



Pacific
Community
Communauté
du Pacifique

Global Climate Change Alliance: Pacific Small Island States Evaluation Report

PREPARED FOR

Pacific Community

23 May 2016



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VERSION CONTROL		
VERSION	STATUS	DATE
1.0	Draft- submitted to SPC	19/03/2015
1.1	Revisions from SPC- Dr. Gillian Cambers	28/03/2015
1.2	Second Draft – submitted to SPC and EU	01/04/2016
1.3	SPC feedback from GC, JU and EU from presentation	12/04/16
1.4	Third draft – circulated to countries, SPC and EU	14/04/16
1.5	Final version incorporating feedback from countries, SPC and EU	10/05/16
1.6	New SPC logo. Integrate final feedback from SPC.	23/05/16

ACKNOWLEDGEMENTS
<p>PREA acknowledges all the contributors to this report: the national coordinators and country-level project teams that were interviewed, other interviewees, and particularly the SPC GCCA: PSIS project team that gave their time to provide input and feedback to the report. Specific thanks to Dr. Gillian Cambers for her valuable comments on draft reports.</p>

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COVER IMAGE CREDITS from left to right: New rainwater tank installed in Palau, D. Sweeney; Sedi-tunnel groynes in Tongatapu, M. Pritchard; Water quality monitoring at a community well in Kiribati, M. Pritchard.

Acronyms and Abbreviations

ACSE	Adapting to Climate Change and Sustainable Energy project
ADB	Asian Development Bank
AusAID	Australian Agency for International Development
CBA	Cost-Benefit Analysis
C-CAP	Coastal Community Adaptation Project
CCCA	Climate Change Coordination Adviser
CCCI	Climate Change Cook Islands
CCCPIR	Coping with Climate Change in the Pacific Islands Region
CCM	Climate Change Matters
CePaCT	Centre for Pacific Crops and Trees
CRGA	Committee of Representatives of Governments and Administrations
CROP	Council for Regional Organisations in the Pacific
DAC	Development Assistance Committee
DPCC	Development Partners for Climate Change
EDF	European Development Fund
EHU	Kiribati Environmental Health Unit
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EQPB	Palau Environmental Quality Protection Board
EU	European Union
EUD	EU Delegation
FFD	First flush device
FNU	Fiji National University
FSM	Federated States of Micronesia
GCCA	Global Climate Change Alliance
GCCA: PSIS	Global Climate Change Alliance: Pacific Small Island States project
GCF	Green Climate Fund
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSD	Geo Sciences Division (SPC)
HDPE	High-density polyethylene
IWRM	Integrated Water Resources Management
JNAP	Joint National Action Plan for Climate Change Adaptation and Disaster Risk Management
KAP	Kiribati Adaptation Program
KRA	Key Result Area
LFA	Logical Framework Approach
LRD	Tuvalu Land Resource Division
M&E	monitoring and evaluation
MFEM	Ministry of Finance and Economic Management, Cook Islands
MMR	Ministry of Marine Resources Cook Islands
MOPW	Ministry of Public Works
MTR	Mid-term review
NAPA	National Adaptation Programmes of Action
NDPB	National Development Bank of Palau
NGO	Non-governmental organisation
NIE	National Implementing Entity to Adaptation Fund

NISP	Niue National Integrated Strategic Plan
NUC	Nauru Utilities Corporation
NZAID	New Zealand Agency for International Development
OECD	Organisation for Economic Co-operation and Development
OERC	Palau's Office of Environmental Response and Coordination
PACC	Pacific Adaptation to Climate Change project
PCCP	Pacific Climate Change Portal
PCCR	Pacific Climate Change Roundtable
PDD	Project Design Document
PECF	Pacific Environment Community Fund
PET	polyethylene terephthalate
PET	Polyethylene terephthalate
PHD	Public Health Division
PICS	Pacific Island countries
PIFACC	Pacific Islands Framework for Action on Climate Change
PIFS	Pacific Islands Forum Secretariat
PMU	Project Management Unit
PPUC	Palau Public Utilities Corporation
PREL	Pacific Resources for Education and Learning
PREL	Pacific Resources for Education and Learning
PWCI	Palau Water Conservation Initiative
RFP	Request for Proposal
RMI	Republic of Marshall Islands
ROM	Results Orientated Monitoring
RONAdapt	Republic of Nauru Adaptation to Climate Change and Disaster Risk Reduction Action Plan
SCMs	Steering Committee Meetings
SCUBA	Self-contained underwater breathing apparatus
SIDS	Small Island Developing States
SODIS	Solar disinfection of water
SOP	Standard Operating Procedures
SPC	Secretariat of the Pacific Community
SPREP	Secretariat of the Pacific Regional Environment Programme
SRDP	Strategy for Climate and Disaster Resilient Development in the Pacific
SRIC-CC	Strengthening Resilience of our Islands and Communities
SRIC-CC	Strengthening the Resilience of our Islands and Our Communities to Climate Change Project (Cook Islands)
STSISP	South Tarawa Sanitation Improvement Sector Project
TOR	terms of reference
TVET	Technical Vocational Education and Training
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Emergency Fund
USAID	United States Agency for International Development
USP	University of the South Pacific
WARD	CROP-CEO Working Arm on Climate Change and Disaster Resilient Development
WASH	Water Supply, Sanitation and Hygiene
WHO	World Health Organization

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1. EXECUTIVE SUMMARY

This is an end-of-project evaluation of the **Global Climate Change Alliance: Pacific Small Islands States** (GCCA: PSIS) project. It provides an independent assessment of the project's performance against key evaluation criteria, and identified lessons and practical recommendations.

Donor	European Union (EU)	Funding	€11.4m (On target to spend all funds)
Implementing agency	Pacific Community (SPC)	Duration	5 years (July 2011 – November 2016)
Participating countries	Cook Islands, Federated States of Micronesia (FSM), Kiribati, Republic of Marshall Islands (RMI), Nauru, Niue, Palau, Tonga and Tuvalu		
Focus	Climate change adaptation		
Target sectors	Coastal protection, marine resources, health, agriculture, freshwater		

The GCCA: PSIS project covers a vast geographical expanse, with approximately 8,000 km separating Palau in the northwest to the Cook Islands in the southeast¹. Some countries are spread across large areas, with the islands of Kiribati dispersed across 3.5 million square kilometres². The nine participating countries have a total population of approximately 431,000, with the smallest country being Niue (1,479 people) and three countries (Kiribati, FSM and Tonga) with populations above 100,000. A large percentage of the populations reside on low-lying atolls or islands that face increasing threat from sea-level rise. Food and water security are key challenges across many of the countries. The region's characteristics and issues are shared with other Small Island Developing States (SIDS)³.

There are significant challenges in implementing projects within the region, including:

- Transport logistics - unreliable, infrequent and expensive inter and intra-country transport
- Capacity constraints across the government and private sector
- Capability constraints across the government and private sector

Overall, the project was highly effective and successful in increasing the capacity of the nine target countries to adapt to climate change. The on-ground climate change adaptation measures have made a real and immediate increase in country's climate change resilience. They also serve as models that can be replicated or in some cases scaled up. Mainstreaming and capacity building activities complimented these measures and form the foundation for future work to address future climate change adaptation needs. Advancements in the ability for countries to access new modalities of climate change financings was also achieved and this will help provide the resources required to support future projects. Measured against the revised regional logframe matrix, the project achieved all but one of its targets which further demonstrates the successful implementation of the project⁴. The overall assessment of the GCCA: PSIS project is that it has been a valuable investment of EU-funding to support Pacific countries to adapt to climate change.

¹ Approximately a similar distance separating Brussels (Belgium) and Beijing (China).

² In comparison, the European Union's land area is 4,325 million square kilometres, with a population of 508 million people.

³ See UNEP 2014. Emerging issues for Small Island Developing States. Results of the UNEP Foresight Process. United Nations Environment Programme (UNEP), Nairobi, Kenya.

⁴ Indicator not achieved related to national coordinators uploading documents to the Pacific Climate Change Portal.

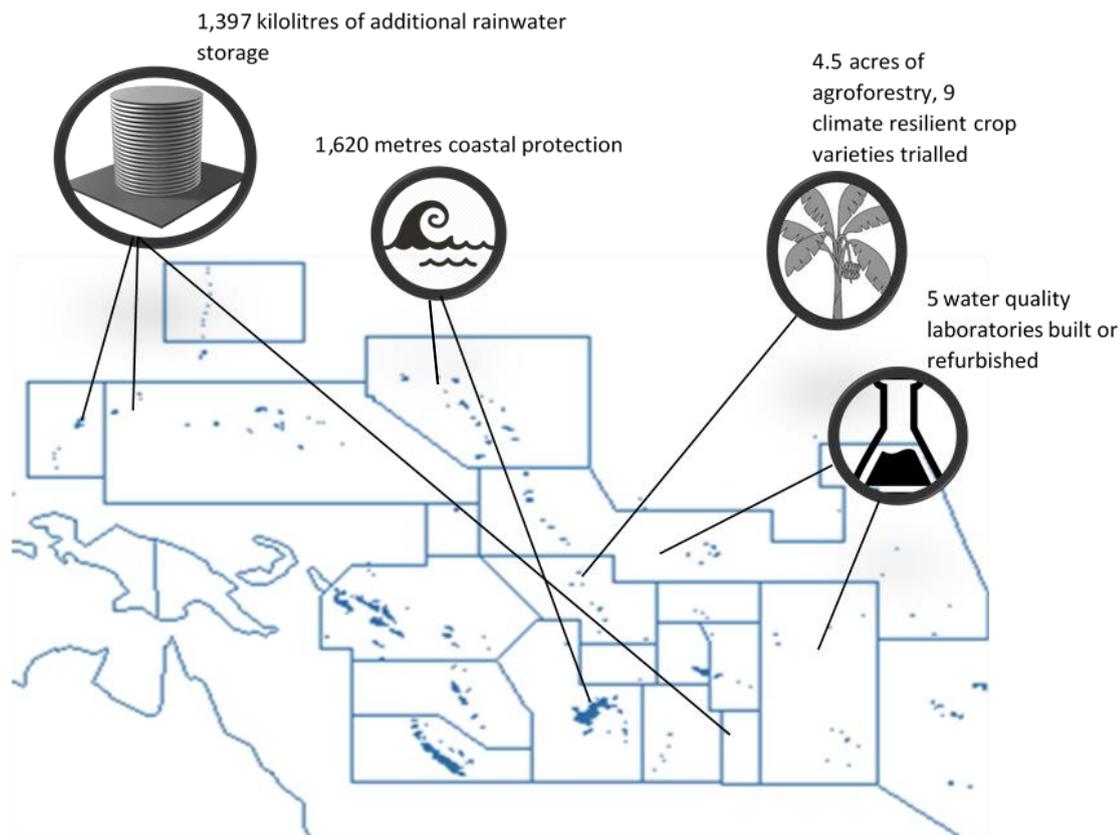
Logframe results summary

<p>Overall objective To support the governments of nine small island states of the Pacific in their efforts to tackle the adverse effects of climate change</p>	<ul style="list-style-type: none"> • Over ten new activities addressed country requests for climate change adaptation • 200 national sector specialists trained to integrating climate change adaptation into key sectors (Training provided in media, finance, Pacific Climate Change Portal) • 396 people trained in proposal preparation using the Logical Framework Approach (LFA) • Additional 992 people trained on various subject (Food security, water security, vector borne disease, agroforestry and home vegetable gardening, tractor maintenance, media, epidemiology, WASH, GIS, food safety, behaviour change etc.) • 1,407 community members in Tarawa, Kiribati trained in the use of SODIS
<p>Purpose To promote long term strategies and approaches to adaptation planning and to pave the way for more effective and coordinated aid delivery on climate change at the national and regional level</p>	<ul style="list-style-type: none"> • New formal mechanisms in SPC to coordinate four different donors/partners engaged in delivery of climate change resilience • GCCA: PSIS officer embedded in SPREP • National climate change policy that integrates disaster risk management in three countries
<p>KRA1. Climate change mainstreamed into national /sector policies and plans</p>	<ul style="list-style-type: none"> • Three countries (Nauru, Palau, Tonga) with new/revised national climate change policy • Four countries (Kiribati, Nauru, Tuvalu, FSM) with new/revised sector plans incorporating climate change resilience.
<p>KRA2. Progress access to climate change funding by new modalities</p>	<ul style="list-style-type: none"> • Review of mainstreaming of climate change into national plans and policies completed for all nine countries • Review and assessment of national and sector policies in relation to budget support modalities in the Pacific smaller island states completed for nine countries • Two countries (Cook Islands, Tonga) assisted with accessing/developing new climate finance modalities.
<p>KRA3. National climate change adaptation projects</p>	<p>Eight of nine national adaptation projects completed by March 2016, whilst the remaining one project which has to be significantly downsized and is on schedule to complete by June 2016:</p> <ul style="list-style-type: none"> • Four water sector projects (Fais in FSM; Tobi, Sonsorol, Kayangel and Angaur in Palau; Niue, Nauru,) • Two coastal sector projects (Tonga, RMI) • One agriculture sector project (Tuvalu) • One health sector project (Kiribati) • One marine resources sector project (Cook Islands) • Nine national lessons learnt workshops and one regional lessons learnt workshop

KRA4. Streamlined technical assistance through regional collaboration

- 15 videos created reaching over 39,000 people
- Two new regional coordination tools available (Pacific Climate Change Portal (PCCP), SPC climate change project matrix)
- 200 SPC GCCA project documents uploaded to PCCP attracting 37,900 views. SPC GCCA website attracted 3,8000 hits in 2012.

On-ground climate change adaptation project highlights



	% country population benefiting from on-ground projects
Cook Islands	1.37
FSM	0.27
Kiribati	56.36
RMI	3.25
Nauru	100
Niue	100
Palau	4.06
Tonga	3.26
Tuvalu	70.9



146,285 direct and indirect beneficiaries



1,588 participants in regional and national trainings

The project design allowed countries to take ownership of the project sector selection, design and implementation which fostered high levels of project ownership and sustainability at the country level. The flexibility offered by this design approach required additional oversight from SPC to ensure the national project scope was focused and achievable considering funding timeframe constraints.

Projects implemented were relevant to and consistent with EU's policies, and SPC's Climate Change Engagement Strategy.

SPC's communication with regional donors was evident and this meant there was no duplication of project activities and in some instances collaboration opportunities were capitalised upon through joint funding and joint delivery.

The SPC adaptive project management approach was effective in identifying and responding to risks in a proactive solutions-focused manner. The high ratio of climate change advisers to countries, complemented by sector-specific advisers and support from SPC divisions, provided the required support and technical assistance to countries.

Regular country missions undertaken by the advisers increased in frequency for some countries to overcome issues and manage implementation risks. The recruitment of competent national coordinators, with supporting project officer(s), finance officer and sector specific experts in some countries, were a key success factor for most projects.

The combination of regional and national capacity building initiatives was critical in building the capacity and capability of country staff to deliver their projects, and to support countries in their ongoing climate change adaptation efforts. Overall there were 1,588 (862 men, 727 women) participants trained at the national and regional level.

The delivery of training in the Logical Framework Approach (LFA) to support proposal preparation was described as a flexible and creative programme that had a positive impact on proposal writing and for general day-to-day project management tasks in the office. The project team's mentoring of national coordinators, and finance staff, helped build skills in project management and financial accountability which will deliver ongoing benefits for those individuals and line ministries.

Most projects took considerable time to develop their detailed project design, and some faced further delays with procurement, transport and on-ground works. The extension granted allowing for 5 years implementation was appropriate and required to enable national project completion.

The project's impact will take time to bear fruit, but there are numerous examples of immediate benefits from both on-ground and mainstreaming activities. The absorption of most of the national coordinators and other GCCA funded staff at the national level into government positions means that the skills and experience gained from the project will be available to countries.

Sustainability of outcomes for most projects is highly likely with the support of exit strategies, high levels of national ownership of projects and high staff retention. Ownership of projects was higher in remote outer islands where vital infrastructure to meet daily needs was provided. Whilst there was an appropriate focus on exit strategies as part of the project design, there are limited examples of national government commitment to provide national funding for the ongoing maintenance of outputs and benefits.

The effective and efficient delivery of projects was hampered by the late re-scoping of projects in two countries. Several country projects experienced high costs and delays when delivering activities in outer islands, especially small countries with limited local capacity, capability and small private

sectors. The SPC lessons learnt process identified a general “rule of thumb” to multiply the overall cost and time for outer island projects by two (compared to main islands) when detailed budgets (based on quotes) and timelines are not available. Where quotes for goods and services have been obtained, then it is still recommended that a large contingency (up to 20%) be added to the budget for capital works projects in outer islands. This contingency factors in the high risks and uncertainties associated with capital works projects and the unreliable and costly transport to these remote islands.

Overall project efficiency was highly satisfactory across a range of areas including the efficient use of funding, time, personnel and the quality of assets produced. Cost efficiencies were achieved through the SPC procurement of water tanks for two country projects and in-kind contributions made by participating countries and other partners.

For some countries, the use of SPC procurement for larger tenders overcame the potential for delays and accountability risks that may arise when using national procurement policies that are not always appropriate for high value tenders. SPC’s choice to involve national representatives on bid review committees provided an additional capacity building benefit from the procurement process. Overall, SPC is well-positioned to manage large infrastructure procurement when certain conditions are met:

- the works fall within SPC’s fields of expertise, or a suitable external expert is brought in to develop the tender specifications and documentation
- there is a recent, and costed feasibility design
- there is sufficient project budget to cover the estimated cost and appropriate contingency
- there is sufficient time for implementation (e.g. 5-year project)
- the tender is open to local and international bidders (e) the asset owners sit on tender review panel.

The reporting process for country projects was sufficient to provide regular progress updates to SPC. Financial management arrangements and tools used were found to be efficient and effective, and should be considered for future regional projects. Revisions to both the regional and country logframes helped in project monitoring and reporting, but further improvements can be made, particularly with indicators. The differences between country logframes reflected the nationally-led approach to project design, but future regional projects should consider developing cascading logframes that provide clearer reporting linkages from the national to regional logframe.

SPC’s Gender Equality Adviser and The Pacific Gender & Climate Change Toolkit helped include gender in project design which resulted in activities focused specially on women or vulnerable groups in many projects. The collection of sex disaggregated data helped to monitor gender inclusiveness.

Nearly all projects delivered positive environmental impacts as a result of their adaptation work and there were no examples of negative environmental impacts reported. No environmental risks were identified in any of the PDD risk management plans, however, environmental risks were present in some projects that should have been identified.

The project created high levels of visibility of project activities and key partner involvement. Visibility increased during the course of the implementation which is partly attributed to the recruitment of a dedicated communications officer in late 2014. Communication skills are often lacking at the national level and SPC’s communications officer helped fill this gap.

The decision by the project team to utilise videos to disseminate project information and lessons learnt was relevant to the Pacific context, with videos being screened on the Pacific Way programme greatly extending the reach the project had. The national and regional lessons learnt workshops, and

the lessons learnt roadshows were a useful means to disseminate project successes and lessons to key national and regional stakeholders, including other CROPs and development partners.

Overall, the evaluation findings were positive across all key evaluation criteria⁵.

Relevance / Coherence / EC-value added	Very good
Effectiveness	Very good
Impact	Very good
Sustainability	Good
Efficiency	Very Good
Gender	Good
Environment	Very good
Visibility	Very good

Best practices arising from the GCCA: PSIS project are identified for sharing and replication (depending on context) are documented in the next section. Following the best practices are a series of recommendations to inform post-project follow-up and the future delivery of regional climate change adaptation projects. Selected recommendations from the independent evaluation of the 'training in proposal preparation using the logical framework approach' are also included. The recommendations documented here do not seek to duplicate all the recommendations made in the MTR and ROM reports.

1.1 Best practices arising from the GCCA: PSIS project

Holistic approach to project design

Project incorporated on-ground adaptation projects complemented by climate change mainstreaming and capacity building. The three-pronged approach supported countries to overcome on-ground, policy and capacity deficits.

Nationally led projects

Project design process allowed countries to select the sector and priority focus area for the adaptation project. This fosters national ownership of projects. Country teams managed the project implementation, which builds national capacity and capability.

National processes supported

Allocation of funds to **national finance ministries** increases national accountability and transparency and reduces financial risks for donors. It also helps build the national capacity within the finance ministry and their capacity to access new forms of climate finance. Project supported the use of **national policies** (procurement, national pay scales) and processes (environmental regulations) which builds national capacity in their application and avoids undermining of the national policies and processes.

⁵ Rating ranges from Very Weak, Weak, Good, Very Good



Skilled and
resourced
PMU

Regional PMU (SPC) was sufficiently staffed with capable individuals to provide a high level of support to national projects. Specifically:

- High ratio of climate change advisers to countries, including a North Pacific based adviser.
 - SPC's flexibility, responsiveness and solutions focused approach to managing challenges and risk was essential to nearly all projects in achieving their purpose.
 - Frequent field trips to countries by SPC's climate change and sector-specific advisers were essential to keeping national adaptation projects moving forward.
 - SPC leveraged expertise (including M&E support) across their different divisions to support country projects.
-



EU – SPC
collaborative
approach

Regular formal and informal communications between the PMU and EU delegation allowed issues to be discussed as they arose, and solutions identified.



