component is on track to achieving its outputs, outcomes, and within budget. This will be undertaken with the organisation's existing resources.
- **End of Year 2:** A mid-term evaluation will be conducted to:
 - assess project operation- how well is it going, whether on track to meeting objectives, and outputs; and
 - get feedback from key partner agencies and clients (SPC members) on satisfaction with quality of project outputs and delivery

- **End of Year 4:** An end of project evaluation will be undertaken to assess achievement of project outcomes and impact based on the indicators listed in Tables 1 to 4 as well as any additional indicators developed in Year 1.
 - data gathered to assess the indicators will include objective quantitative data (e.g. statistics on income and employment) as well as qualitative feedback (e.g. surveys and interviews) from participating PICTs and key partner agencies.
 - this evaluation will be undertaken by external consultant(s).

Reporting

Project outputs, outcomes and impact will be reported and reviewed at the following levels:

- Annual reporting to AusAID
- Annual reporting to SPC member sectoral specialists (i.e. Heads of Fisheries) and governing body (i.e. CRGA) against implementation of the FAME Strategic Plan and annual work plan.

Gender equality

SPC is keen to promote the engagement of women in project activities and as project beneficiaries. In particular there have already been some successful aquaculture ventures led by female entrepreneurs and women's community groups. Women are also normally involved in the marketing of tuna caught by small scale fishing operations, and interventions to assist them in this role are envisaged under the EU DevFish 2 project.

The organisation has recently completed a study of gender in fisheries science and management⁶ which proposes three ways to increase the representation of women in this field: The first is by raising the profile of fisheries as a potential career as well as the profile of women already working in the sector; the second is by providing a support network; and the third is by strengthening the institutional level (work environment and conditions). Detailed recommendations for the implementation of these proposals are provided in the report and will be implemented as far as this is practicable by SPC through various projects. For example recommendation 5 "provide funding for scholarships in fisheries science and management at the postgraduate level as a means to promote capacity building" is directly addressed by components 2 and 3 of this proposal.

Gender specialists in the organisation can also provide assistance in project monitoring and evaluation e.g. in the reporting of gender-disaggregated income and employment data to measure impact on men and women. The organisation also has policies in place to ensure that project jobs

⁶ Demmke Patricia and Kelvin Passfield: Gender in Oceanic and Coastal Fisheries Science and Management based on case studies in Solomon Islands, Marshall Islands and Tonga. A report for the SciCOFish Project – March 2011 available at www.spc.int/DigitalLibrary/Doc/FAME/Reports/Tuara_11_GenderOceania.pdf

and training places are equally available to men and women. Women have been recruited for two out of the four technical assistance posts supported by the first part of this programme.

Sustainability

This proposal focuses on improving the sustainability of fisheries as “the most significant renewable resource that Pacific Island countries have for food security, livelihoods and economic growth” (The Future of Pacific Island Fisheries, February 2010, SPC & FFA). Therefore, sustainability is a direct aim of this proposal.

Risks to sustainability of project outcomes are identified separately for each component. As far as possible, these have been addressed in the design.

Budget Summary

| Item | Cost AUD\$ | | | | |
|---|------------|-----------|-----------|------------|------------------|
| | Y1 | Y2 | Y3 | Y4 | TOTAL |
| Component 1: Artisanal tuna data & tuna data management | 518,500 | 598,500 | 418,500 | 501,000 | 2,036,500 |
| Component 2: Inland aquaculture | 280,000 | 330,000 | 275,000 | 332,500 | 1,217,500 |
| Component 3: Deepwater snapper | 307,500 | 342,500 | 257,500 | 285,000 | 1,192,500 |
| Subtotal – operation costs | 1,106,000 | 1,271,000 | 951,000 | 1,118,1500 | 4,446,500 |
| SPC project management fee @ 7% | 77,420 | 88,970 | 66,570 | 78,295 | 311,255 |
| Total | 1,183,420 | 1,359,970 | 1,017,570 | 1,196,795 | 4,757,755 |