Embedded
staff

Embedding senior staff in other regional organisations (e.g. SPREP) fosters regional collaboration in the delivery of activities (e.g. training and PCCP) and enhances efficiency in delivery of services to countries.



Donor
collaboration

Regular formal and informal communications between donors and development partners reduced duplication and helped identify opportunities for SPC to complement existing work being undertaken, or to work together on new joint initiatives, ensuring efficient delivery of regional support to countries and in some cases contributing to sustainability of projects.



Technical
assistance on
request

Project provided technical assistance on request to address in-country capacity or capability shortfalls identified at the national level. The delivery of regional and national level training helped build country capacity across common and country-specific needs to support both project delivery and ongoing climate change adaptation.

South-South
exchanges

Funding of 'South-South' exchange initiatives, for example through attachments within other country departments (e.g. Nauru officer in Kiribati Environmental Health Unit), and delegations to other regional countries (e.g. Palau to Tonga), fosters a regionally-led approach to knowledge sharing.

Knowledge
sharing
through
videos

Project's use of videos to capture project successes and lessons is an example of an appropriate and effective means to capture and share knowledge. The screening of videos on regional television (e.g. Pacific Way) and during national and regional meetings was a highly useful knowledge sharing process and increased project and partner visibility

Lessons
learnt
workshops

Lessons learnt workshops at the national and regional level provided a valuable process for reflection and disseminating lessons to stakeholders. The lessons learnt roadshow provided an opportunity to share lessons with regional development partners and to discuss future steps.

ROM
supports
adaptive
management

Conducting external Results Oriented Monitoring (ROM) annually, and in particular in the first 12 months of implementation, facilitates the identification and addressing of issues early in the project.

Thorough
coastal
infrastructure
projects

Research and rigorous process informed coastal infrastructure project design and implementation, with a number of best practices:

- Site selection and design informed by coastal engineering studies (including historical analysis), feasibility studies, and detailed design and costing reports.
- Appropriate hybrid (hard & soft) coastal protection measures.
- Coastal design engineer involved in project oversight role through several site visits.
- Environmental risks assessed and addressed through EIA or EMP.
- Monitoring plans developed during project design phase and are being implemented.
- Estimated maintenance works and budgets developed during project design phase.
- Use of locally available materials and labour to undertake works to reduce costs and provide examples for local cost-effective replication.

1.2 Recommendations

Recommendations are followed by their rating and target:



Blue circle for priority (High, Medium, Low)



Orange circle for ease of implementation (High, Medium, Low)



Recommendations for the EU (or donors)



Recommendations for SPC (or regional implementing partners)

1.2.1 POST-PROJECT

1. Document and share 'adaptive and flexible' approach to project management



- Develop a video-based knowledge management product (e.g. interview, Q&A) on the 'flexible' approach to project support and implementation to inform future regional projects.

2. Continue using the PCCP



- Continue use of PCCP as a repository for project documents and knowledge management products. Work with SPREP and other CROPs to publicise the PCCP as a key regional resource.

3. Conduct impact evaluations (3 years post)



- Impact evaluations should be undertaken for a sample of key projects (3 years post) to assess the longer-term effectiveness and impact of key outputs (e.g. coastal or water infrastructure, new agricultural methods and crops, and policies).
- Additional donor funding is needed to support the impact evaluation for this project. In future, PMU should include as part of its project management costs an allocation for impact evaluation.

1.2.2 MOVING FORWARD

4. Longer implementation period

H

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- A 5-year implementation period is required for large regional projects to allow sufficient time to ramp up and close down, and leave sufficient time for on-ground implementation (allow up to 12 months for procurement, and 18+ months for implementation).
- Recognising the EU's new D+3 rule, countries need to ensure that all procurement is contracted by the end of the third year of implementation.

5. Make clear funding reallocation rules

H

H



- Letters of Agreement (LoA) with countries need to contain and make clear funding reallocation clauses that can be actioned (at the discretion of the project manager) if implementation timeframes and other specified requirements are not met.
- SPC to develop clear plan as to how to respond to funding reallocation situation.

6. Recruit PMU staff early

M

M



- SPC to begin recruitment process (e.g developing position descriptions) for PMU staff as soon as EU has finalised project funding allocation.

7. Identify relevant gender targets

H

H



- Relevant gender targets from the EU Gender Action Plan to be incorporated into projects.



8. Develop cascading logframes

M

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- Cascading logframes support clarity in linkage between regional logframe and country-level logframes, and they facilitate monitoring and reporting from country-level up to the regional level.

9. Countries to demonstrate post-project financial commitment

H

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- Countries should demonstrate, through the Concept Note and in particular the Letter of Agreement, a commitment to national budget allocation to sustain project outputs and benefits post-implementation.

10. Ensure capital works projects are realistic considering time and budget

H

H



- Ensure the scope of capital work projects is realistic in relation to the available timeframe (e.g. D+3) and budget, noting this project's lessons learnt from delivering projects on outer islands (logistical, capacity and capability constraints and costs for outer island projects).
- Consider applying a contingency of up to 20% to the project budget for capital works projects on outer islands when accurate costs/quotes contributed to developing the project budget.
- Apply SPC's "rule of thumb" lesson learnt and double initial timeline and budget estimates where accurate costs are not available in determining the project budget.
- Large infrastructure projects in PSIS require either recent feasibility and design studies that are accurately costed or the ability to refer to recent similar projects in the region to obtain reliable costing and time estimates.

11. Mobilise SPC divisions early in the project

M

H



- Ensure sector experts from SPC's divisions are mobilised early and available to review PDDs for their feasibility and risks.
- SPC division input (e.g. GSD, CePaCT) into project implementation needs to be programmed at least 12 months in advance to ensure SPC divisions have sufficient capacity to assist projects.

12. Increase SPC's procurement capacity

H

M



- Capacity (staffing levels) within SPC's procurement team should be increased to better service country level requests for SPC to undertake procurement on their behalf. Donor funds across multiple projects could be pooled to fund the initiative.

13. Actively assist countries with known implementation constraints

M

H



- Provide active oversight for projects in countries that have historically experienced difficulties in successful project implementation. This can be through additional capacity building of local project staff (formal or informal training, including mentoring) as well as more frequent missions and involvement of SPC or external sector-specific technical assistance.

14. Report accumulated results and achievements

H

H



- Mid-year and annual reports should include an accumulated list of results and achievements to provide a complete picture of what the project had achieved across the entire project duration.

15. Conduct LFA/project design training early

M

M



- Provide training in the project design at the outset of a **all** new projects to support the development of robust logic model.
- EU funded projects should lead with training in using the LFA. Training can be customised for the approaches preferred by other donors.

16. Repeat and replicate LFA training

M

M



- LFA workshops should be repeated throughout the Pacific on a regular basis, not just focussing on the nine PSIS, but also on other larger countries.
- The format for further LFA training should be a four-day workshop in the first week, complemented by two days mentoring in the second week.

17. Develop an accredited course in project design and evaluation

M

L



- Engage with other regional partners and projects (e.g. ACSE TVET) to develop an accredited short course on project design and evaluation at national and regional institutions.

18. Develop national capacity to deliver LFA/project design training

M

L



- Develop a cadre of skilled facilitators through a customised Training of Trainer (ToT) initiatives leveraging off the LFA training. Complementary to this, an online version of the Project Proposal/LFA program should be considered.

19. Develop and share a best practice PDD

M

L



- An example 'best practice' PDD should be developed and shared through the PCCP. The PDD could contain examples of content complemented by comments as to what to include to ensure it is flexible to different scenarios.

2. INTRODUCTION

The Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) Project is a European Union (EU) funded initiative to assist nine smaller Pacific Island states (Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu) to adapt to climate change. The project was implemented by the Pacific Community (SPC), with an implementation period from July 2011 through to November 2016⁶.

The GCCA: PSIS project consisted of on-ground climate change adaptation activities in specific sectors – coastal protection, marine resources, health, agriculture, and freshwater; supported by mainstreaming of climate change into national and sectoral policies, plans, budgets and procedures. The project also provided technical assistance, capacity building and supported regional collaboration.

2.1 Project purpose and objective

The overall objective of the project was to support the governments of nine small island states of the Pacific in their efforts to tackle the adverse effects of climate change.

The purpose of the project was to promote long term strategies and approaches to adaptation planning and to pave the way for more effective and coordinated aid delivery on climate change at the national and regional level.

The four components and key result areas (KRA) of the project were:

1. Climate change mainstreamed into national and/or sector response strategies.
2. Well-articulated sectoral adaptation strategies that address budget support criteria.
3. National climate change adaptation projects implemented.
4. Streamlined technical assistance that supports national adaptation responses delivered by regional organisations in a collaborative manner.

2.2 Purpose of the evaluation

The purpose of the evaluation is to provide the decision-makers from the EU, SPC, partner countries and regional organisations with an overall independent assessment about the performance and impact of the project, clarify key lessons and practical recommendations for follow-up actions (see Terms of Reference, Annex 1). The results of this evaluation will inform future project design.

2.3 Evaluation objectives

This external evaluation adds to the existing Results Oriented Monitoring assessments conducted in 2012, 2013 and 2015, and the 2013 mid-term evaluation.

The Terms of Reference (ToR) identified five key evaluation questions that this evaluation responds to:

1. Assess the degree to which project activities have achieved the defined objective, purpose and expected results using the intervention logic (log frame).
2. Assess the issue of sustainability.
3. Assess the project's sensitivity to environmental and gender issues.
4. Review the issues and challenges faced, lessons learnt and successes achieved which could strengthen institutional capacity and future planning within the partner countries and SPC.

⁶ The project was granted a one-year extension.

5. Review and assess the relevance of the original project design and climate change adaptation project design documents (updating only).

The regional logframe was also consulted to ensure that indicators linked to the questions covered the full scope of project activities and desired outcomes.

2.4 Scope of the evaluation

The evaluation considers project activities, outputs and outcomes that were achieved or took place from July 2011 through to December 2015. In some cases the scope of the evaluation has extended through to March 2016 to capture the most current data and project updates.

The evaluation considers project activities, outputs and outcomes in the nine participating GCCA: PSIS countries (Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu).

Out of scope

The evaluation acknowledges final narrative reporting and financial reporting will not be completed until June 2016 and therefore a few small project outputs will be excluded from the evaluation as they fall outside of the defined evaluation timeframe.

2.5 Evaluation methodology

Pacific Research and Evaluation Associates (PREA) was contracted by the Pacific Community (SPC) to conduct an end-of-project evaluation of the GCCA: PSIS project. The evaluation consisted of two components:

1. An evaluation of the GCCA: PSIS project (except component 2, below) undertaken by PREA.
2. An evaluation of training in 'Proposal Preparation using the Logical Framework Approach (LFA)'. This component was undertaken by Torquaid (see Annex 2).

The evaluation of component one was informed mostly by qualitative methods and data. These methods consisted of desktop research, key informant interviews and onsite field observations of demonstration measures.

A detailed methodology is provided in Annex 3, including the list of documentation reviewed (Annex 4) and list of stakeholders consulted (Annex 5).

Desktop research

Extensive desktop research was undertaken to inform the evaluation. Over 900 documents from the SPC GCCA PMU and country projects were reviewed (Annex 4). The main types of documents reviewed include:

- concept notes, project design documents, technical detailed design documents and logframes;
- technical reports, policy documents and strategic plans;
- field trip reports;
- narrative and financial reports; and
- photographic evidence.

Key informant interviews

The project team sought out a range of stakeholders to ensure that different viewpoints were heard, and to triangulate results. Interviews were conducted with 113 people to inform the evaluation (Annex 5). Twenty two of the 113 interviews were conducted with 'insiders' who directly benefited from the project. Time constraints of the evaluation field trips limited the opportunities to interview more beneficiaries. Feedback from beneficiaries was also captured through other existing monitoring data captured in workshop reports and survey reports.

The types of stakeholders interviewed included:

- SPC GCCA project manager, the project team and PMU staff;
- SPC GCCA national coordinators and PMU staff from all nine countries;
- key national government representatives from all nine countries;
- contractors;
- community members (beneficiaries); and
- national and regional development partners.

Field visits

Field visits were undertaken to three project countries - Tonga, Kiribati and Palau, with a week being spent in each country. The evaluation team also conducted a two-week mission to Fiji to meet with SPC and development partners.

Quantitative data

Existing quantitative data was considered in the evaluation where it existed. Examples of quantitative data analysed to inform the evaluation included:

- post-training test scores;
- post-workshop knowledge and satisfaction surveys;
- numbers of rainwater tanks installed;
- additional potable water storage capacity added; and
- reach of visibility products and website pages.

There was no requirement or benefit to be derived from undertaking any in-depth statistical analysis of quantitative data.

The research, interviews and field trips were undertaken during February and March 2016.

The evaluation of component two was informed by desktop research of training reports and key informant interviews. Torqaid delivered an independent report, and its key findings are integrated into this evaluation report.

Country evaluation reports were prepared for the nine countries (see Annex 6). These country reports cover the five DAC criteria and three added EU criteria that are used in this report. The country reports thereby provide the detailed evidence that has informed this report. Three case studies were created to more deeply explore important findings from the three countries visited (see Annex 7).

2.5.1 Limitations

There were a number of limitations in the methodology:

1. Three countries were selected for visits, based on several criteria, which included the main sectors covered by the project; geographical location and geophysical considerations. The extent of the evaluation was more in-depth in the three selected countries than in the other six countries.
2. Stakeholder consultations for the remaining six countries were limited to those that were able to be contacted by phone or Skype. Phone and internet connections in the Pacific can be poor at times (e.g. phone lines to Tuvalu were cut for three days during the field mission to Fiji; phone lines to Nauru are often unclear) which either limited the number of stakeholders that could be consulted, or impacted on the clarity of the call. Some stakeholders were contacted by email.
3. Some stakeholders did not respond to calls/emails or were not available during country visits.
4. Some of the on-ground projects are in the final stages of completion. Also, some post-project or post-activity surveys are still to be undertaken by project teams and their results could not be included in the evaluation.

3. FINDINGS

3.1 RELEVANCE: To what extent have the objectives of the GCCA: PSIS project been consistent with beneficiaries' requirements, country' needs, global priorities and partners' EU's policies, and SPC's Climate Change Engagement Strategy?

The GCCA: PSIS project was highly relevant to the priorities of donors, regional organisations, and national countries.

Climate change is projected to impact Pacific Island countries, especially low-lying atolls, disproportionately compared to high greenhouse gas emitting countries⁷. The impact of several cyclones/typhoons and droughts during the project implementation period demonstrated the importance of projects such as GCCA: PSIS in providing basic water infrastructure⁸.

The EU and SPC decision to fund country-led projects meant that that the GCCA: PSIS project was not a 'one-size fits all' initiative, and allowed countries to identify priority needs relevant to their national context.

This not only meant that projects were relevant, but also tended to have a high level of national ownership. The one issue with supporting country-led projects is that the project scope for some countries, particularly those with different States (e.g. Palau, FSM) can be too broad, and not feasible considering the budget and timeframe. Countries need to be provided with feedback on the feasibility of delivering projects, either through the regional implementing entity, or through a panel of sector-experts at the project design stage.

The GCCA: PSIS project was consistent with, and supportive of the Joint EU-Pacific Declaration on Climate Change. For example, the GCCA: PSIS project:

- Provided increased technical and financial support for measures to address the challenges presented by climate change (Article 12). The project did this through the funding allocated to the on-ground projects, as well as through the funding accessible to countries for capacity building (e.g. LFA training in each country, three Tuvalu government staff attached to SPC divisions, one Nauru staff attached to Kiribati Environmental Health Unit, south-south exchanges such as Palau government representatives visiting the Tonga coastal protection project) and policy/plan development (e.g. Palau Climate Change policy for Climate and Disaster Resilient Low Emissions Development, Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction, and the 20 year Water and Sanitation (W&S) Master Plan in Nauru).
- Supported country-identified climate change adaptation projects and programmes (Article 21a). Each country identified the sector and project of their choice and SPC provided support to develop the Project Design Document (PDD) which had the added benefit of building national capacity to design projects.

⁷ <http://thediomat.com/2015/06/climate-change-and-the-pacific/>, <http://www.un.org/climatechange/blog/2014/06/sea-level-rise-in-small-island-nations-up-to-four-times-the-global-average-to-cost-us-trillions-in-annual-economic-loss-and-impede-future-development-shift-to-green-policies-and-investment-criti/>

⁸ For example, Typhoon Maysak impacted Fais island, FSM, and the GCCA: PSIS project came at the right time to refurbish the Sahagow well so as to provide an alternative water source to rainwater. The project also provided immediate water infrastructure fixes in Kayangel, Palau, following Typhoon Haiyan.

The GCCA: PSIS project was also consistent with and supportive of the Pacific Islands Framework for Action on Climate Change (PIFACC) 2006-2015. For example, the project:

- Built capacity for the implementation of national adaptation measures. The project funded national coordinators and project staff to implement on-ground adaptation measures, as well as funding technical advisers to support specific needs, such as coastal engineering (e.g. Tonga, RMI), and water storage design (e.g. Palau, FSM).
- Built capacity in hydrological, oceanographic and terrestrial fields, including upgrading data collection systems. The project funded the refurbishment of water quality testing laboratories in the Cook Islands and Kiribati, and the refurbishment of a water quality monitoring buoy in Manihiki Lagoon, Cook Islands.
- Supported the mainstreaming of climate change considerations into national policies and planning processes. The project supported the development of a National Environmental Health Action Plan 2015-2019 in Kiribati, as well as a Climate Change and Climate Risk Communications Strategy 2014-2018 to guide national level climate change communications in Kiribati.
- Supported countries to secure increased resources from climate change funding mechanisms. The project funded a review and assessment of countries' readiness to access direct budget support and supported two countries (Cook Islands and Tonga) in their efforts to strengthen national financial management systems and thereby achieve increased climate change funding.
- Supported CROP agency partnerships to ensure focused delivery of services. The project worked closely with other CROP agencies to deliver regional (e.g. LFA training) and national services (e.g. EIA training in Tuvalu, media training in Pohnpei, climate finance training in Samoa).

The GCCA: PSIS project supported the implementation of SPC's Climate Change Engagement Strategy and SPC's Strategic Plan 2013 – 2015 (strategic objective multi-sector work regarding 'Capacity to respond to climate change, disasters and emergencies strengthened'). For example, the project:

- Identified areas where SPC's pool of technical specialists can be used to supplement national capacities (Strategic outcome 1). SPC's Centre for Pacific Crops and Trees (CePaCT) called upon for project in Tuvalu to provide plant cultures and training; the Land Resource Division (LRD) delivered agroforestry training in Tuvalu; SPC Water Sanitation Program assisted in the drafting of a terms of reference for a hydrogeological study in Palau; SPC GCCA: PSIS water sector technical adviser assisted in developing the design for rainwater catchment systems in Palau and FSM. SPC's procurement team was involved in several countries (e.g. Nauru, Palau, FSM), which was beneficial in providing a timely and transparent procurement service, as well as demonstrating and building experience in procurement at the national level⁹.
- Built the capacity of countries to integrate climate change considerations into their national development plans and policy settings (Strategic outcome 1). The project funded a national climate change dialogue in RMI to discuss the long term future of RMI in the context of

⁹ SPC procurement generally ensured that a national representative was included in the tender review process, as a full voting member. This helped build the skills of national representatives in transparently evaluating tenders against set criteria. SPC also acted as advisers in some nationally-led procurement (e.g. Tuvalu) but were not voting members.

climate change and to share and receive feedback on climate change policies, plans and actions.

- Enhanced capacity of SPC programme staff to understand how climate change impacts on natural ecosystems and human welfare (Strategic outcome 2). The project built the capacity of GCCA: PSIS advisers as well as communications staff in understanding climate change impacts in the Pacific region. Stakeholders interviewed all noted how important the SPC Project Manager and Technical Advisers were in getting the country projects implemented.
- Enhanced partnerships at the regional and international level. Stakeholders interviewed indicated that SPC demonstrated a good level of collaboration with other CROP agencies and development partners. SPC collaborated with regional and international partners to deliver a number of activities as part of the GCCA: PSIS project. Examples include: SPC funded a Climate Change Coordination Adviser (CCCA) based at SPREP, who also manages the Pacific Climate Change Portal (PCCP)¹⁰; SPC jointly delivered with SPREP the Pacific Climate Change and Finance Workshop (Oct 2012), and training on the PCCP (Feb 2013); SPC supported the Pacific Climate Change Roundtable (Jul 2013 and May 2015); and a Lessons Learnt roadshow at SPREP (Nov 2015). SPC worked with other CROPs to develop the Draft Strategy for Climate and Disaster Resilient Development in the Pacific. The GCCA: PSIS project in Niue pooled funding with the Pacific Adaptation to Climate Change (PACC) project to deliver a whole-of-country rainwater tank project.

The Concept Note and PDD required countries to identify alignment to national policies and plans. As a result, the GCCA: PSIS country projects all align with two or more national development and/or national climate change priorities. A summary of the alignment is provided in Annex 8, and more detail can be found in the country evaluation reports (Annex 6).

Most projects demonstrated a high level of community consultation as part of the project design, whilst balancing general country requests to not over-consult¹¹. This helped ensure that project designs reflected community needs. In some cases the community asked for certain interventions (e.g. stainless steel or concrete water tanks in Palau; sea walls in Tonga) but the project design featured alternative solutions which were deemed more suitable and sustainable. In such cases, the community engagement process provided a means for the community to understand the reasons design choices were made, which generally facilitated community acceptance of the final project designs.

Though projects demonstrate a strong alignment with national priorities, the individual project designs at times demonstrate less relevance to the specific targets. For example, the Niue project sought to provide rainwater tanks as a disaster risk management measure. The Niue PDD aligns the project to the NISP 2009-2013, which specifies a target for rainwater tanks to make up 20% of water supply by 2013. For this to be achieved requires the household rainwater systems to be plumbed into homes. However, the project as implemented in Niue installed rainwater tanks to serve as a back-up water supply during cyclones and times of power outages that can significantly impact the reticulated water supply, but require households to access water directly from the tank. This reduces the convenience of the tank as an alternative supply to mains water, so the 20% target is very unlikely to

¹⁰ The PCCO is an online Pacific regional information hub that hosts up-to-date and archival material for SPC and SPREP, as well as being used by other development partners (e.g. GIZ ACSE programme). Country projects have also uploaded key knowledge management documents to the portal.

¹¹ It was reported that in 2012 virtually every country told SPC “*no more consultations we have been consulted to death*”.

be achieved without modifications to the design¹². However, the Niue project does meet its disaster risk management aim.

The Nauru project suffered from a change in government priority leading to the original PDD (for a roof catchment restoration project to complement a separate household rainwater harvesting project) not being signed off¹³. The revised PDD was for a national water storage project but a lack of time to implement such a large infrastructure project led to a reduction in scope to simply the demolition of the old storage. The change in scope was accompanied by the decision by the GCCA countries to re-allocate funds from Nauru to three other countries to support recovery efforts following natural disasters¹⁴. In this way, the GCCA: PSIS project was able to respond to changes in national contexts in Tuvalu and Kiribati following Cyclone Pam, and in FSM following Typhoon Maysak.

3.1.1 Mutual reinforcement (coherence)

There are a number of climate change projects in the Pacific region. The GCCA: PSIS project team worked with development partners to maximise the opportunities for leveraging and building on the outcomes of other projects, and minimise the likelihood of duplication. The high level of engagement with other donors and partners demonstrated by the project team was key success factor in the GCCA: PSIS project. Examples of mutual reinforcement are summarised in Table 1.

Table 1: Examples of mutual reinforcement

Project	Mutual reinforcement
PACC: climate change adaptation on-ground projects and mainstreaming activities, in 14 countries	GCCA funding pooled with PACC and PACC+ in Niue to deliver whole-of-country rainwater tank project. The PACC project funded the mainstreaming of climate change into the agricultural / aquiculture sector in Palau to complement the GCCA-funded national climate change policy.
Pacific Environment Community Fund (Japan)	GCCA funded water leak testing and repairs in Peleliu (Palau) to enhance water pressure to households, so that households can benefit from the treated water produced by the PECF-funded reverse osmosis treatment plant.
Coastal Community Adaptation Project (C-CAP) (USAID)	GCCA liaised with C-CAP in Nauru to see if there were opportunities to co-fund with C-CAP the building of a national water storage tank at the site of the B10 tank.
Coping with Climate Change in the Pacific Island Region – Programme (CCCPIR) 2009- 2015 (GIZ)	Joint efforts to progress JNAP implementation in some countries.

¹² See Niue country report for more details (Annex 6)

¹³ Stakeholders interviewed provided a range of reasons for the change in priority. See Nauru country report for more details (Annex 6).

¹⁴ A proposal by the EU Delegation and SPC's Director General to re-allocate €389,437 from Nauru's allocation to the three countries was endorsed by the eight other participating countries.

Project	Mutual reinforcement
	<p>Administration assistant assisted in the Pohnpei office provided support to the CCCPIR and the GCCA: PSIS.</p> <p>Support for the Palau Climate Change Policy was provided through an agreement between SPC GCCA: PSIS and CCCPIR</p>
EU-GIZ ACSE project	Involvement in SCMs, many discussions and sharing of good practices at design and early implementation phase, and ongoing as ACSE is being implemented.
USP-EU GCCA: capacity building and community engagement around climate change, in 15 countries.	<p>The mid-term evaluation noted little linkages between the SPC GCCA: PSIS project and the USP GCCA-EU GCCA project¹⁵. It was reported that USP were invited to all the GCCA: PSIS steering committee meetings (and vice versa), and there was communication and collaboration at the national consultations (e.g. Palau, Niue, Nauru, Tonga) as well as at non-project regular events (e.g. CI Platform meetings held every quarter).</p> <p>It was reported that there was considerable confusion in the Pacific region in 2012 and part of 2013 between the two GCCA projects (SPC GCCA: PSIS and USP EU-GCCA).</p> <p>Feedback from stakeholders interviewed indicated that there has been little progress in developing further coherence beyond sharing information at the national and regional level. Stakeholders interviewed indicated there could have been more synergies during the project design stages, especially with community consultation to avoid 'consultation fatigue'. SPC indicated this would have been difficult given that the USP targeted engagement directly at the community level whereas the SPC GCCA project worked through Government.</p>
SRIC-CC in Cook Islands (Adaptation Fund (AF) 2012-2017)	Close collaboration on activities in Cook Islands. Shared transport costs. SRIC-CC is replicating some SPC GCCA activities e.g. senior citizen tablet training.
NIWA Kiribati Water Quality Monitoring Project 2012-2015	Sharing of procurement and transportation of equipment, sharing of training activities, sharing of equipment and close

¹⁵ This was a result of different processes, where USP used staff at their national campuses and SPC went through governments. In addition, the project scopes were different: USP focused on small scale community interventions and SPC focused on larger scale government interventions.

Project	Mutual reinforcement
	collaboration throughout to ensure the different projects were complementary.
Palau – collaboration with Community Action team (US)	Joint programming to refurbish a large water cistern in Sonsorol (Palau).
UNDP NAPA 1 project in Tuvalu	Joint procurement and delivery of equipment for the agroforestry project and the NAPA 1 project.

3.1.2 EC value added

The GCCA: PSIS demonstrated a concerted effort to add value to EU-funded projects, and build synergies and avoid duplication. The project was complementary to the intervention of EU Member States in the region. For example, the project in Niue built on a report produced by the EU-funded IWRM project¹⁶. The project to improve the Koska well in Angaur, Palau, built on the foundations of a Slovakia-funded project. The original project design in Nauru (roof catchment restoration) was designed to complement an EU-funded (EDF 9) procurement of guttering, with the actual installation being supported by funding from the Italian Government through the PACC project.

There are no examples of duplication with other EU funded projects. Instances of duplication may occur in the future where other donors are proposing projects that may reduce the impact of the GCCA interventions. For example, the medium to long-term benefits of the Koska well refurbishment and rainwater harvesting in Angaur, Palau, may be reduced by the proposed project to install a USD3 million water treatment plant funded by the United Arab Emirates.

There was a strong level of engagement with different SPC divisions and units where feasible. This was usually but not always done on a fee-for-service basis and in most cases the fees were lower than those prevailing on the open market¹⁷. Additional engagement of SPC units would have been possible if there was spare capacity within SPC (e.g. SPC-GSD Water Sanitation Programme was invited to participate in the Palau Concept note but was unable to do so due to other commitments at that time). Future projects should consider how best to make use of SPC expertise as early as possible in the project and schedule such expertise at least 12 months in advance.

3.2 EFFECTIVENESS: To what extent has the GCCA: PSIS project attained, or is expected to attain, its specific objective(s)?

The GCCA: PSIS project was successful in achieving twelve of its thirteen targets in the revised regional logframe (see Annex 9 for original logframe, revised logframe and results achieved)¹⁸. Most targets set in country logframes were also achieved across all nine projects (see Annex 6 for individual country reports).

Most of the country activities were completed by December 2015. A number of activities were still incomplete at the time of the evaluation (e.g. Koska well and rainwater storage in Angaur, and

¹⁶ Ambroz, A. (2011). Least-Cost Analysis of Water Supply Options in Niue: (Integrated Water Resource Management Technical Report), SOPAC Technical Report 447

¹⁷ SPC-GSD provided the time for the Cook Islands buoy refurbishment at no cost to the project and this was a significant input.

¹⁸ Regional logframe revised version approved 12.02.14; Indicator dates revised as of 31.12.14.

Kayangel (Palau) and demolition of B10 tank in Nauru) but these were on track for completion. Some activities will not be completed, such as the roll-out of the WASH training in Nauru, due to lack of time as a result of a late country request for assistance (see country reports in Annex 6 for status of country activities).

Overall, the evaluation assesses that the project has attained its overall objective to “*support the governments of nine small islands states of the Pacific in their efforts to tackle the adverse effects of climate change*”. This was done through responding to country requests for technical assistance to develop national policies (e.g. to develop a Climate Change Policy in Palau), to develop sectorial plans (e.g. Nauru 20 year Water and Sanitation Master Plan), to access climate change finance (e.g. Cook Islands application to become an NIE under the Adaptation Fund), and to access training (e.g. regional proposal preparation training using the LFA, country-specific training such as in use of laboratory equipment in Kiribati, and through government staff attachments with SPC).

The project purpose, “*to promote a long term/strategic approach to adaptation planning and budgets and to pave the way towards more effective and coordinated aid delivery modalities at national and at regional level*” was achieved through a high level of coordination between SPC, other CROP agencies and development partners (e.g. through regular meetings such as Development Partners for Climate Change and through the CROP-CEO Working Arm on Climate and Disaster Resilient Development) and the development of national policies on climate change (e.g. Palau Climate Change Policy, supported by a prioritised and costed action plan; revision of Tonga Climate Change Policy and Trust Fund Bill; Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction).

Examples of achievements against the Key Result Areas (KRA) and what they mean for countries are provided in Table 2.

Table 2: Examples of achievements against KRAs

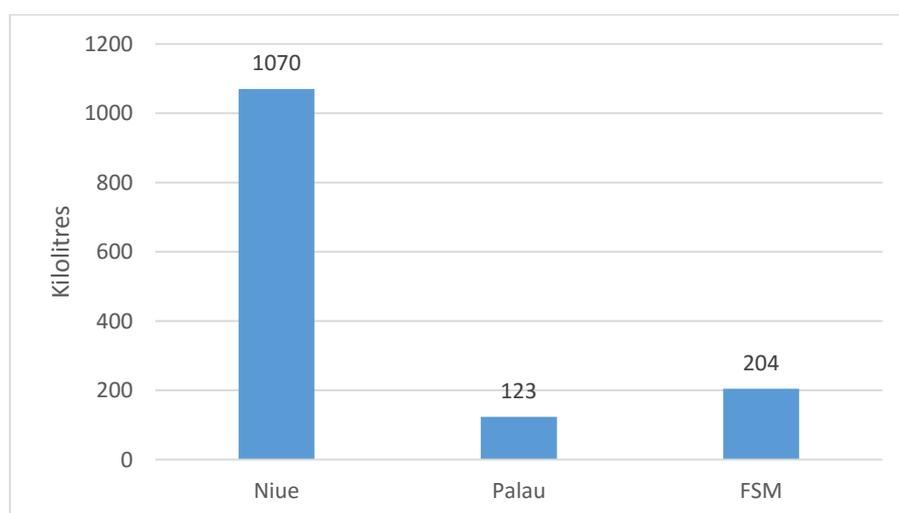
KRA	Achievements
1. Climate change mainstreamed into national and/or sector response strategies.	National: <ul style="list-style-type: none"> • Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development; includes a costed and prioritised 5-year implementation plan. This will assist Palau in accessing further climate change finance by demonstrating a national multi-sector approach to identifying and costing priority projects. • Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction (RONadapt), also includes a prioritised action plan. This will help Nauru access climate change funding by demonstrating priority projects. • Tonga has revised the national Climate Change Policy (2020). Priorities from the revised policy are to be incorporated into Tonga’s Joint National Action Plan for Climate Change and Disaster Risk Management II 2016-2020 (JNAP II). Tonga was rated the most likely country to qualify for direct budget support for climate change activities, and the revised Climate Change Policy and JNAP II will provide an update on priority needs.

KRA	Achievements
	<p>Sectoral:</p> <ul style="list-style-type: none"> • Nauru 20-year Water and Sanitation (W&S) Master Plan will help Nauru demonstrate to donors the priority needs to fix critical infrastructure and effectively manage water resources. • Kiribati National Environmental Health Action Plan 2015-2019, and Climate Change and Climate Risk Communications Strategy 2014-2018, will assist Kiribati in pro-active management of climate change related health risks. • Tuvalu Agriculture Strategic Marketing Plan 2015-2025 will assist in boosting local agricultural trade and reducing reliance on food imports, and over time assist in the export of certain produce. • FSM hydrological assessments for four outlying islands of Yap State will provide a baseline for future water security projects, thereby helping access climate change funding. • Tonga diagnostic study for integrated coastal management plan will assist in identifying strategic priority projects to support a holistic approach coastal management.
<p>2. Well-articulated sectoral adaptation strategies that address budget support criteria</p>	<p>Review of mainstreaming of climate change into national plans and policies completed for all nine countries. Followed up with a 'Review and assessment of national and sector policies in relation to budget support modalities in the Pacific Smaller Island States' completed for nine countries. Tonga (rated high) and Tuvalu (rated medium) assessed as most likely to receive direct budget support for climate change activities. The findings from these assessments provides an opportunity for countries to prioritise improvements to fill gaps identified, thus furthering their progress towards receiving climate change funding via direct budget support.</p> <p>Together with PIFS and other CROP agencies assessment of climate change finance in RMI undertaken.</p> <p>47 people (22 male, 25 female) attended Pacific Climate Change and Finance Workshop, which also involved participation from SIDS in Indian Ocean and Caribbean regions. Feedback from participants (end-workshop survey) indicated that the workshop met or exceeded most people's expectations (28 of 31 respondents). Such training helps develop skills at the national level in understanding the requirements to access climate change finance, and donor requirements. This training contributed to countries requesting national level training in project preparation using the logical framework approach, which were subsequently delivered in all nine countries (see separate report, Annex 2).</p>

KRA	Achievements
	<p>Cook Islands received support in its bid to become an NIE under the Adaptation Fund. Though not yet successful (still under review by Adaptation Fund Board), the process has improved transparency, governance and finance mechanisms within government. This GCCA initiative was highlighted as being a smart strategic investment that complemented existing work to progress Cook Islands' NIE application.</p> <p>Tonga revised its Climate Change Trust Fund Bill and developed a supporting manual to guide the administration of the Fund. Once endorsed, this will help Tonga attract future climate change finance, and provide a sustainable funding mechanism to sustain climate change adaptation projects (e.g. maintenance & replacement).</p>
<p>3. National climate change adaptation projects implemented</p>	<p>Four water sector projects completed, providing 1,397 kilolitres of additional rainwater storage capacity across three countries (Niue, Fais in FSM, Tobi, Sonsorol, Kayangel and Angaur in Palau- see Figure 1). The Nauru water project was reduced in scope due to time constraints and funding, so there was no added water capacity.</p> <p>Two coastal sector projects completed protecting three communities (Talafo'ou, Makaunga and near Manuka Village in Eastern Tongatapu) in Tonga (1,401 meters of coastline protected), and providing safe access in all conditions to one community on Woja, Ailinglaplap Atoll in RMI (220 meters of coastal road and causeway improved).Communities in the target areas feel safer and more resilient to climate change impacts.</p> <p>One agricultural project in Tuvalu successfully piloted agroforestry practices in two sites on Funafuti and one site on Nukufetau. Training of farmers led to the adoption of new sustainable agricultural practices.</p> <p>One health sector project in Kiribati focused mainly on Tarawa that has led to improved environmental monitoring of vector, food and water-borne diseases, and the successful adoption of Solar Water Disinfection (SODIS) in one community in Bairiki has led to reduced sickness from water-borne disease.</p> <p>One marine resources sector project in the Cook Islands has resulted in improved water quality information for pearl farmers in Manihiki, and enhanced marine resource information for four outer islands (Penrhyn, Rakahanga, Pukapuka and Manihiki).</p> <p>Lessons learnt have been captured at the national level and regional level and shared with other development partners (through 10 individual presentations, videos, fact sheets, and case studies).</p>

KRA	Achievements
4. Streamlined technical assistance that supports national adaptation responses delivered by regional organisations in a collaborative manner	<p>Feedback from stakeholders indicates that SPC demonstrated a high level of coordination with other development partners.</p> <p>SPC has collaborated with CROP agencies and other development partners to deliver different activities in a streamlined manner. SPC has worked with SPREP to deliver the Pacific Climate Change Portal. SPC has collaborated with SPREP and other agencies in delivering regional training including LFA training, climate change finance training, Adaptation Fund training. SPC explored collaboration opportunities with the USAID-funded C-CAP project on the Nauru water project, and with SIDS-DOCK project in Kayangel (Palau). The high level of collaboration was appreciated by countries, as it assists in reducing duplication in initiatives, and ensures efficiency in delivery at the national level, where limited staff capacity can be compounded by staff being away from work duties to attend training and other events.</p>

Figure 1: Total rainwater storage capacity (KL) added across three countries



Stakeholders interviewed in Palau noted the community benefit as a result of the rainwater projects in Tobi and Sonsorol. The rainwater project has provided the sole source of potable water to residents, following the Palau Environmental Quality Protection Board (EQPB) advice that the existing fibreglass tanks were no longer safe to use for drinking water due to flaking of fibreglass. A Koror resident who received a water tank as part of the National Development Bank of Palau (NDPB) Palau Water Conservation Initiative (PWCI) indicated that they now “felt safe even when there is no water” (from the mains) as the tank provided up to one week’s supply. It was also reported that the system design (plumbed into home with First Flush Diverter, and pressure pump) provided better quality water and better water pressure. Stakeholders interviewed in Tonga noted that they felt more protected from storms and sea level rise as a result of the coastal protection works.

The extensive and wide-ranging training components funded by the GCCA: PSIS project have contributed to building capacity in the nine countries to deliver on their projects and their on-going climate change adaptation and sustainable development goals.

The project provided both regional training in key areas accessible to all countries, as well as responding to specific country requests for training (funded under technical assistance). This allowed the project to build a common level of skills in areas such as climate change finance, proposal preparation, media training in reporting climate change (three national and regional workshops) and using the PCCP, through regional initiatives. In addition, national level training in specific sector areas (e.g. Kiribati climate sensitive disease surveillance), and individual attachments, built sector specific expertise (see Annex 9 for regional logframe and Annex 6 for country reports). Country project staff also received informal training and mentoring during field visits by the SPC project team.

Some participating countries experienced more difficulties than others in implementing their projects. These implementation difficulties can be attributed to multiple factors (insufficient national capacity / capability, competing priorities for staff, difficult operating environments etc.). An opportunity exists in future projects for SPC to identify those countries that have difficulty designing and implementing projects (based on past experience) and provide additional support:

- more formal / informal capacity
- mentoring
- more oversight and a more active role in project design decisions and procurement processes
- more frequent field visits

Stakeholders interviewed were thankful for the ability to access training. A number of staff from country project management units have been absorbed into national departments, which indicates that their skill level is valued (e.g. national coordinator from Palau now in the new Climate Change Office, and project officer at Palau Public Utilities Corporation has a permanent role implementing water infrastructure projects).

An independent evaluation (see Annex 2) of the regional training in 'Proposal preparation using the logical framework approach' noted amongst other findings that¹⁹:

- The LFA training program was a comprehensive initiative covering each of the separate nine PSIS. It was suggested that the training could be improved by referring to a real or sample best-practice full PDD accessible from the PCCP.
- Overall, the course content and the facilitators' skills were highly regarded.
- It was a flexible and creative programme. The extra workshops in 5 countries reflected intended improvements for individual workshops (for example, in Kiribati), as well as experimenting with improving the overall LFA programme (Cook Islands).
- Overall participants found the workshop rewarding. Certain sections of the LFA proved particularly popular, for example the stakeholder analysis and problem/solution trees.

The independent evaluation report highlighted the need to continue running LFA training workshops to refresh knowledge of past participants and to spread the skills to others who have not yet attended the training. Cost-effective training could be achieved through running a Training of Trainers (ToT) workshop to build LFA training capacity at the country level which could be drawn on to delivery

¹⁹ Evaluation of 'Proposal preparation using the logical framework approach' workshops conducted by Torqaid, 2016

regular LFA training. The establishment of an accredited project design / LFA course that could be delivered through TVET colleges would also help to formalise the training and make it accessible to others.

Beneficiaries

Across all nine countries, 82,905 people directly benefited from on-ground climate change adaptation projects.

Looking more broadly at the number of people benefiting from the entire scope of the national climate change adaptation projects, the number of beneficiaries increases to 146,285. The percentages appear low for some countries which is a reflection of the small populations on outer islands where activities were implemented, combined with the high costs to undertake projects at such locations.

Table 3: Number of beneficiaries

Country	No. of people* benefitting from infrastructure improvements		No. of people* benefitting from the entire scope of the national climate change adaptation project	
	# of beneficiaries	% Total population	# of beneficiaries	% Total population
Cook Islands	243	1.37	1,112	6.25
FSM	294	0.27	11,376	10.63
Kiribati	58,086	56.36	58,086	56.36
Marshall Islands	1,729	3.25	53,158	100
Nauru	10,084	100	10,084	100
Niue	1,479	100	1,611	100
Palau	711	4.06	711	4.06
Tonga	3,367	3.26	3,367	3.26
Tuvalu	6,780	70.9	6,780	70.9
Total	82,905		146,285	

3.2.1 Factors that facilitated and hindered the achievement of project objectives

SPC project management unit

Stakeholders interviewed indicated that the SPC project management unit (PMU) was an important factor in the completion of country projects.

Stakeholders noted their appreciation for the project manager and technical advisers' flexibility to find solutions so projects could be achieved.

This was evident in a number of projects. For example, in Nauru, SPC worked with country stakeholders to design a second project after the first PDD was not signed off, and liaised with other donor projects (e.g. C-CAP) to try and collaborate to get a new national water storage tank built.

SPC demonstrated flexibility in funding one additional staff (an office manager as well as a national coordinator) to assist with capacity constraints in Palau's Office of Environmental Response and Coordination (OERC). This allowed staff to gain skills and experience, and this has led to positive results in terms of staff development, and ongoing employment post-project as staff have been absorbed into government. There is also evidence that the SPC team played a critical review role in decision-making. For example, the decision to upgrade the remote monitoring buoy in Manihiki (Cook Islands) was challenged by the SPC team, on the basis of the potential for breakdown. However, the Cook Islands opted for a technological solution, which in hindsight, may prove less durable and useful. Perhaps there is a role for the regional implementing entities to balance flexibility with an increased 'devil's advocate' role in future projects but this may come at a cost of loss of national ownership. Overall, the SPC project management unit responded promptly and well to unforeseen circumstances.

Stakeholders noted that the frequent country visits by SPC technical advisers were important in maintaining country project momentum.

A number of stakeholders noted that without the frequent visits, it was easy to put project implementation to one side, whilst concentrating on other duties. This also indicates that country staff funded by the GCCA: PSIS project often undertook other duties, which is understandable as government staff often have multiple responsibilities which is exacerbated by frequent duty-travel. Countries undertaking water sector projects noted the benefit from the SPC project management unit hiring a water engineering adviser (e.g. to design rainwater catchment systems in Palau and FSM, and review water storage design and procurement documents in Nauru and FSM).

The flexibility and responsiveness of the PMU is highlighted as a best practice that should be shared and replicated in other projects.

Logframe

The revisions in the regional logframe (noted as recommendations in the ROM reports and mid-term evaluation) have helped clarify the project description (results chain) and the revised indicators have supported the project implementation and monitoring. Further improvements could have been made to the regional logframe, to remove incidences of the same indicators appearing at different levels (e.g. national climate change policy as an indicator for purpose, and KRA1).

Country level logframes were revised to accommodate changes in scope (e.g. Nauru) and to include more realistic targets for the on-ground climate change adaptation areas (e.g. Palau, FSM).

Major re-scoping of projects (e.g. Nauru) half way through the implementation period should be avoided in future as it leaves little time for project implementation, especially in countries with limited local capacity and capability to deliver on outputs.

The country level logframes could have been improved to better reflect the overall scope of projects and the total GCCA investment in countries. The project budgets had line items for technical assistance related to the on-ground activities, as well as short term technical assistance. However, short term technical assistance was not always reflected in the logframes, either as outputs, or elsewhere in the results chain or indicators. The PMU reported that the logframes deliberately focused mainly on the on-ground adaptation projects. This is useful for the design and planning of this component, however, it does not reflect the full scope of the intervention which is generally what is captured in a logframe. To be more representative of the full scope of the project's intervention, the logframes could have included activities and outputs for policy mainstreaming and technical assistance outside of demonstration projects (e.g. WASH training in Nauru).

Short-term technical assistance could also have been added as outputs to country logframes, either as specific items when identified during the design stage, or as a separate key result area (e.g. 'short term technical assistance provided to countries') where the indicators could have been modified as GCCA investments were made.

Future regional projects should consider the benefits of establishing 'cascading' (or 'nested') logframes where country logframes have a similar structure to the regional logframe, in terms of project description²⁰. This would facilitate the reporting up from country level to regional level. A cascading logframe can be developed to accommodate country-led projects (see examples in Annex 10).

Delivering capacity building activities at the most appropriate stage in the project management cycle and timeline can yield greater benefits.

It should be noted that the training in proposal preparation using the LFA was delivered after country PDDs were developed. The skills built in applying the LFA and developing robust logframes should assist future projects. Regional projects should also consider delivering refresher training on using the logical framework approach prior to the PDD development stage.

Extended implementation period

A three-year time frame is clearly insufficient to encompass the project management cycle for regional delivery.

The 2012 ROM noted that it was doubtful if the project purpose could be achieved in the timeframe of end of 2014. Early in 2013 a request for a two-year extension was submitted to the EUD. This request was supported by the mid-term evaluation, and the request was subsequently granted in March 2014. The 2016 ROM report notes that the extension was the right decision, to which this evaluation concurs.

It generally takes at least six months for regional organisations to recruit staff and six to nine months to close down projects.

²⁰ Project description or results chain for country level would re-word the regional level description to make it relevant to the country, but still be nested within the regional logframe level description.

Participating countries took on average 17 months to complete their concept notes and have their PDDs approved (see Table 4). Procurement takes on average between six to seven months. Altogether, this takes up over two years before on-ground works can be commenced.

A five-year timeframe would be more appropriate for regional climate change adaptation projects. This expanded timeframe can sit within the EU's new D+3 funding guidelines.

Niue was the first country to commence implementation, mainly as the GCCA project provided additional funding to the already designed PACC project. Six countries commenced mid-2014 onwards. Nauru and RMI only commenced their on-ground projects in 2015, with RMI doing extremely well to complete the Woja causeway on-time.

Table 4: Timeframe for project milestones

AVERAGE 7 MONTHS BETWEEN 1st STEERING COMMITTEE AND CONCEPT NOTE

	EU-SPC contract	SPC PM & CC Advisers recruited	Letter of Agreement	Concept Note finalised	PDD signed	Procurement process commenced	Procurement process completed
SPC	Jul-11	Jan-12					
Cook Islands			Sep-12	Oct-12	Apr-13		
FSM			Oct-12	Apr-13	Sep-13	Sep-14 ²¹	Dec-14
Kiribati			Aug-12	Oct-12	Jun-13	Feb-13 ²²	Jun-13
RMI			Jan-13	Apr-13	Jun-14	Jul-14	Apr-15
Nauru			Nov-12	Jun-12	Nov-14	Nov-14	Jul-15
Niue			Nov-12	Feb-13	Aug-13	Nov-12 ²³	Apr-13
Palau			May-13	Oct-12	Jul-13	Sep-14	Dec-14
Tonga			Jan-13	Aug-12	Aug-13	Sep-13	Jul-14
Tuvalu			Nov-12	Jul-13	Dec-13	Apr-14	Dec-14

AVERAGE 10 MONTHS BETWEEN CONCEPT NOTE AND PDD

AVERAGE 6 to 7 MONTHS BETWEEN COMMENCING AND COMPLETING PROCUREMENT

²¹ Procurement commenced after Chuuk reallocation

²² PDD agreed (but not signed) Jan 2013, procurement during Feb to Aug 2013 with NIWA

²³ Procurement commenced under PACC project

Capacity constraints

There are significant capacity constraints in many smaller Pacific countries in government (e.g. PPUC had limited staff resources such as water engineers to assist with design work) and private sectors (e.g. limited pool of contractors with the right skills and experience to undertake large infrastructure projects in Nauru and RMI). Stakeholders in Palau noted that other donor-funded projects used external contractors from project design through to implementation (e.g. Japan-funded Pacific Environment Community Fund reverse osmosis plant in Peleliu) and this relieved government staff from project duties, and thus overcame national constraints. The downside with such project approaches is that they may not build local skills in project management and implementation, and there can also be a lack of ownership. The Peleliu PECF reverse osmosis project also failed to address water leakage issues, which has negated the project's benefits (see Palau country report, Annex 6). This is a reminder of the benefits of identifying all the causes to a problem during the project concept note stage.

Technical assistance

The use of external technical assistance was important in the achievement of project objectives at the regional (e.g. training in specific fields such as climate finance, LFA) and country level (coastal and water engineering, policy preparation). Technical assistance at the country level helped address the capacity and capability constraints that are often present in smaller countries (e.g. water engineers at NUC in Palau do not have spare capacity to assist on projects).

Technical assistance is most effective when contractors have a good level of knowledge and experience of the Pacific context, and can work well with local counterparts and other team members in a cohesive and collaborative manner.

It is also important to balance the use of local consultants (where there is national capacity and capability) with overseas consultants. The use of a local education and awareness consultant in FSM was effective as they knew the local context and language. Local consultants were also used to inform and develop of Palau's Climate Change Policy. The use of overseas consultants (in combination with local consultants) to develop the Climate Change Policy framework in Palau was beneficial to the overall policy development, but highlighted the importance of a cohesive team approach both within the consultancy team, and between local and international consultants (see Palau country report, Annex 6, and Palau case study, Annex 7).

Outer island projects

Outer island projects are generally costly and require more time. This needs to be factored into the project design budgets and timelines.

An important constraint that delayed several projects was procurement of goods, and transport to outer islands (e.g. Palau, FSM, Tuvalu, and RMI). Shipping services to outer islands can be intermittent and delayed (e.g. FSM, Tuvalu) and other options such as chartering boats/barges can be expensive (e.g. Palau, RMI). The Palau project changed from working on one outer island (Angaur) to five outer islands at opposite ends of the main island, which spread the limited financial resources thinly.

Countries are advised to carefully consider costs and logistics when focusing on outer islands. This could be through limiting projects to one outer island, or more only where they are adjoining (e.g. hydrological field studies on two adjacent outer islands in FSM). This has already been recognised by SPC through their lessons learnt process that identified "outer islands face serious transportation and logistical constraints resulting in higher costs".

3.3 IMPACT: To what extent has the GCCA: PSIS project supported the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change?

The impact from projects generally takes time to bear fruit, and is best assessed several years post-implementation. However, there is evidence to suggest a positive impact, based on what has been achieved.

The GCCA: PSIS project has clearly supported the governments of the nine participating countries in their efforts to tackle the adverse effects of climate change, through funding technical assistance at the request of countries, and through funding on-ground climate change adaptation projects that have increased the resilience of communities to climate change effects.

The project responded to more than ten requests for technical assistance (see logframe results, Annex 9), including a regional request for training in proposal preparation using the logical framework approach delivered to all nine countries in Round 1 and five countries in Round 2. An independent report on the training (see Annex 2) noted that interviewees articulated positive value in the LFA training, not just for proposal writing, but also for general project management. A number of participants reported that the training had helped in winning proposals.

Stakeholders interviewed noted that the process to develop Palau's Climate Change Policy was very useful in developing the different sector's understanding of climate change. The process also led to a restructure of the OERC's functions, with a new Climate Change Office created within the Ministry of Finance. Situating the Climate Change Office within the Ministry of Finance helps engage Finance on climate change initiatives and is a positive step to demonstrating adherence to meeting the stringent fiduciary standards to access climate change finance²⁴.

The development of the national and sectoral policies mainstreaming climate change has helped countries identify priority projects for funding. For example, the ten sectors in Palau's Climate Change Policy are being encouraged to develop funding proposals for priority actions. Three draft proposals have been prepared for the top three priority actions under Nauru's W&S Master Plan. In Tonga, access to climate change finance via new modalities was progressed through revision of the existing Tonga Climate Change Trust Fund Bill (awaiting endorsement) and a supporting manual to guide the administration. The Tonga Trust Fund will be the first national level climate change trust fund to be established in the Pacific and may provide a model for other countries.

No countries to date have been successful in accessing new climate change finance modalities to implement adaptation projects. However, both FSM and Cook Islands have been successful in obtaining new funds (USD150,000 each) through the GCF Readiness Programme²⁵. This is positive outcome for these countries and it reinforces the relevance and importance of GCCA's capacity building work on climate finance. However, based on the evidence collected, it is not possible to

²⁴ A December 2014 report by the Overseas Development Institute states (p17): "*Working arrangements that create space for ministries with responsibility for economic and financial decision-making to partner with Ministries with requisite expertise and mandate to address climate change and environmental issues are needed*" Nakhooda, S & Jha, V, 2014. Getting it together: Institutional arrangements for coordination and stakeholder engagement in climate finance. <http://www.odi.org/publications/8765-getting-together-institutional-arrangements-coordination-stakeholder-engagement-climate-finance>

²⁵ FSM, Cook Islands USD \$150,000

attribute the GCF Readiness Programme funding to the GCCA project. Good progress was also made in Cook Islands where work towards becoming an NIE under the Adaptation Fund has led to increased governance and financial accountability and provided important lessons for other Pacific Island countries. This will assist it in the future as it progresses the NIE application for both the Adaptation Fund and Green Climate Fund (GCF).

Stakeholders have noted that SPC has been proactive in collaborating with other CROP agencies and development partners through both formal and informal means. The GCCA: PSIS project has been proactive in capturing and sharing lessons learnt at the national and regional level. SPC has used the lessons it has learnt along the way and made positive contributions to regional strategies such as the draft 'Strategy for Climate and Disaster Resilient Development in the Pacific (SRDP), and through formal mechanisms such as the Pacific Climate Change roundtable (CROP inter-agency activity) held in Apia, Samoa (May 2015). The GCCA project team has also been proactive in sharing lessons with other development partners through a "Lessons Learnt Roadshow" in Q4 of 2015 involving 10 events and reaching more than 200 development practitioners, and has been called upon to share lessons to inform new regional projects (e.g. EU-funded Adaptation to Climate Change and Sustainable Energy programme).

3.3.1 Country level impacts

The GCCA: PSIS project has supported the efforts of the nine participating countries in their efforts to tackle the adverse effects of climate change through the impacts of on-ground projects, capacity building, mainstreaming of climate change, and assessment of climate finance readiness. Country examples of intended impacts are provided in Table 5. The impacts listed can generally be attributed to the support provided by GCCA: PSIS (except where noted). For example, the rainwater infrastructure improvements in Tobi and Sonsorol (Palau) and in Fais (FSM) can be attributed solely to the GCCA project. Some impacts (e.g. arising from policy development) were the result of co-funding (e.g. GCCA, GIZ and USAID for Palau Climate Change Policy, and PACC and GCCA for Nauru W&S Master Plan).

Table 5: Examples of impacts achieved at country level

Country	Impacts
Cook Islands	<ul style="list-style-type: none"> Increased economic resilience of pearl farmers in Manihiki through increased ability to reduce the negative impacts of climate variability on their pearl shells. Increased institutional capacity across a number of areas (audit, procurement, anti-corruption, project management), increasing Cook Islands' readiness to access new forms of climate change finance
FSM	<ul style="list-style-type: none"> Additional 54,000 gallons of rainwater storage provided in Fais, benefitting 65 residential compounds. Community members, particularly women, have less time and distance to access reliable and clean water supply. A solar pump installed at Sahagow Well in Fais has provided a valuable alternative water supply for use during droughts and natural disasters, evidenced by its use following Typhoon Maysak.
Kiribati	<ul style="list-style-type: none"> Improved health benefits from SODIS project in South Tarawa, with reported reduction in cases of diarrhoea (235 cases per month baseline, 163 cases per month with intervention), though full attribution is difficult as there are other water improvement projects being implemented by

Country	Impacts
	<p>range of stakeholders. Also improved health benefits from reduced smoke (from boiling water) and reduced expenditure on fuel.</p> <ul style="list-style-type: none"> Improved decision-making and disease outbreak surveillance and response within Kiribati Environmental Health Unit (EHU) in Tarawa as a result of regular monitoring, new data collection and analysis systems, training, and new GIS Health Information System.
RMI	<ul style="list-style-type: none"> Increased access to essential services on Ailinglaplap Atoll, including to a school and pharmaceutical drug dispensary. Transport of copra for trade secured. Increased capacity (machinery) and experience (skilled staff) in Ministry of Public Works to plan and undertake coastal protection works.
Nauru	<ul style="list-style-type: none"> New national and sector policies (RONAdapt and the 20-year Water and Sanitation Master Plan) will influence future actions. Three proposals drafted to seek funding for top three priorities in W&S Master Plan.
Niue	<ul style="list-style-type: none"> Rainwater tank moulding facility built in Niue (co-funded with PACC), which provides flexibility in procurement of additional tanks, as well as guaranteed quality of supply and manufacture of tanks for other purposes e.g. septic tanks. Rainwater tanks supplied to 214 households (GCCA component), and most Niue households (Niue citizens, owner occupied) now have back-up water supply. The impact in terms of back-up water storage during cyclones should be positive, but the impact in terms of displacing reticulated water consumption (as per NISP target of 20%) is likely to be low (see Niue country report).
Palau	<ul style="list-style-type: none"> Two outer islands (Tobi and Sonsorol) have secured potable water through rainwater catchments. Two outer islands have improved water infrastructure (e.g. new pumps), and back-up water supply from rainwater (e.g. Kayangel, Angaur). A total of 32,550 gallons (123,215 litres) of additional rainwater storage installed. New rainwater harvesting (First Flush Diverters) and storage (HDPE tanks) equipment rolled out for better quality and safer water supply. Improved understanding and focus on climate change impacts and their relevance to different government sectors as a result of the process to develop the Climate Change Policy (co-funded by GIZ and USAID). A new Climate Change Office should facilitate policy implementation.
Tonga	<ul style="list-style-type: none"> Improved coastal protection covering 1401 meters for three communities (Talafo'ou, Makaunga and near Manuka Village) in Eastern Tonatapu), as evidenced by beach profile monitoring and three strong storm events that led to debris being deposited onto the road by strong waves in adjacent communities, but not the target communities.

Country	Impacts
	<ul style="list-style-type: none"> Revised Climate Change Policy and legislation and manual on the Climate Change Trust Fund will help Tonga plan and fund projects into the future.
Tuvalu	<ul style="list-style-type: none"> Agroforestry successfully trialled in three sites at Funafuti and Nukufetau, with one site (Funafuti) already having its first harvest of kumala, banana, yam and coconut. Data on crops and crop yield will continue to be collected and compiled by the Department of Agriculture, and shared nationally, to SPC CePaCT, and with other Pacific island nations. 140 farmers from all 9 islands of Tuvalu trained in agroforestry with 20 surveys from farmers indicating an increased knowledge on agroforestry and farmers implementing agroforestry measures on their farms. Attachment of Agricultural Extension officer at CePaCT led to one research paper drafted²⁶ and new skills being put to use in material propagation in the Agricultural Research Station on Vaitupu. Tuvalu Biosecurity Officer attachment to SPC Land Resource Division has helped with progressing the potential for breadfruit export.

Unintended impacts

There were some cases of unintended impacts arising. The coastal works in Tonga created a number of headlands, upon which three playgrounds were created following community requests. The playgrounds have provided new recreational activities for local children, and there is a reduced need to drive to the capital to access play equipment. Unfortunately, increased patronage of the playground by children has led to one accident involving a car and a child. Temporary measures have been put in place to warn vehicles for children crossing, whilst more permanent measures are being planned.

The impacts from the policy development, capacity building, and on-ground projects will become more apparent over time. Full consideration of these impacts would require a longitudinal (impact) evaluation, and attribution can become more difficult over time. This is especially true for capacity building activities.

Overall, the project had a very good level of impact considering the short period of time post-implementation for these impacts to emerge and be observed.

3.4 SUSTAINABILITY: To what extent will the project benefits in the targeted sectors be sustainable over the longer term (5 years)?

The long term impact of investments such as the EU-funded GCCA: PSIS project rests on the sustainability of the outputs produced. The SPC project team demonstrated a strong appreciation for this in their support to countries in developing exit strategies as part of their PDDs. However, in practice, evidence to demonstrate government budgets have allocated ongoing funds for

²⁶ *In vitro and in vivo screening of sweet potato (Ipomoea batatas) varieties for tolerance to salt, using two methods.* Paper currently being reviewed by the CEO of the Scientific Research Organisation of Samoa, ahead of submission to a journal.

maintenance of outputs is limited to Tuvalu and Kiribati (see Table 6, and country reports). Claims that departments will cover costs in other countries will be seen over time.

Exit strategies developed during the design phase provide a plan for sustainability, but these plans need to be backed up by government budget or other project commitments.

A number of countries that implemented water sector projects face a challenge of providing free (e.g. Niue) or heavily subsidised (e.g. Nauru, and some outlying states in Palau) water. This not only acts as a disincentive to more sustainable levels of water consumption, and better maintenance of water infrastructure (e.g. fixing leaks etc.), but it also does not provide water utilities with the funding required to maintain existing infrastructure or invest in improvements. Niue is looking to trial water metering and a water tariff, and Palau will be implementing a consumption-based rather than flat water tariff in Peleliu, which are necessary steps to ensure the long-term sustainability of reticulated water supply.

Letters of Agreement between SPC and national governments make no mention of sustainability, or committing governments to work through forward budget processes to allocate funds to ongoing project maintenance.

This is perhaps something that future projects should consider, as well as including in the Concept Note stage. Estimated maintenance budgets formed during the PDD or later technical design phase of projects could be used to make early approaches to government ministries for ongoing budget support.

A high level of ownership of projects, at the national level, and particularly beneficiary level, helps sustain the project outputs and ongoing benefits.

Countries and beneficiary communities generally demonstrated a high level of ownership of projects. This is likely due to the projects being led by countries, and often having a strong level of consultation at the design stage, and ongoing community engagement during the implementation phase.

Interestingly, poorer and more remote communities that are less frequently the focus of a donor funded project (e.g. Fais, in FSM) were more proactive to contribute money and labour to receive rainwater storage than the wealthier Niueans who more frequently receive funding for projects²⁷. This brings into question the level of community ownership of the Niue rainwater tank project. The rainwater storage in outer islands of FSM and Palau were providing vital water infrastructure, whereas the Niue project was providing an alternative water source for disasters. The degree of sustainability of the rainwater tank project in Niue will be determined over time. History has shown a general lack of tank maintenance since the advent of reticulated water supply in 1983-1984. The Niue government has not allocated funds to test the water quality in rainwater tanks.

Overall there seems to be a higher level of community ownership, participation, and input to projects in remote outer islands, which generally benefit from less investment from donor and government-funded projects, as well as for investment in vital infrastructure to meet daily needs.

Table 6: Examples of project sustainability at country level

²⁷ Seventeen Fais households required roofing improvements and this need was addressed by applying for an Australian Aid community grant.

Country	Sustainability
Cook Islands	<ul style="list-style-type: none"> • Maintenance of buoy and implementation of Manihiki Lagoon Pearl Management Plan to come from Ministry of Marine Resources but little evidence that sufficient funding has been set aside, especially for buoy maintenance. • Technology used in buoy may not be appropriate for a remote location, as evidenced by breakdowns and difficulty in getting prompt repairs. • Project staff, including the technical expertise in Manihiki, have ongoing employment with other projects. • Other donor-funded projects identified to continue and replicate GCCA activities.
FSM	<ul style="list-style-type: none"> • High level of community ownership, demonstrated through household contributions to repair household roofs. • Community members had to sign recipient agreements for the water tank project. These agreements outline household maintenance responsibilities and requirements (cleaning and repairs) in cooperation with state agencies and community leaders (chiefs). The agreement also provides permission for Yap EPA to undertake water quality testing. • Community trained in basic maintenance of water tanks and FFDs. • Technical support and training and further education and awareness activities will be continued by PREL-Water for Life and the Yap Department of Education.
Kiribati	<ul style="list-style-type: none"> • High level of ownership of SODIS demonstrated by Kawan Bairiki community and incorporated into the school curriculum. • Other partners and projects (WHO, NZAID, UNICEF, STSISP, KAP III), are including SODIS as part of their projects. • Environmental Health monitoring consumables (laboratory supplies and fuel) as well as the vehicle driver funded from government budget. • Project staff have ongoing employment with other projects.
RMI	<ul style="list-style-type: none"> • Ongoing maintenance of the causeway structure and heavy machinery purchased is the responsibility of the MPW. • National coordinator absorbed into the Ministry of Finance.
Nauru	<ul style="list-style-type: none"> • High level of government ownership of RONAdapt (endorsed), and high level of ownership by Nauru Utilities Corporation for the W&S Master Plan. • Three proposals drafted for priority W&S Master Plan projects.
Niue	<ul style="list-style-type: none"> • Quality water tanks with guarantee of 20 years with a 10-year warranty. • Moulding facility can be used to produce more tanks or other plastic moulded products. EU-funded GIZ ACSE project to use moulding facility to produce septic tanks.

Country	Sustainability
	<ul style="list-style-type: none"> • Project has manufactured an extra 100 tanks for sale to the private sector at NZ\$1,200 per tank which will raise NZ\$120,000 to help contribute to the maintenance of the moulding facility and purchase of water testing kits. However, tank sale price still below manufacturing price. • A longer term business plan is needed for moulding facility but no government funding allocated for this.
Palau	<ul style="list-style-type: none"> • High level of community ownership of the water tanks installed in Tobi and Sonsorol, with residents reportedly very satisfied. • Use of HDPE tanks will be longer lasting than other tank options commonly available (e.g. stainless steel that have been demonstrated to rust). • Community trained in basic maintenance of water tanks and FFDs. • Commitment to monitor water quality in rainwater storage tanks to ensure that water is safe to drink. • Climate Change Policy endorsed by government, and Climate Change Office established. • Staff absorbed into government departments (e.g. Climate Change Office) and public utility.
Tonga	<ul style="list-style-type: none"> • Monitoring program to assess long term performance and impact of the coastal protection works. • No core budget allocated for sand recharge or repair of the groynes. Infrastructure maintenance is reliant on either external financial support through an ongoing project (ADB funded) or an allocation from the Tonga Climate Change Trust Fund (not yet endorsed)²⁸. • Coastal trial proposed to expand under EU-funded GIZ ACSE programme.
Tuvalu	<ul style="list-style-type: none"> • Tuvalu national budget for 2016 includes provisions for the Department of Agriculture to work with the landowners and farmers to maintain the agroforestry project sites and equipment. • Results from crop production will be fed back to SPC CePaCT for sharing regionally. • MOUs with landholders of the two Funafuti sites allowing for a five-year monitoring period (until mid-2019). • Training in agroforestry techniques and machinery maintenance successful. • Two other projects are looking to build on the agroforestry project.

²⁸ The endorsement of the Tonga Climate Change Trust Fund is important to ensure funding for continuation of activities when project funding finishes e.g. maintenance of the coastal protection works undertaken with GCCA funding.

No countries have yet acquired access to new climate change funding modalities to implement adaptation projects. However, both Cook Islands and FSM have obtained a GCF Readiness Programme funding (USD150,000 each). Whilst it is not possible to attribute this outcome to the GCCA project, it does validate the project's work in this area. The GCCA project did directly advance Cook Islands' NIE application for the Adaptation Fund and this may have contributed to broader positive GCF outcome.

There is a high retention of country-level project staff post-GCCA, with stakeholder consultation indicating approximately 18 of 23 staff continuing employment, either through positions being absorbed into national government departments or agencies (e.g. Palau, RMI) or through other donor projects (e.g. Cook Islands, Tonga). This is important in terms of the sustainability of the skills and experience being maintained within countries, and being applied to other projects. Some projects also used government departments to deliver infrastructure projects (e.g. coastal works in RMI) which has built the skills within the departments to deliver such works in the future, as well as to maintain them.

The project has also built private sector capacity in a number of countries. For example, contractors were trained to install and maintain rainwater tanks in Niue and Palau. A local construction company was also contracted in Tonga to carry out the coastal protection works, thus building local capacity and creating ease of maintenance. Yet as noted previously, there are significant constraints in private sector capacity and capability to deliver projects in smaller Pacific countries (e.g. Nauru). This is evidenced by limited tender responses, and the high cost of bids received (e.g. RMI). There is a need to develop a business plan for the moulding facility in Niue to ensure its long term viability, especially considering that extra rainwater tanks are being sold for less than the manufacturing cost. Technical assistance and funding will be required for this, as the government has not allocated funding to develop a business plan.

The sustainability of the GCCA: PSIS project is supported by the strong focus on capturing and sharing of lessons. As noted previously, there were national and regional lessons learnt workshops. This allowed national and regional stakeholders to learn from the GCCA: PSIS project. SPC were proactive in sharing lessons with other CROP agencies and development partners through a lessons learnt roadshow. The SPC team also shared lessons informally through meetings with development partners. Stakeholder consultation indicated that lessons from the GCCA: PSIS project have been taken up by the EU-funded GIZ-ACSE programme.

Lessons have also been captured using lessons learnt videos (screened at regional events and available on YouTube), as well as through fact sheets available online. Key project documents are available on the PCCP, which supports the sustainability of the knowledge management.

3.5 EFFICIENCY: To what extent does the GCCA: PSIS project demonstrate timely implementation, sound financial management and value for money?

Efficiency reviews the way project inputs (time, funding and resources) are converted into project outputs and deliverables. This evaluation of project efficiency includes discussion of a number of items including project work planning and reporting, financial management, risk management, management of knowledge and assets, and coordination with partners.

3.5.1 Work planning and narrative reporting

The implementation of national adaptation projects was guided by a logframe matrix and timeline in the PDD. The logframe supported results based monitoring that was implemented through quarterly narrative reports. These reports also acted as work plans for the following quarter. All reports contained highlights, progress against planned work and discussion of issues / barriers faced. Both SPC staff and national coordinators were satisfied with the reporting process. SPC noted that it provided enough detail to determine if any external intervention or assistance was needed to resolve issues or move projects forward. Coordinators indicated that the process was not too onerous, particularly compared to other donor funded projects.

Results based quarterly narrative reporting of country projects is sufficient to keep the regional PMU informed and not too onerous for national PMU staff.

The regional level SPC GCCA project was also guided by a logframe matrix. Half yearly progress reports and annual reports were submitted to the Project Steering Committee and EU. These reports reviewed progress made by SPC and national adaptation projects against Key Results Areas 1 to 4. A work plan for the following year was included in the annual report for endorsed by the Project Steering Committee. Two areas for improvement in annual reports were noted in the final ROM report²⁹:

- Reports produced should document an accumulated list of results and achievements which would provide a complete picture of what projects had achieved across the entire project duration. This compilation would inform summary end of project country reports (SPC GCCA Spotlight reports) that assist evaluators and other external stakeholders understand what the project achieved³⁰.
- Reports contained highlights from each adaptation project, however, there was a lack of detailed narrative on progress achieved by each project in regards to both adaptation and main-streaming activities. This evaluation questions if this level of detail is needed given that the overall implementation status (percentage complete) was provided in the report.

Project monitoring, reporting and evaluation (through the ROM and mid-term evaluation) were effective at keeping key stakeholder (including the EU) informed of the project's status, what issues were being faced and what recommendations could be implemented to improve future delivery. EU representation at key events (steering committee meetings and official events) provided an opportunity to keep this key stakeholder engaged and informed.

²⁹ Final ROM report for period ending 15/10/2015

³⁰ At the request of the EU, the reports produced by the SPC GCCA project only focused on achievements of the current reporting period.

It is less clear to what extent beneficiaries (specifically communities) were kept informed about the status of projects. In some cases (Cook Islands, Kiribati) there appeared to be a higher level of awareness as many project activities involved the community or they were exposed to project communications via billboards and direct communication. Coastal communities in Tonga were engaged during the design stage, however, sand mining issues³¹ indicate that more could be done to ensure communities were informed of planned project activities. In other cases (Niue) there was inadequate levels of communication with communities during the implementation stage.

3.5.2 Funding allocation

All projects were originally allocated €500,000 to implement their adaptation projects and €54,000 to employ a national coordinator. A separate pool of funding was managed by SPC to support requests for technical assistance to support KRA 1 (mainstreaming) and KRA 2 (climate change finance). Some projects received additional funding from SPC's contingency fund to expand their scope (if progress was going well) or replicate components of their work. The use of the contingency was approved by the EU towards the end of the project timeframe as per regulations. All changes to funding allocations were documented and approved in amended Letters of Agreement between SPC and the respective national Government. Decisions to allocate additional funding were made on a case-by-case considered basis. After the Nauru projected missed some agreed targets in 2015, a portion (€389,437) of Nauru's funding was reallocated to three countries (Tuvalu, Kiribati and FSM) most impacted by recent natural disasters³². The reallocation process could be made easier if rules and conditions that may trigger a funding allocation were built into funding agreements. The funding reallocation process should also be documented and explained to countries at the onset of projects. The final decision to reallocate funds should still rest with the project manager and there should be some flexibility for the project manager to exercise discretion in when to apply to rules.

Project efficiency in relation to funding was increased through in-kind contributions made by Government and community stakeholders (as documented in PDD budgets). These contributions have not been quantified here, however some examples of in-kind contributions made were:

- RMI - MPW labour (~USD 50,000) to complete coastal works and community members' involvement in coastal replanting.
- Tonga - Government (Village Council) contribution of sand resources to re-charge coastal protection sites.
- Tonga - Geology Division undertaking coastal monitoring work in Tonga.
- Palau - PPUC provided labour for water leak testing and repairs, and contributed cash to make up shortfalls in transport costs.

Additional efficiencies were gained by leveraging off transport being provided by other projects and stakeholders³³.

PMUs need to ensure project budgets incorporate sufficient contingencies to reflect project risks and uncertainties, especially when designing capital works projects in outer islands.

Four of the nine projects (RMI, Palau, FSM and Nauru) had insufficient funding to deliver their demonstration projects as scoped in the PDD. These funding shortfalls have more to do with the project design cost estimation process than insufficient funding allocations. These projects

³¹ See Tonga evaluation report.

³² See Nauru Evaluation Report for reasons funding was reallocated.

³³ New Zealand Navy for Cook Islands and Kiribati. SRRIC-CC project in Cook Islands.

experienced very large variations between their estimated project costs (project design stage) and costing obtained from bidders during the procurement process. Key factors in these cost differentials were:

- remoteness of the target project sites which increases transport costs, logistical complexities and risks should any additional inputs or supplies be needed on-island;
- small capacity of domestic private sector resulting in very few bidders and limited competition between them; and
- projects works (and cost) are often too small to attract interest from international bidders³⁴.

Larger contingency amounts (up to 20%) should be included for construction and transport costs for capital works projects in outer islands. Small contingencies (5%) could be allocated for other budget items.

Where budgets with high contingencies exceed the available funding, this presents an opportunity to reconsider the feasibility of the proposed projects, and whether it would be more prudent to invest in a different project.

The project used a fixed funding allocation model where all countries were allocated (€500,000) for their adaptation project. The final ROM report indicated that projects efficiency and effectiveness could have been improved by considering the country size and population, sector or type of project when determining the funds available for each country. Arguments for and against different allocation models can be made. This evaluation does not take issue with the fixed funding allocation used for this project. If the allocation amount was much higher (too high for countries to efficiently utilise), then this would flag the need for alternative models like that used by the EU-funded GIZ ACSE programme where country population size influenced the funding allocation.

3.5.3 Financial management

Financial management measures and cost controls were effective in ensuring SPC GCCA project funds were efficiently delivered and used to fund valid project expenses. Funds were released to projects in two, sometimes three tranches to decrease risks to SPC and EU of possible inappropriate use of funds. Acquittal of 80% of the first tranche was required for release of the subsequent tranche. Funding was efficiently delivered to national projects usually within three weeks of receiving a request that complied with the funding rules. Projects needed to expend funds in a manner consistent with their PDD budgets, however, a 10% variation between funding allocated to different KRAs was allowed demonstrating some flexibility in the funding arrangements.

Financial management arrangements and tools used were found to be efficient and effective, and should be considered for future regional projects. SPC finance staff training in the use of these tools should be considered.

Funds were channelled to country projects through the national Government's finance department which follows best practice to ensure both transparency and accountability of finances³⁵. Whilst delays in finance ministries releasing funds to line ministries was sometimes experienced (e.g. FSM,

³⁴ Nauru had one international bidder. RMI stakeholders commented that international bidders were only interested in projects of USD 10 million in value, but this may have limited to coastal protection projects with significant start-up costs.

³⁵ Practice is associated with requirements to receive direct budget support for climate change financing. This practice is an improvement to that used in previous SPC projects that saw funding delivered directly to line ministries. PIFACC also notes that closer links between budgeting agencies and climate teams support appropriate governance and an enabling environment.

Kiribati), the arrangement reduces risks for both SPC and the EU and helps to build capacity within the finance ministry as well as ensuring the funding is recorded in the national aid management pipeline and budget.

Three annual external audits were conducted and no financial irregularities were identified that could not be explained by SPC's finance officer. This demonstrates robust financial management procedures were followed throughout the project. Spreadsheets provided by the finance officer demonstrate that the project team had the ability to report on project status by both actual funds spent and also by funds committed, but not yet acquitted.

This was a large project for SPC to manage. Financial templates, reporting tools and processes set up by the SPC finance officer should be documented and considered for reuse in similar projects of this scale. Reuse would increase efficiency through preventing the need to create new templates and processes. SPC finance staff may need training in setting up and using the existing (SPC endorsed) templates. Existing templates could be improved through categorising expenses by KRA which would add additional depth to reporting.

3.5.4 Funding expenditure

A review of the adaptation project budget line reveals that the project is forecast to utilise its entire EU €4.6 million funding allocation by the close of the project (see Annex 11). This forecasting demonstrates good financial management practice and the utilisation of all funds should reflect well with the EU who have stressed the importance of 100% expenditure in the past.

Financial reporting systems that include an option to include committed funds in the current financial position enable PMUs to more easily plan to expend the entire donor funding allocation.

Whilst there is some variance³⁶ in project budgets and actual costs for some line items, discussions with the SPC GCCA finance officer revealed that these were mostly deliberate strategic decisions to better reallocate funding³⁷.

Expenditure on transport was noted as an item where expenditure was higher than budgeted. This reflects both additional travel undertaken by SPC staff to monitor projects and the high cost of transport in the Pacific region. A comment in the final ROM report indicated that "...as a rule of thumb, the costs for a particular distance in other parts of the world need to be multiplied by 2 or 3 times in the Pacific"³⁸.

3.5.5 Efficiency of project approaches selected to achieve project purpose

One way of assessing if project finances were efficiently invested is to question if different options to achieve the same project objective (or output) were identified and evaluated before making a design or purchasing decision. Projects may have used a weighted multi-criteria analysis (where cost was one determining factor) or invested in undertaking a Cost-Benefit Analysis (CBA) to guide their decision making.

With the exception of Niue, CBA was not undertaken for any SPC GCCA projects. The Niue CBA was undertaken prior to the SPC GCCA project and whilst CBA results were considered, other factors in

³⁶ Underspending by 22% for Suva Climate Change Adviser and overspending by 38% on regional training workshops and technical attachments

³⁷ Additional funds to adaptation projects to enable Cook Islands to replicate some components. Additional funding to deliver five extra rounds of LFA and proposal preparation training.

³⁸ SPC GCCA: PSIS ROM Report, dated 05/01/2016, p.3

the decision making process more strongly influenced the chosen adaptation measure (see Niue country report).

The Nauru project also considered cost in its decision making process to determine the most cost-efficient investment (regarding location and tank size) to increase Nauru's community water storage. Whilst it was positive that these processes were used, the costs of different options considered were greatly underestimated which highlights the importance of not just using a decision making tool, but having reliable and accurate information to feed into it.

Procurement policy guidelines were based on best value for money and required projects to obtain three quotes before purchasing decisions were made. This policy helped to ensure projects considered the costs of good or service as one factor in the final decision making process, thus helping to ensure efficient use of financial resources. As noted previously, the use of SPC's procurement for larger tenders provided timely procurement services to countries, as well building national skills in best-practice procurement.

Whilst capacity constraints in SPC's procurement team were not initially identified, conversations with stakeholders (PMU, EU) indicate that there is a need to build capacity in this area and that procurement is a common bottleneck experienced by projects. These capacity increases could be supported by pooling a small funding allocation from multiple projects.

Overall, SPC is well-positioned to manage large infrastructure procurement when certain conditions are met: (a) the works fall within SPC's fields of expertise, or a suitable external expert is brought in to develop the tender specifications and documentation, (b) there is a recent, and costed pre-design (b) there is sufficient project budget to cover the estimated cost and appropriate contingency (c) there is sufficient time for implementation (e.g. 5-year project) (d) the tender is open to local and international bidders (e) the asset owners sit on tender review panel.

3.5.6 Quality of outputs delivered.

Efficiency can also consider if the quality of outputs delivered reflects the financial investment made. The evaluation does not explore this complex and time consuming analysis in detail; however, some observations have been made. Project coordinators confirmed that they were satisfied with the quality of outputs delivered by all but one the SPC GCCA projects. Evidence of quality outputs was observed during site visits to Tonga, Kiribati and Palau.

The evaluation did not perform a detailed quality review of all reports, new and revised policies and strategies produced by the project. Interviews conducted revealed that whilst there was a high level of satisfaction with the final Palau Climate Change Policy, there was some dissatisfaction with the Palau Gaps and Needs Analysis Report developed as one of the steps to inform the policy. Other interviews (Tonga and Kiribati), provided evidence of a high degree of satisfaction with policy and report related deliverables³⁹.

One project output, the Cook Islands refurbished monitoring buoy, was noted as not being of a high quality⁴⁰. This is one incidence where the project funds invested did not result in a quality output being produced. Additionally, the RMI rock truck has only just come into possession of MPW and thus its quality has not yet been assessed.

³⁹ Tonga Climate Change Trust Fund Bill, Kiribati Ordinance Regulations.

⁴⁰ Numerous weaknesses with the buoy are discussed in the Cook Islands Evaluation Report.

Overall, the evaluation finds that nearly all project outputs have been delivered were of high quality, thus representing an efficient use of project funds.

3.5.7 Assets

Each country was required to keep a register of assets procured by the project. Evidence of asset registers being kept up to date was found. Asset registers were handed over to respective national Government departments who now take ownership of project assets.

3.5.8 Personnel

SPC and the PMU kept track and continuously monitored performance of internal and country level staff employed by the project. SPC's PMU was comprised of a Project Manager, 4 climate change advisers (3 in Suva and 1 in FSM), 2 financial and administrative staff, a communication officer and a liaison officer, and a climate change coordination adviser at SPREP. Turnover of staff was very low. Small time efficiencies in PMU recruitment may have been achieved if PMU recruitment processes (e.g. job descriptions) were prepared in advance of funding agreement signing (SPC and the EU) and actioned straight after the agreement was signed.

SPC internal annual reviews of staff performance provided a mechanism to assess quality of work and address any performance issues. No performance issues were raised by SPC staff or national coordinators during interviews and discussions. The SPC project manager took every opportunity to ensure the team had access to capacity building opportunities required to fulfil their current roles and mature as professionals. Staff were also encouraged to represent SPC at events and presentations. The evaluation team has observed some staff growth and maturity in their capacity and confidence over the project period⁴¹.

A ratio of one climate change adviser to three countries ensured adequate support and oversight was provided by SPC. This support and oversight was a key factor in the success of projects.

In response to ROM (October, 2012) recommendations, SPC hired two additional climate change advisers to work directly with the countries. These additional advisers allowed more detailed attention to be paid to each individual national project. The ratio of one adviser to two or three countries contrasts from previous climate change adaptation projects that have been implemented in the Pacific region⁴². The productivity of SPC GCCA staff is evident in their trip reports and activity reported in annual reports. The evaluation team was co-located with the project team for two weeks and also witnessed the efficiency of the team in completing its work load.

SPC's approach to delivery (high levels of support and balance between rules and flexibility) was another key success factor for projects as noted by one national coordinator "the way the project was designed and managed made it nearly impossible to fail in its implementation".

Project interviews with national coordinators, national PMU staff, government representatives and the EU all provided significant positive remarks about the SPC GCCA project team, mentioning their flexibility, responsiveness and proactive attitude⁴³. Gillian Cambers, the SPC GCCA Project Manager was singled out on numerous occasions for her approach to managing the project that balanced the need for rules and oversight on one hand and flexibility and national autonomy on the other hand

⁴¹ Specifically, one project officer has stepped to become a climate change adviser.

⁴² Pacific Adaptation to Climate Change (PACC) had two advisers to service 14 countries.

⁴³ Project officers, climate change coordinators, financial officer and project manager were all specifically praised during in-country and telephone interviews.

which helped to build capacity in local staff and national systems. The evaluation acknowledge the work of the core project team:

- Ms Gillian Cambers, SPC GCCA Project Manager
- Mr Sheik Irfaan, Finance Officer
- Mr Sanivalati Tubuna, Climate Change Advisor
- Ms Juliana Ungaro, Climate Change Advisor
- Ms Pasha Carruthers, Climate Change Advisor (Northern region)
- Mr Clinton Chapman, Former Climate Change Advisor
- Mr Aaron Atteridge, Former Climate Change Advisor
- Mr. Graham Sem, Former Climate Change Advisor
- Mr Sean Hobbs, Climate Change Communications and Information Officer
- Mr Zhiyad Khan, Communications Assistant
- Ms Tagaloa Cooper-Halo, Climate Change Coordination Adviser
- Ms Titilia Rabuatoka, Project Liaison Assistant
- Ms Victorina Loyola-Joab, Project Assistant

PMUs staffed by competent national coordinators with supporting project officer(s), finance officer and a sector specific expert were a key success factor for most projects.

Some national level projects hired financial officers and project officers to implement the on-ground activities. These staff lifted a burden from the national coordinator and enabled them to focus more on 'coordinating' the overall project. Sector specific experts also played important roles in country PMUs, especially if the PMU was based in a ministry not focused on the project's target sector.

Overall the evaluation finds that the project has made an efficient use of personnel to support and deliver project outcomes.

3.5.9 Risk Management

In response to a ROM (October 2012) recommendation, the SPC GCCA project implemented a risk management strategy in December 2012. This involved creating a regional level risk management matrix during the second annual Steering Committee Meeting. Contingency measures in the risk management strategy were considered throughout the project implementation, however the implementation of these measures and status of risks could have been made more visible in documentation and status reports.

Effective risk management was a critical factor assisting the success of projects. Risk management through adaptive dynamic processes was successful and should be recommended for future projects provided the project manager is experienced and similar reporting and field trips are planned.

Risks were managed through an adaptive dynamic process that relied on quarterly narrative reports and frequent in-country visits by SPC staff to keep the PMU informed. Risks identified were quickly addressed. This adaptive dynamic approach worked well for this project, however, more traditional methods of documenting and tracking risks may be better suited for projects that have a less experienced project manager or less frequent reporting and fewer field trips.

Risk management matrices based on the regional risk management strategy were included in national level PDDs for adaptation projects. This provides some evidence that the risk strategy reached beyond the one matrix created during the Steering Committee Meeting. Whilst risks were

considered across a spectrum of prompting risk types (natural hazards, remoteness, etc.), the number of risks document in PDDs was minimal given the large range of project activities (adaptation, policy mainstreaming, community awareness, etc.). The evaluation recommends risk plans be reviewed by additional stakeholders with experience in project delivery to identify and mitigate risks in future projects. For example, PDDs, including risk management plans, could be reviewed by a panel of sector specialists to provide an oversight function at the project design stage. This will assist projects introduce design changes and mitigation activities into the project plans.

3.5.10 Responding to risk

SPC have been extremely proactive and flexible in responding to risk events and changes in circumstances that arose during implementation. Examples that demonstrate SPC flexibility include:

- changes to outputs delivered by adaptation projects⁴⁴
- additional funding allocations for adaptation projects⁴⁵
- re-scoping of projects⁴⁶
- negotiation of cut-off dates and deadlines⁴⁷

SPC's flexibility and focus on finding solutions is another key contributing factor to the achievements made by all projects, even those that experienced difficulties during implementation.

As demonstrated throughout this evaluation report, SPC have been extremely proactive and flexible in responding to risk events and changes in circumstances. This reflects positively on the GCCA: PSIS project team's commitment to achieve results.

SPC developed a trusting relationship with the EU through frequent and honest communication. This approach helped develop a successful partnership and it made it easier for the EU to trust and accept SPC's recommendations when decisions to resolve issues needed to be made. SPC's demonstration of providing a more truthful project experience story is important as a learning activity for this and future projects.

3.5.11 Timeliness

There were numerous examples where deliverables (quarterly reports, reconciled finances, completion of project activities etc.) were completed late by national project teams.

Project timelines need careful review to ensure they incorporate sufficient contingencies to reflect project risks in the PSIS context, especially when designing capital works projects in outer islands.

The non-adherence to deadlines is commonly experienced by projects, especially those implemented in PSIS. Delays are often caused by a combination of limited capacity and capability in project teams, extreme weather events and transport delays. Projects need to develop realistic timelines that factor in the risks and realities of working in the Pacific (especially outer islands). The importance of timely reporting also needs to be emphasised at the national project level.

The regional PMU needs to scrutinise the scope of projects to ensure that projects are not overly ambitious in their plans considering time, funding and national capacity constraints.

⁴⁴ Tonga – replaced community training in coastal monitoring to create parks (playground) at demonstration sites on request from the local communities.

⁴⁵ Cook Islands was allocated additional funding to replicate project activities.

⁴⁶ Nauru changed project activity focus area. RMI changed implementation arrangements.

⁴⁷ All project activity was meant to be completed by December 31, 2015. SPC have allowed some projects to finish implementation in the first three months of 2016 so they can expend all their funds.

As acknowledged by SPC and country teams, many countries were overly ambitious in the volume of work included in their project designs. These ambitious designs were also partially responsible for projects missing project activity completion dates. Pacific culture is less performance and task oriented and this also needs to be acknowledged when making a judgement about the degree of respect paid to deadlines. Whilst overall there were many deadlines and due dates missed, reasons other than a 'lack of respect for deadlines' are identified in many cases to explain this shortfall (e.g. delays due to transport).

The short implementation period (3 years) and slow initial progress in project implementation has been acknowledged. SPC's request and the EU's granting (March 2014) of a two-year extension resulted in the project ending on 19 November 2016. This extension was essential in enabling sufficient time for adaptation projects to complete implementation.

Seven of nine projects completed all key adaptation activities by the adaptation project implementation end-date (December 2015) and eight were completed by March 2016. Nauru was still completing its main project activity and it planned to be finished by June 2016⁴⁸. Both are estimated to complete implementation in March (Palau) and May (Nauru) 2016. Other countries were finalising some very minor tasks and making final project purchases in February and March 2016 to fully utilise their funding allocation⁴⁹. Table 7 below documents the percentage of project activities that were completed as of March 2016.

Table 7: Project and financial activity completion status

Country	Completion of activities	Completion of financial reporting
Cook Islands	100%	99%
FSM	100%	90%
Kiribati	100%	98%
Marshall Islands	100%	99%
Nauru	60%	90%
Niue	100%	100%
Palau ⁵⁰	98%	92%
Tonga	100%	99%
Tuvalu	100%	99%

Countries with higher levels of project implementation maturity and good project delivery reputations from past projects require less frequent oversight and can be granted more autonomy.

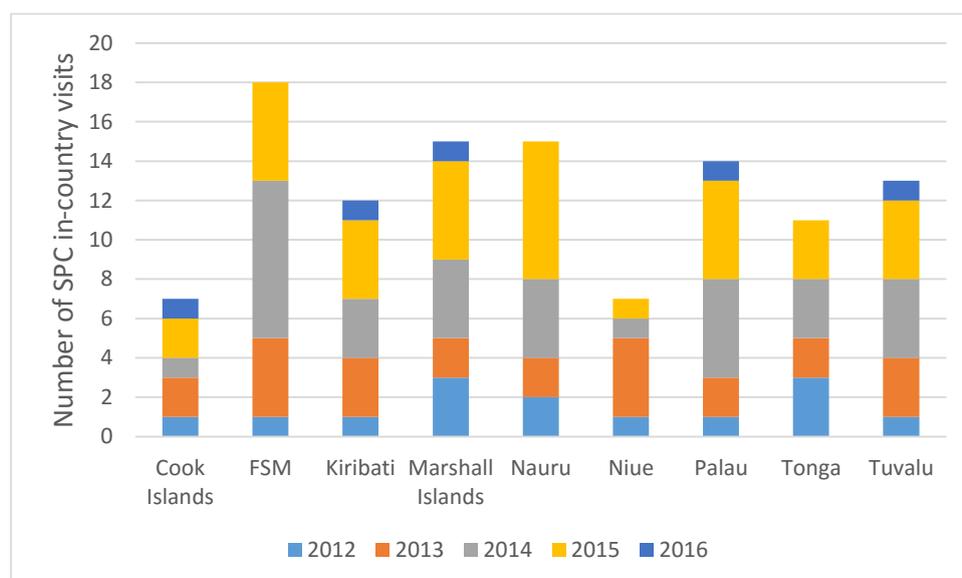
SPC's climate change advisers played a critical role in progressing project activities forward. This was facilitated through regular phone and Skype calls with the national coordinator and numerous in-country visits. Figure 2 shows the extent of in-country visits made to each participating country. The low number of visits to Niue and Cook Islands reflects the maturity of project implementation and the need for minimal intervention and visits by SPC. The higher number of visits to Nauru, RMI and FSM reflects that more oversight and direct intervention was needed to overcome barriers to progress projects forward (e.g. changes in scope, delays in tendering etc.).

⁴⁸ Tank decommissioning still in progress as at March 18 2016.

⁴⁹ Despite some outstanding minor activities, these projects were classified as finished.

⁵⁰ Categorized as having completed all key project activities.

Figure 2: SPC in-country visits



3.6 CROSS-CUTTING: To what extent has the project demonstrated sensitivity to environmental and gender issues?

Environment and gender are two important cross-cutting themes relevant to all development projects. The evaluation reviews each theme independently to consider the extent to which each has been considered in project design and implementation.

3.6.1 Gender

For the purpose of this evaluation, gender is defined by an expanded definition that considers vulnerability in addition to the roles and relationships between men, women and children⁵¹. The additional of vulnerability provides the ability to consider how the project did or did not address people most in need or in disadvantaged minority groups with limited access to resources (e.g. families living subsistence based lifestyles on outer islands).

Acknowledging the role that considering gender has in achieving the maximum positive benefits from a project, SPC engaged their Gender Equality Adviser during the time PDD's were being prepared. The adviser reviewed the PDDs and recommended ways to improve or incorporate gender mainstreaming activities to increase gender equity in projects. Several opportunities identified across projects to mainstream gender included:

- ensuring that special groups⁵² actively participate in national consultations and trainings;
- developing education and awareness strategies that reach out to different social groups based on their capacity to access and absorb information; and
- identifying opportunities to reduce women's burdens (as primary family carers).

SPC sought to capitalise on these opportunities through two approaches:

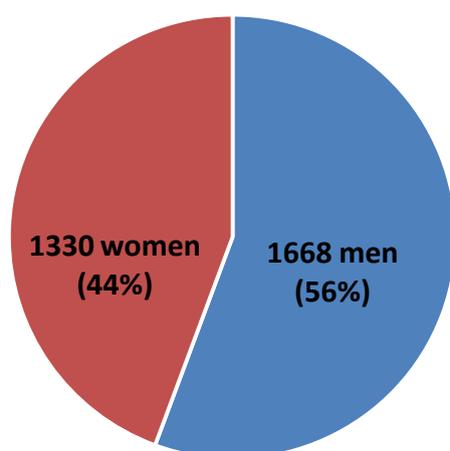
1. Aggregate all training and consultation data by gender.
2. Include specific activities that focus especially on women's groups.

⁵¹ UN Women, <http://www.un.org/womenwatch/osagi/conceptsanddefinitions.htm>

⁵² Women, children, youths, elderly and other minority vulnerable groups.

The first approach is more focused on capturing monitoring data to inform reporting. Clearer and bolder statements about needing to increase representation by women and other vulnerable groups could have been made to emphasise why the data was being collected. The aggregated monitoring data captured reflects a reasonable degree of representation of women (44%) in training activities and consultations (see Figure 3). Age categorisation and location (main / outer island) disaggregated data could be captured in future projects to enable an analysis of broader inclusiveness of vulnerable groups.

Figure 3: Representation of men and women at national and regional SPC GCCA training and consultation events.



Source: Data compiled by SPC and summarised by PREA⁵³.

Country level data documents fairly equal representation of men and women in most countries⁵⁴. Kiribati showed very strong representation (58%) of women which reflects the targeted SODIS community outreach work focused on women. Men were more representative in FSM (72%) due to a strong showing at training activities in Yap State (Colonia), and Tuvalu (58% men) due to men's primary role in the agriculture sector (see Annex 12 for more data and details).

Representation at regional training and consultation events showed a higher proportion of men (60%) which likely reflects the higher proportion of men in roles targeted by these events.

Collecting sex disaggregated data for attendance at events is a positive contribution to monitoring gender representation, however, it falls short of putting in place stronger mechanisms or requirements to ensure women's participation and it does little to ensure women benefit and are not negatively impacted by projects.

SPC's second approach to include gender (specific activities for women) was effective for four of the nine projects (Cook Islands, FSM, Kiribati and Tuvalu) and it did to some extent help ensure women benefited from projects⁵⁵. Table 8 below provides evidence of how gender was actively considered in projects and in cases, where improvements could have been made.

⁵³ Spreadsheet 'GEN 2 Appendix 1 - Gender breakdown (trainings and consultations).xlsx' can be provided by PREA on request. Includes data from national trainings, regional trainings, national consultations, regional consultations and roadshows.

⁵⁴ Cook Islands, Niue, Nauru, Palau and Tonga.

⁵⁵.

Table 8: How gender was considered

Country	Evidence that gender was considered
Cook Islands	<ul style="list-style-type: none"> • Senior citizens targeted through internet training using tablet computers. • 66 women were trained on five outer islands in the Southern Group (outer islands). • Seniors consulted to document environmental changes and climate variability. • Youth were beneficiaries in SCUBA training.
FSM	<ul style="list-style-type: none"> • Remote outer island with scarce water resources and dominated by a subsistence lifestyle which increases vulnerability to climate and non-climate change related shocks. • Women primarily responsible for controlling household water collection and use. • Women and children's workload reduced through less travel distance to obtain water for cleaning. Potable rainwater now captured at the household. • Women and children's involvement in projects and decision making is often limited due to a strong patriarchy. Women and children participation increased through separate activities and consultations for these groups.
Kiribati	<ul style="list-style-type: none"> • Key beneficiaries of SODIS were women (tasked with responsibility for providing potable water) and vulnerable children (< 5 years of age) who often suffer more from climate sensitive diseases (water, food and vector sourced), specifically diarrhoea. • Project targeted mothers, fathers and children. • 60% (21) of participants involved in community needs identification, solution selection (SODIS and tip-taps) and behaviour change communication education and campaign design were women. • Four of the six Water Champions were women. • Elderly women also benefited through less exposure to smoke from fires used to boil water. • Women and children more highly represented than men in both technical and non-technical training events.
RMI	<ul style="list-style-type: none"> • Woja causeway works improved access to school and health services benefiting the entire community, especially school children. • 86% or 25 participants who attend LFA training were youth representatives, many from outer islands. • Specific project activities targeting women and children included coastal planting and school gardens in Woja Island.
Nauru	<ul style="list-style-type: none"> • Original rooftop catchment project sought to prioritise vulnerable households and especially people with disabilities. This project focus area was later revised.
Niue	<ul style="list-style-type: none"> • Equal representation of women and men at LFA training workshops. Many young graduates benefitting.

Country	Evidence that gender was considered
	<ul style="list-style-type: none"> • Potential low-income or vulnerable non-Niuean citizens residing in Niue were excluded as project beneficiaries. Consideration for all low-income and vulnerable citizens should be taken into account in future projects.
Palau	<ul style="list-style-type: none"> • Near equal representation of men and women in project design workshops. • Project loans and incentives program to obtain water tanks excluded poorer vulnerable households that are often in outlying parts of the main island, and that are not connected to the main water system. Alternative options for low-income vulnerable households should be considered in future projects.
Tonga	<ul style="list-style-type: none"> • Children benefit from parks (playgrounds). • Representatives from Women's groups involved in consultations. • Missed opportunities to specifically target gender during the design phase.
Tuvalu	<ul style="list-style-type: none"> • Separate project activities (home gardening activities and competition) designed by National Council of Women's groups specifically for women. • 48 women trained in home gardening to increase supply of fresh vegetables to households.

SPC's Gender Equality Adviser and The Pacific Gender & Climate Change Toolkit helped include gender in project design.

Overall the SPC GCCA project was sensitive to gender issues in both its design and implementation. This was assisted through involvement of SPC's Gender Equality Adviser and use of The Pacific Gender & Climate Change Toolkit. More visible discussion and documentation of how different groups will benefit from the project could be made to help raise the profile of gender considerations in the project. Additionally, Pacific audiences often associate gender as a simple male / female division. A short component on gender awareness training could be included in early pre-design activities to broaden this understanding to include dimensions of differing gender roles and vulnerability. This would bring into focus how the project benefits or does not discriminate against people with a disability, the young, elderly or those in outer islands. The EU's new Gender Action Framework (2016 – 2020) and supporting action plan should be referenced by future projects to identify and report on relevant gender targets.

3.6.2 Environment

The consideration of the environment and environmental impacts is generally a mandatory requirement for all development projects, and is consistent with regional frameworks (e.g. PIFACC). There is often considerable overlap between measures to adapt to climate change and increase resilience to climate change impacts and environmental protection / improvement measures. These linkages are present in country level SPC GCCA projects. Most SPC GCCA projects addressed an environmental issue or resulted in an environmental benefit. Table 9 below outlines some of these benefits and how environmental risk was managed.

Table 9: Environmental considerations and benefits

Country	Environmental considerations and benefits
Cook Islands	<ul style="list-style-type: none"> • Project focused on increasing environmental monitoring and led to improved management practices for the Manihiki Lagoon. • Knowledge about marine resource stocks increased through survey work.
FSM	<ul style="list-style-type: none"> • Hydrological assessments conducted to determine water resources and sustainable extraction rates. • Water conservation education delivered potentially reducing demand on underground water sources. • Checklist for water infrastructure installation on outlying islands prepared which considers environmental management issues.
Kiribati	<ul style="list-style-type: none"> • Focused on improving environmental health surveillance (water, food and vector surveillance). • Revised Public Health Ordinance regulations supported clean-up of rubbish (vector breeding sites) in communities. • Re-use and recycling of PET bottles through SODIS campaign.
RMI	<ul style="list-style-type: none"> • EPA engaged to oversee and assess environmental impacts. Monitoring identified environmental issues which were later corrected by MPW. • Proper permits obtained and Environmental Management Plan developed. • Feasibility and design assessments provide a thorough understanding of environmental changes. • Community training in coastal planting delivered and coastal planting undertaken (soft coastal protection measure to complement hard measures). • Marshallese glossary explaining climate change terms developed to increase awareness about climate change and related environmental issues.
Nauru	<ul style="list-style-type: none"> • Options developed to safely dispose of hazardous waste (asbestos). No solution implemented as project changed focus area.
Niue	<ul style="list-style-type: none"> • Potential for reduced demand upon groundwater resources. • Assistance provided to restructure Climate Change Unit and Environmental Division and Meteorological Division under the Ministry of Natural Resources to improve national environmental management
Palau	<ul style="list-style-type: none"> • PPUC staff trained in Standard Operating Procedures (SOP) designed to minimise impact on water resources. • Project worked closely with Environmental Quality Protection Board to ensure correct environmental permits and processes followed. • Water conservation education and leak detection and repair work reduce extraction from underground water resources. • Palau Climate Change Policy developed that includes environment issues.
Tonga	<ul style="list-style-type: none"> • National environmental regulation processes followed resulting in an EIA being conducted which informed a monitoring plan. • Rubbish bins and signage at new parks promote environmental messages.

Country	Environmental considerations and benefits
	<ul style="list-style-type: none"> • Tonga Climate Change Policy 2006 was revised. It considers both climate change and environmental issues. • Feasibility and design assessments provided a thorough understanding of environmental changes. • Diagnostic study to inform integrated coastal management plan provides a thorough assessment of environmental changes.
Tuvalu	<ul style="list-style-type: none"> • Training in environmentally-friendly farming methods (agroforestry, intercropping) delivered. • Three agroforestry demonstration sites created. • New varieties of crops trialled for climate resilience. • Project supported national training in EIA. No EIA required for this project.

No projects documented any specific environmental risks or possible negative impacts in their PDD (Risk Management' section). Seven of the nine projects posed no significant environmental risks worth noting as their activities replicated common low impact / low risk activities based on experience from past projects. The two projects (Tonga and RMI) that did pose potential environmental risks engaged their respective national environmental regulation organisation and followed correct processes. The evaluation notes that neither PDD included possible environmental risks in the risk management plan. Tonga had already undertaken its EIA prior to the GCCA project. Risks and responses measures identified from that assessment could have been included in the PDD risk management matrix. Additionally, RMI could have noted environmental risks relating to damage to reef flats during the moving of armouring rock.

The perception of environmental risks also needs to be considered by projects. Contractors mining sand in Tonga to recharge the target coastal protection sites were stopped by police on two occasions at different sites due to concerns raised by the local community about the aesthetic and environmental impacts of mining large volumes of sand from the designated sites. Sand mining sites had been identified, research and cleared by the EIA, however, the community may not have been aware of these facts.

Future projects can also learn what risks may eventuate by considering risk incidents from past projects. For example in Palau, a barge got stuck on a reef at low tide whilst transporting rainwater tanks and heavy machinery to Tobi. Whilst no damage to the reef was reported, these incidents prompt the inclusion of boats and barges getting stuck on reefs at low tide as risks to consider in future projects.

3.7 VISIBILITY: To what extent have project activities and results been made visible in both the beneficiary countries and the European Union countries?

The GCCA: PSIS project activities, partner involvement and results have been made visible to both beneficiary countries and to a lesser extent, to EU countries. A communications strategy reflected in communications plans was used to guide project communications activities.

The SPC GCCA project budgeted included €80,638 (< 1% of overall SPC GCCA budget) for visibility. This funding allocation appears low, but was sufficient to implement the central communications plan. This investment is complemented by smaller allocations from other GCCA project budget line items and some country projects also invested in their own funds in visibility products and activities.

3.7.1 Organisation and regional level communications plans

The GCCA project funded an SPC-wide Climate Change Communications Plan (October 2012) that supports SPC's internal Climate Change Engagement Strategy goal. The plans present an opportunity for SPC to take a coordinated approach to climate change communications across its many divisions which fits its 'whole of organisation' approach to climate change. Evidence provided indicates that the plan is being used to inform decision making and processes within SPC⁵⁶. A recommendation from the plan saw the employment of an SPC Climate Change Communications Officer funded by SPC and GIZ between March 2013 and January 2015. This officer provided assistance to the GCCA project. As the project progressed, the need for a dedicated SPC GCCA Communications Officer became apparent to capitalise on the communications opportunities available in the SPC GCCA project. A Communications Assistant was hired between November 2014 and March 2016 and this greatly increased project visibility and media monitoring.

A dedicated communications officer should be hired by the regional PMU to ensure the communications component is sufficiently resourced to action the communications plan. Communications skills are often lacking at the national level and a regional communications officer can help fill this gap.

A SPC GCCA project-wide communications plan was created in 2013 and later revised in October 2014. The plan contained key components including a communications matrix that detailed target audiences, key messages, communications channels, tools, activities and activity dates. Key messages at the regional level highlight the EU's financial contribution and SPC's role as implementation entity. The plan also included a component on media monitoring and evaluation. A review of the plan indicates that all planned communications tools were developed and distributed via the nominated communications channels. Judging by the high level of visibility obtained by the project, the evaluation finds that the communications plan and overarching strategy was effective⁵⁷.

Visibility was also enhanced through knowledge management products and processes. Knowledge management through the GCCA: PSIS project has been commendable, with stakeholders interviewed providing positive feedback on both the national and regional lessons learnt workshops. Some stakeholders noted that it would have been beneficial to have more regular lessons learnt processes at the regional level (e.g. during steering committee meetings).

There have been approximately 200 SPC GCCA project documents uploaded to the PCCP attracting 37,900 views. This indicates that the knowledge sharing processes have had a positive impact in disseminating project information.

3.7.2 National level communications plans

Communication plans were developed and implemented by five country projects which achieves the target set out in Activity 1.4 of the regional logframe. Two plans (Tonga and FSM) focused mainly on community engagement activities as opposed to outward communication to media channels. At one page long, Tonga's plan was considered very basic and lacking detail, however, many other communications activities not in the plan were implemented. Specialist communications expertise is

⁵⁶ Director Communications SPC in 2015 employed as a result of plan. Communications now more centralised within Communications team.

⁵⁷ See Annex 13 Communication Tools for a summary of communication tools developed.

often lacking in countries which makes finding and hiring staff with the required communications skills difficult. This capacity weakness can be backstopped to some extent by a regional communications officer. Table 10 presents a summary of findings relating to national communications and visibility.

Table 10: National communications and visibility

Country	Communications Plan			Awareness and visibility effectiveness
	Planned	Developed	Implemented	
Cook Islands	✓	✓	✓	 ⁵⁸
FSM	✓	✓ ⁵⁹	✓	
Kiribati	✓	✓	✓	 ⁶⁰
RMI	✗	✗	✗	 ⁶¹
Nauru	✗	✗	✗	 ⁶²
Niue	✗	✗	✗	 ⁶³
Palau	✓	✓	✓	 ⁶⁴
Tonga	✓	✓ (very basic plan)	✓	
Tuvalu	✗	✗	✗	

Legend

Achieved	✓
Not achieved	✗
Highly effective	
Effective	
Low effectiveness	

Whilst all national projects produced sufficient awareness and visibility, there were some instances where the EU and SPC were not appropriately acknowledged for their involvement and contributions

⁵⁸ Specifically through both national newspapers and international coverage of Silver Surfers initiative.

⁵⁹ Education and awareness campaign with communications elements.

⁶⁰ Specifically at the national level through SODIS communications campaign.

⁶¹ Specifically the climate change dialogue (and coverage) and Woja Causeway official opening coverage.

⁶² Opportunities limited by very few national media outlets (radio) and limited number of achievements to promote.

⁶³ Specifically from multiple donor collaboration and innovate demonstration project.

⁶⁴ Specifically from both events and media coverage of Palau Wonder of Water campaign, World Water Day and Climate Change and Disaster Resilient Development Summit.

to the project. Countries were encouraged to use the approved 'regional messaging text' in the SPC GCCA communications plan; however, this was not always followed⁶⁵. Cross-promotion of SPC GCCA projects and achievements could be enhanced in future projects if a review and approval process for country media releases was set up and enforced at the start of the project. SPC's involvement in the design, funding, printing or distribution of national communications products helped to ensure that proper processes and acknowledgements were included in the majority of products and tools created.

To increase visibility of the EU, a recommendation from the mid-term evaluation to include the text 'European Union' in addition to the logo was adopted and reflected in all recent communications tools viewed. It is not possible to determine if this minor change has increased recall and recognition of the EU being a key partner in the project. Many (but not all) high level stakeholders interviewed during the evaluation acknowledged and thanked both SPC and the EU in unprompted closing remarks which demonstrates a degree of recognition and appreciation at the national level.

All country level projects should develop communications plans.

A communication plan should be a mandatory output for all national level projects. These plans could have easily leveraged off the regional SPC GCCA communication plan and lifted content (key messages and communications channels) from the regional (country specific) communications matrix. Having to produce a national level communications plan would have increased national ownership of this activity and potentially reinforced requirement to include the approved text to acknowledge partner contributions. Plans also help ensure that sufficient staff and budget is set aside for communications. Where there is no available local communications capacity to develop communications plans, SCP's communications team could be engaged to collaboratively develop these plans through a round of in-country visits. These visits may also present an opportunity to run an 'Introduction to Communications' workshop for government staff.

3.7.3 Customisation of communications tools

The evaluation found evidence that communications tools had been customised for specific target audiences. Specific examples of customisation include:

- Kiribati SODIS campaign – Posters and FAQ translated into i-Kiribati language. Locally produced video in i-Kiribati.
- FSM project – Tank sticker, bumper sticker and poster in Yapese language.
- RMI project – Development of Climate Change Glossary in English and Marshallese.
- Tuvalu Informational pamphlet – English and Tuvaluan versions of pamphlet, and agroforestry documentary in Tuvaluan distributed.

Translating materials into appropriate local languages increases their effectiveness, however, the degree and number of communications materials that can be customised is constrained by the additional time and cost associated with translating materials into different languages combined with the additional complexity of different print runs (and costs) and different physical or online distribution channels.

Videos were effective in providing visibility and communicating lessons.

⁶⁵ Referred to in the SPC GCCA mid-term evaluation and also noted in one cited Climate Change Matters article.

Customisation went beyond language translation and included consideration of the target audience's ability to comprehend climate change or sector specific technical content. Examples of this customisation include:

- Training in the outer islands of Cook Islands when conducted in Cook Islands Maori was especially effective.
- Consultations in Palau – Consultation to obtain and share information were tailored for chiefs and traditional elders (formal arrangements, following protocol), Government stakeholders (slide presentations) and community members (workshops with activities).
- Kiribati water cards – Picture cards graphically illustrate water safety and sanitation concepts for people with low literacy levels and can engage children.
- Speech, poster and logo competitions – Several projects (e.g. Palau, Tonga) used these tools to engage with and communicate to school children and youth.
- Project fact sheets – Short 2-page documents written in accessible language for the general public.
- Climate Change Matters articles – Written for an audience with existing climate change knowledge, but not specifically sector level expertise. Teaser summaries linking to additional content cater for a time poor audience.
- Technical project reports – Lengthy detailed reports developed for sector specific technical experts.
- Project videos – Targeting development partners and general public using accessible language and engaging visual media which is specifically relevant for the Pacific region with its historical focus on oral and story based communication.

A summary of SPC led communications tools and channels used is provided in Annex 13. Specific examples of national level communications tools can be found in the country evaluation reports.

Direct dialogue and active engagement achieved through the lessons learnt roadshows were an innovative, effective and well received method for both sharing project outcomes, lessons and raising visibility.

Some highlights from these summaries include:

- Well over 200 published articles in the media (including EU media).
- 3,800 visitors to the official SPC GCCA website in 2012, including visitors from EU member countries.
- Seventeen blog posts on Cap4dev.
- Approximately 200 SPC GCCA project documents uploaded to the PCCP attracting 37,900 views. This findings indicates the PCCP is a useful repository for future climate change projects.
- Over 20 articles published in Climate Change matters reaching 1700 subscribers with approximately 150 views per issue.
- 15 official videos produced distributed via DVD, USB, online, screened on TV ('Pacific Way') in all participating countries and screened at national and regional events. Collectively, videos received over 39,000 views on YouTube.
- 11 'roadshow events' led by SPC with internal and regional partners to share outcomes and lessons from the project reaching over 200 people. The use of roadshows reflects SPC's finding that awareness and visibility is most effective through direct dialogue and active

engagement. The roadshows stand out as a particularly innovative method of communicating.

Whilst there is evidence of SPC GCCA visibility on EU websites and through some direct representations at meetings held in EU countries, the evaluation finds that overall visibility in EU member states is likely to be low due to the challenges of media channels already oversaturated with news and the limited interest of EU audiences to news from the Pacific region.

4. OVERALL ASSESSMENT AND CONCLUSIONS

The overall assessment of the GCCA: PSIS project is that it has been a valuable investment of EU-funding to support Pacific countries to adapt to climate change. The positive results obtained for most country projects are the result of the commitment demonstrated by the SPC GCCA project team, country teams, and delivery partners. This includes the completion of on-ground projects, and the mainstreaming of climate change into national policies and sector plans. Despite the sometimes late implementation, projects have for the most part been delivered within the much needed project extension timeframe. Importantly, the project has built the capacity of country staff directly funded by the project, as well as other people through training activities and attachments. The strong focus on capturing and sharing lessons learnt is a testament to the importance placed on knowledge management, and the influence the GCCA: PSIS can have (and already has had) on future donor-funded interventions.

An assessment against the DAC and EU evaluation criteria is presented below. The rating ranges from Very Weak, Weak, Good, Very Good.

4.1 Relevance / Coherence / EC-value added

The EU and SPC decision to fund country-led projects meant that that the GCCA: PSIS project was not a 'one-size fits all' initiative, and allowed countries to identify priority needs relevant to their national context.

The GCCA: PSIS project was highly relevant to the priorities of donors, regional organisations, and national countries. The GCCA: PSIS project is consistent with EU and regional declarations and it supported nationally-led projects. As such, all projects were aligned to national priorities. The implementation model that allowed countries to choose their priority sector and project focus areas based on their needs resulted in a high level of national ownership.

The evaluation has demonstrated that the project was consistent with SPC's Climate Change Engagement Strategy and aligned with SPC's Strategic Plan 2013 – 2015 (strategic objective multi-sector work regarding 'Capacity to respond to climate change, disasters and emergencies strengthened'). The SPC project team coordinated and collaborated with regional development partners to minimise duplication and maximise coherence with existing and future projects. Expertise from within SPC's other divisions was also drawn upon to assist projects, however, longer lead-times in requests for services would have assisted in some instances. There was evidence that some project activities supported the implementation of other regional partner's projects and plans.

Whilst closer links could have been formed with the USP EU-GCCA projects, this did not negatively impact the project's relevance, coherence, or value-adding. One improvement to assist in further articulating the project's relevance would be that future project design undertake a problem analysis in a participatory manner in order to be clear about the core problem (and purpose) of country projects, and the causes to the problem.

Overall assessment- Relevance / Coherence / EC-value added Very good

4.2 Effectiveness

The GCCA: PSIS project was successful in achieving twelve of its thirteen targets in the revised regional logframe. The KRA₄ logframe indicator relating to national representatives contributing to the Pacific Climate Change Portal was only partially achieved. This indicator is not of great importance in relation to the project achieving its purpose. Project objectives (purpose) were achieved at both the regional and country level for all projects.

The project was effective in supporting three countries develop or update national climate change and disaster risk policies and frameworks. The project supported the development of sectoral plans and regulations that mainstream climate change adaptation, and it built national capacity in climate change adaptation through regional and national training activities, attachments, and informal on the job training and mentoring.

The on-ground projects were mostly effective in building resilience to climate change across the different sectors. The water sector projects in the outlying islands of Palau (Tobi and Sonsorol) and FSM (Fais) were very effective and met an immediate need for safe water supply (in Tobi and Sonsorol, existing rainwater tanks were deemed to be unsafe to drink from). Water, food and vector disease surveillance capacity has been built in Kiribati and the short-term impacts (reduced diarrhoea illness) from the introduction of SODIS are positive. The coastal protection works in Tonga and RMI have led to immediate benefits. The agricultural sector project in Tuvalu has been effective in demonstrating agroforestry practices to local farmers. The effectiveness of the Niue (water sector) and Cook Islands (marine sector) will be determined over time, and rely on the beneficiaries demonstrating a strong level of ownership of the projects. The Nauru project did not lead to an increase in water security but has assisted the government of Nauru in clearing a site for a potential future donor-funded national water storage intervention.

The extensive and wide-ranging training components funded by the GCCA: PSIS project have contributed to building capacity in the nine countries to achieve their on-going development goals. The timing of capacity building, specifically LFA training, should be moved forward to before the country project design phase to increase the usefulness and application of these skills. LFA training should be repeated in the nine participating counties and potentially replicated in other larger PICs. The training format should reflect the format that offers mentoring in the second week. The use of a Training of Trainers (ToT) workshop to build national LFA training capacity should be considered. An accredited LFA/project design course would also help make these skills accessible across the region. The course could be customised to support the different design tools used by different donors. For example, the use of the logframe matrix for the EU and outcome hierarchy for Australian Aid. PC's overall approach to use and support national procurement guidelines and national processes also assisted to build capacity within national governments.

There are a number of factors that supported and hindered the project's effectiveness. Supporting factors include the SPC project team's flexible and solution-focused approach and the frequent country visits by SPC technical advisers. Technical assistance by external contractors assisted in overcoming country-level capacity and capability constraints in areas such as water and coastal engineering, and policy development. The project extension granted by the EU allowed projects to have sufficient time to complete on-ground works. It was noted that three years was insufficient to implement a regional project. Revisions to the regional and country logframes provided greater clarity to relevant stakeholders. The use of cascading logframes could provide additional structure and better show links between the country and regional logframes.

Factors that hindered the effectiveness of the project include the capability and capability limitations in smaller countries, especially the private sector's ability to undertake large infrastructure projects. Whilst the GCCA: PSIS project should be commended for supporting activities on outer islands, the delivery of the activities can be reduced due to the high cost of transport, and time delays related to shipping. Projects on outer islands need to be carefully planned to ensure that they are feasible bearing in mind the constraints.

Improvements suggested to maximise the effectiveness is to have clear logframes from the project's outset, which can be facilitated by delivering training in the LFA prior to countries developing their PDDs. This would assist in having a realistic scope for the project, considering the constraints of location, and available budget and time.

Overall assessment- Effectiveness

Very good

4.3 Impact

PSIS face many negative impacts from climate change. The GCCA: PSIS project has greatly supported the nine participating countries to tackle one or more of the adverse effects of climate change identified by their project.

Considering the limited time since the completion of country projects, the GCCA: PSIS project has shown a good degree of positive impact to date. The development of the national and sectoral policies mainstreaming climate change has helped countries identify priority projects for funding. The mainstreaming process has also led to some countries restructuring their institutional arrangements to facilitate climate change mainstreaming into the future (e.g. development of a Climate Change Office in Palau).

Whilst no countries to date have been successful in accessing new climate change finance modalities to implement adaptation projects, support provided to the Cook Islands to become an NIE under the Adaptation Fund has led to increased governance and financial accountability and provided important lessons to other countries. Additionally, both Cook Islands and FSM have obtained GCF Readiness Programme funding to support their future engagement with the GCF. Whilst this outcome can not be attributed to the GCCA projects, it does validate the project's focus on climate change funding.

Stakeholders have noted that SPC has been proactive in collaborating with other CROP agencies and development partners through both formal and informal means. The GCCA project has collaborated with SPREP extensively in delivering regional training, and through the PCCP.

The GCCA: PSIS project has been proactive in capturing and sharing lessons learnt at the national and regional level. This has influenced the design and implementation arrangements of other projects (e.g. EU GIZ-ACSE programme). Overall, the project had a good level of impact, considering the short period of time post-implementation for these impacts to emerge and be observed. Impact evaluations two to three years after project completion would be useful in identifying longer term impacts and to better clarify the effectiveness of climate change adaptation projects.

Overall assessment- Impact

Very good

4.4 Sustainability

The evaluation finds that most of the benefits from the SPC GCCA project are highly likely to be sustained over the next 5 years.

The SPC project team has exhibited a strong focus on the sustainability of the project's outcomes and lessons. Exit strategies developed during the design phase combined with a high degree of national ownership of projects are two factors that support sustainability. Also, some aspects of the adaptation projects have been agreed to be maintained or duplicated by other projects or partners, such as SODIS in Kiribati.

The regional and national training has increased the capacity and capability of government staff in climate change adaptation across different fields (e.g. climate change financing, proposal preparation). Most of the project-funded national staff have been absorbed into government departments, or into other donor-funded projects.

Whilst more could be done by national governments to support sustainability, it needs to be recognised that many Pacific countries have limited spare capacity in national budgets. This underscores the importance of careful project design, to ensure that maintenance requirements are minimal, or to ensure that cost-recovery is built in where beneficiaries have the capacity to pay.

Overall assessment- Sustainability

Good

4.5 Efficiency

The evaluation finds that the GCCA: PSIS project demonstrate efficiency through reasonably timely implementation of activities, sound financial management and value for money in terms of the procurement and production of quality assets and outputs.

The project was delivered in a reasonably timely manner. Several adaptation projects missed due dates for deliverables, however, the evaluation still finds that overall there was an efficient use of time. Eight of nine projects completed key adaptation activities by the implementation end-date and the remaining two projects (Palau, Nauru) are scheduled to finish prior to May 2016. Shortfalls in timely delivery were largely attributed to overly ambitious work schedules and unrealistic timelines that failed to factor in sufficient contingency and acknowledge capacity constraints. The scope of future projects needs to be carefully analysed to make sure it is achievable.

The evaluation also finds that financial management practices, tools and templates supported the efficient delivery of funds and responsible expenditure of funds on legitimate goods and services. Funds distribution through national ministries of finance was noted as best practice, however, this did reduce efficiency from a time perspective due to delays by some country's finance ministry in releasing funds to the implementing line ministry. Funding shortfalls for some projects highlighted the need to build sufficient contingencies into project budget estimates, especially for capital works and outer island projects. The decision to reallocate a portion of Nauru's funding allocation was prudent and allowed efficient use of the funds in other projects. Funding allocation terms, conditions and processes could be made clearer in future funding agreements with countries.

The positive, flexible and solutions focused approach of the adequately resourced SPC PMU combined with frequent field trips assisted national projects to overcome challenges and progress implementation. The adequate resourcing of the SPC PMU, specifically the four climate change advisers was critical in providing the support required to countries. Ideally, processes to hire PMU

staff should be ready to be executed as soon as the funding agreement with the donor has been signed.

Adaptive dynamic risk management measures were implemented at the regional level which enabled the PMU to quickly respond to present and potential risk events. Field trips debriefing sessions and quarterly narrative reporting helped feed into the risk management process. There was less visibility of risk management at the country project level outside of the consideration of risks in the PDD.

The overall reporting arrangements were sufficient to keep the PMU and other key stakeholders (EU) informed. However, improvements could be made to inform the reporting of aggregated results over the life of the project. A healthy SPC – EU relationship built trust through frequent and honest communication. This assisted in the timely resolution of high level decisions to address project risks.

Procurement policy guidelines ensured transparency of purchasing decisions and helped ensure that purchases of goods and services considered cost as one criteria in the decision making process. There is a need to ensure that SPC has sufficient capacity to undertake procurement or procurement support for countries. Nearly all outputs delivered by the project were rated as being of a high quality and provided value for money.

Overall assessment- Efficiency

Very Good

4.6 Gender and environment

The GCCA: PSIS project was sensitive to gender issues in both its design and implementation. This was assisted through involvement of SPC's Gender Equality Adviser and use of The Pacific Gender & Climate Change Toolkit. Future projects should consider replicating these practices in order to mainstream gender into project designs and delivery. More visible discussion and documentation of how different groups will benefit from the project could be made during the project design meetings and included in documentation. The EU's new Gender Action Framework (2016 – 2020) and supporting action plan should be referenced by future projects to identify and report on relevant gender targets.

Overall assessment- Gender

Good

The SPC GCCA project demonstrated a high degree of sensitivity of environmental issues and concerns. Close linkages between any climate change adaptation and positive environmental outcomes meant that most adaptation projects resulted in positive environmental outcomes being achieved. Two projects posed environmental risks. These risks were identified and satisfactorily managed through following national environmental regulations and processes. No negative environmental impacts were caused by projects.

Overall assessment- Environment

Very good

4.7 Visibility

Overall the GCCA: PSIS project has created a medium to high degree of awareness for project activities and achievements. Visibility to SPC and the EU for their roles in the project was sufficient and increased in the final year of implementation as more projects came to completion and a dedicated communications adviser was appointed. The PCCP was a useful repository that provided others access to the project documents and knowledge management products. Videos and lessons learnt roadshows were highly effective in creating visibility and sharing lessons. Visibility could be enhanced in future projects by mandating that all country projects need to create a communications plan.

Overall assessment- Visibility

Very Good

5. BEST PRACTICES

The evaluation has identified a number of best practices demonstrated in the project that should be highlighted and recommended for replication in the design and implementation of future projects.

Holistic
approach
to project
design

Project incorporated on-ground adaptation projects complemented by climate change mainstreaming and capacity building. The three-pronged approach supported countries to overcome on-ground, policy and capacity deficits.

Nationally
led
projects

Project design process allowed countries to select the sector and priority focus area for the adaptation project. This fosters national ownership of projects. Country teams managed the project implementation, which builds national capacity and capability.

National
processes
supported

Allocation of funds to **national finance ministries** increases national accountability and transparency and reduces financial risks for donors. It also helps build the national capacity within the finance ministry and their capacity to access new forms of climate finance.

Project supported the use of **national policies** (procurement, national pay scales) and processes (environmental regulations) which builds national capacity in their application and avoids undermining of the national policies and processes.



Skilled and
resourced
PMU

Regional PMU (SPC) was sufficiently staffed with capable individuals to provide a high level of support to national projects. Specifically:

- High ratio of climate change advisers to countries, including a North Pacific based adviser.
- SPC's flexibility, responsiveness and solutions focused approach to managing challenges and risk was essential to nearly all projects in achieving their purpose.
- Frequent field trips to countries by SPC's climate change and sector-specific advisers were essential to keeping national adaptation projects moving forward.
- SPC leveraged expertise (including M&E support) across their different divisions to support country projects.



EU – SPC
collaborative
approach

Regular formal and informal communications between the PMU and EU delegation allowed issues to be discussed as they arose, and solutions identified.



Embedded
staff

Embedding senior staff in other regional organisations (e.g. SPREP) fosters regional collaboration in the delivery of activities (e.g. training and PCCP) and enhances efficiency in delivery of services to countries.



Donor
collaboration

Regular formal and informal communications between donors and development partners reduced duplication and helped identify opportunities for SPC to complement existing work being undertaken, or to work together on new joint initiatives, ensuring efficient delivery of regional support to countries and in some cases contributing to sustainability of projects.



Technical
assistance on
request

Project provided technical assistance on request to address in-country capacity or capability shortfalls identified at the national level. The delivery of regional and national level training helped build country capacity across common and country-specific needs to support both project delivery and ongoing climate change adaptation.



South-South
exchanges

Funding of 'South-South' exchange initiatives, for example through attachments within other country departments (e.g. Nauru officer in Kiribati Environmental Health Unit), and delegations to other regional countries (e.g. Palau to Tonga), fosters a regionally-led approach to knowledge sharing.



Knowledge
sharing
through
videos

Project's use of videos to capture project successes and lessons is an example of an appropriate and effective means to capture and share knowledge. The screening of videos on regional television (e.g. Pacific Way) and during national and regional meetings was a highly useful knowledge sharing process and increased project and partner visibility



Lessons
learnt
workshops

Lessons learnt workshops at the national and regional level provided a valuable process for reflection and disseminating lessons to stakeholders. The lessons learnt roadshow provided an opportunity to share lessons with regional development partners and to discuss future steps.



ROM
supports
adaptive
management

Conducting external Results Oriented Monitoring (ROM) annually, and in particular in the first 12 months of implementation, facilitates the identification and addressing of issues early in the project.



Thorough
coastal
infrastructure
projects

Research and rigorous process informed coastal infrastructure project design and implementation, with a number of best practices:

- Site selection and design informed by coastal engineering studies (including historical analysis), feasibility studies, and detailed design and costing reports.
- Appropriate hybrid (hard & soft) coastal protection measures.
- Coastal design engineer involved in project oversight role through several site visits.
- Environmental risks assessed and addressed through EIA or EMP.
- Monitoring plans developed during project design phase and are being implemented.
- Estimated maintenance works and budgets developed during project design phase.
- Use of locally available materials and labour to undertake works to reduce costs and provide examples for local cost-effective replication.

6. RECOMMENDATIONS

Reflecting on the overall assessment and conclusion, the evaluation makes a number of recommendations to inform post-project follow-up and the future delivery of regional climate change adaptation projects. Selected recommendations from the independent evaluation of the 'training in proposal preparation using the logical framework approach' are also included. The recommendations documented here do not seek to duplicate all the recommendations made in the MTR and ROM reports. Recommendations are followed by their rating and target:

-  Blue circle for priority (High, Medium, Low)
-  Orange circle for ease of implementation (High, Medium, Low)
-  Recommendations for the EU (or donors)
-  Recommendations for SPC (or regional implementing partners)

6.1.1 POST-PROJECT

1. Document and share 'adaptive and flexible' approach to project management

M

M



- Develop a video-based knowledge management product (e.g. interview, Q&A) on the 'flexible' approach to project support and implementation to inform future regional projects.

2. Continue using the PCCP

H

H



- Continue use of PCCP as a repository for project documents and knowledge management products. Work with SPREP and other CROPs to publicise the PCCP as a key regional resource.

3. Conduct impact evaluations (3 years post)

M

L



- Impact evaluations should be undertaken for a sample of key projects (3 years post) to assess the longer-term effectiveness and impact of key outputs (e.g. coastal or water infrastructure, new agricultural methods and crops, and policies).
- Additional donor funding is needed to support the impact evaluation for this project. In future, PMU should include as part of its project management costs an allocation for impact evaluation.

6.1.2 MOVING FORWARD

4. Longer implementation period

H

H



- A 5-year implementation period is required for large regional projects to allow sufficient time to ramp up and close down, and leave sufficient time for on-ground implementation (allow up to 12 months for procurement, and 18+ months for implementation).
- Recognising the EU's new D+3 rule, countries need to ensure that all procurement is contracted by the end of the third year of implementation.

5. Make clear funding reallocation rules

H

H



- Letters of Agreement (LoA) with countries need to contain and make clear funding reallocation clauses that can be actioned (at the discretion of the project manager) if implementation timeframes and other specified requirements are not met.
- SPC to develop clear plan as to how to respond to funding reallocation situation.

6. Recruit PMU staff early

M

M



- SPC to begin recruitment process (e.g developing position descriptions) for PMU staff as soon as EU has finalised project funding allocation.

7. Identify relevant gender targets

H

H



- Relevant gender targets from the EU Gender Action Plan to be incorporated into projects.



8. Develop cascading logframes

M

H



- Cascading logframes support clarity in linkage between regional logframe and country-level logframes, and they facilitate monitoring and reporting from country-level up to the regional level.

9. Countries to demonstrate post-project financial commitment

H

H



- Countries should demonstrate, through the Concept Note and in particular the Letter of Agreement, a commitment to national budget allocation to sustain project outputs and benefits post-implementation.

10. Ensure capital works projects are realistic considering time and budget

H

H



- Ensure the scope of capital work projects is realistic in relation to the available timeframe (e.g. D+3) and budget, noting this project's lessons learnt from delivering projects on outer islands (logistical, capacity and capability constraints and costs for outer island projects).
- Consider applying a contingency of up to 20% to the project budget for capital works projects on outer islands when accurate costs/quotes contributed to developing the project budget.
- Apply SPC's "rule of thumb" lesson learnt and double initial timeline and budget estimates where accurate costs are not available in determining the project budget.
- Large infrastructure projects in PSIS require either recent feasibility and design studies that are accurately costed or the ability to refer to recent similar projects in the region to obtain reliable costing and time estimates.

11. Mobilise SPC divisions early in the project

M

H



- Ensure sector experts from SPC's divisions are mobilised early and available to review PDDs for their feasibility and risks.
- SPC division input (e.g. GSD, CePaCT) into project implementation needs to be programmed at least 12 months in advance to ensure SPC divisions have sufficient capacity to assist projects.

12. Increase SPC's procurement capacity

H

M



- Capacity (staffing levels) within SPC's procurement team should be increased to better service country level requests for SPC to undertake procurement on their behalf. Donor funds across multiple projects could be pooled to fund the initiative.

13. Actively assist countries with known implementation constraints

M

H



- Provide active oversight for projects in countries that have historically experienced difficulties in successful project implementation. This can be through additional capacity building of local project staff (formal or informal training, including mentoring) as well as more frequent missions and involvement of SPC or external sector-specific technical assistance.

14. Report accumulated results and achievements

H

H



- Mid-year and annual reports should include an accumulated list of results and achievements to provide a complete picture of what the project had achieved across the entire project duration.

15. Conduct LFA/project design training early

M

M



- Provide training in the project design at the outset of a **all** new projects to support the development of robust logic model.
- EU funded projects should lead with training in using the LFA. Training can be customised for the approaches preferred by other donors.

16. Repeat and replicate LFA training

M

M



- LFA workshops should be repeated throughout the Pacific on a regular basis, not just focussing on the nine PSIS, but also on other larger countries.
- The format for further LFA training should be a four-day workshop in the first week, complemented by two days mentoring in the second week.

17. Develop an accredited course in project design and evaluation

M

L



- Engage with other regional partners and projects (e.g. ACSE TVET) to develop an accredited short course on project design and evaluation at national and regional institutions.

18. Develop national capacity to deliver LFA/project design training

M

L



- Develop a cadre of skilled facilitators through a customised Training of Trainer (ToT) initiatives leveraging off the LFA training. Complementary to this, an online version of the Project Proposal/LFA program should be considered.

19. Develop and share a best practice PDD

M

L



- An example 'best practice' PDD should be developed and shared through the PCCP. The PDD could contain examples of content complemented by comments as to what to include to ensure it is flexible to different scenarios.

7. ANNEX

7.1 Annex 1. Terms of Reference

Terms of Reference

Consultancy for final evaluation of the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) Project

RFP 15/112

Consultancy title: Final evaluation of the Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) Project

1. Background to the specific work covered under this consultancy

The European Union (EU) established the Global Climate Change Alliance (GCCA) in 2007 to strengthen dialogue, exchange of experiences and cooperation on climate change with developing countries most vulnerable to climate change, in particular the Least Developed Countries and the Small Island Developing States. GCCA is the main implementing channel for the EU fast start commitments related to climate change adaptation. The project budget is €11.4 million. The implementation period for the GCCA: PSIS project is from 19 July 2011, to 19 November 2016.

The overall objective of the SPC GCCA: PSIS is to support the governments of nine smaller Pacific Island states, namely Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change. The purpose of the project is to promote long-term strategies and approaches to adaptation planning and pave the way for more effective and coordinated aid delivery to address climate change at the national and regional level.

The GCCA: PSIS project is implemented by SPC as part of its ‘whole of organization approach’ and is one of the activities contributing to the SPC Climate Change Engagement Strategy.

The **overall objective** of the project is to support the Governments of nine small islands states of the Pacific, namely: Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change.

The **purpose** of the project is to promote long term strategies and approaches to adaptation planning and to pave the way for more effective and coordinated aid delivery on climate change at the national and regional level.

The **four key result areas** (KRA) are:

1. Climate change mainstreamed into national and/or sector response strategies.
2. Well-articulated sectoral adaptation strategies that address budget support criteria number 1 in place.
3. National climate change adaptation projects implemented
4. Streamlined technical assistance that supports national adaptation responses delivered by regional organizations in a collaborative manner.

An external Results Oriented Monitoring assessment of the project was conducted in 2012, 2013 and 2015. A mid-term evaluation was conducted in the last quarter of 2013.

2. Scope of services

The purpose of this consultancy is to recruit a skilled evaluation consultancy team to perform a final evaluation of the GCCA: PSIS project from commencement of activities in July 2011 to completion of activities in December 2015, recognizing that final narrative and financial reporting will be completed by June 2016. This will provide the decision-makers from the European Union, SPC, partner countries and regional organisations with an overall independent assessment about the performance and impact of the project, clarify key lessons and practical recommendations for follow-up actions. The results of this evaluation will inform future project design.

Specifically the consultancy will address the following key assessment questions:

1. Assess the degree to which project activities have achieved the defined objective, purpose and expected results using the intervention logic (log frame) endorsed at the Second Regional Steering Committee Meeting, 3-5 December 2012, and accepted by the EU Delegation (12.02.14), noting that indicators have been updated to reflect the situation as of 31.12.14.
2. Review the issues and challenges faced, lessons learnt and successes achieved which could strengthen institutional capacity and future planning within the partner countries and SPC, and in particular address:
 - Human resources in partner countries
 - Management of the project by SPC
 - Project financial management
 - National ownership of project activities
 - Role of partnerships in planning and delivery of project activities
 - SPC's approach to climate change as an integrated, cross-cutting issue
3. Review and assess the relevance of the original project design and climate change adaptation project design documents in light of achievements or failures to achieve the expected objective and SPC's commitment to results-based programming. (This question will only require updating since considerable attention was given to this in the mid-term evaluation).
4. Assess the issue of sustainability and specifically:
 - The extent to which the on-the-ground climate change adaptation activities have strengthened specific sectors - freshwater, agriculture, health, coastal protection and marine resources – and the way they address climate change and variability
 - How the technical assistance has helped with the mainstreaming of climate change into policies, plans, budgets and procedures at the sector level
 - The extent to which the project has contributed to the mainstreaming of climate change into national policies, plans, budgets and procedures
 - Whether the project has strengthened countries' capacity to access climate change funds
 - Knowledge management using tools such as the Pacific Climate Change Policy
5. Assess the project's sensitivity to environmental and gender issues:
 - How has gender been addressed in the project activities
 - Whether the needs of special groups, including youth, elders, and geographical groups such as persons living in outer islands, have been addressed.

The criteria for the evaluation are:

- **Relevance** (problems and needs): The extent to which the objectives of the project are consistent with beneficiaries' requirements, country needs, global priorities and partners/EU's policies, and SPC's Climate Change Engagement Strategy

- **Effectiveness** (achievement of purpose): The effectiveness criterion, concerns how far the project's results were attained, and the project's specific objective(s) achieved, or are expected to be achieved.
- **Efficiency** (sound management and value for money): The efficiency criterion concerns how well the various activities transformed the available resources into the intended results in terms of quantity, quality and timeliness. Comparison should be made against what was planned.
- **Impact** (achievement of wider effects): This criterion should assess the project's achievements to date and the likelihood of achieving its intended impacts. It should also assess if any unintended or unexpected impacts have been produced, and if so, how these have affected the overall impact and if impacts to date have been facilitated or constrained by project management. The impact of project activities on cross-cutting issues such as gender should be considered.
- **Sustainability** (likely continuation of achieved results): This criterion relates to the potential for the overall sustainability of the project beyond project life-time, and should include recommendations for the project sustainability plan, with specific focus on the in-country climate change adaptation projects and mainstreaming activities.
- **Coherence** (mutual reinforcement): Considering other climate change activities undertaken by national governments, SPC and other donors, this criterion considers the likeliness that results and impacts will mutually reinforce one another or duplicate/conflict with one another.
- **EU value added**: This criterion relates to the extent to which the project complements other EU interventions in the region.
- **Visibility**: The extent to which the project's communications strategy achieves the desired impact in the beneficiary countries and the region.

These criteria and the required format for the final report are described in more detail in Annex III.

Methodological guidance for project evaluations and the evaluation of integration of cross-cutting issues are available on the [EuropAid's Evaluation methodology website](#).

3. Specific activities and deliverables

1. On signing the contract prepare a work plan for conducting the consultancy Deliverable 1: Signed contract and work schedule
2. Conduct a two-week inception mission to Fiji to:
 - consult with the SPC Team including the GCCA: PSIS team, and the Delegation of the European Union for the Pacific
 - meet with other regional partners
 - review the necessary documents
 - prepare a detailed work plan and revised schedule for how the consultancy will be conducted.

Deliverable 2: Detailed work plan and revised schedule

3. Using the criteria outlined above prepare methodology and key questions to be addressed in all nine countries

Deliverable 3: Study methodology, and key questions for each country

4. Assess activities in each of the nine countries addressing particularly the key assessment questions 1, 2, 4 and 5 and using the criteria listed above.
 - In Cook Islands, FSM, Marshall Islands, Nauru, Niue and Tuvalu this will involve desk top studies and telephone/skype interviews
 - In Kiribati, Palau and Tonga, this will involve desktop studies, and short visits to last around five working days. (These countries represent three different sectors: coastal protection (Tonga); health (Kiribati); and freshwater (Palau)).
 - Prepare a short draft report for each of the nine countries. Also prepare at least one case study for each of the three countries visited which demonstrates how the interventions were or were not successful, citing specific examples.

Deliverable 4: Draft country report for each of the nine countries, and three case studies one from each of the three countries visited.

5. Prepare a draft overall report (v1), see Annex III for report layout, guidelines and criteria for evaluation of the final report, and standard DAC format for evaluation report summaries.

Deliverable 5: Draft overall report

6. Present the draft country reports and the draft overall report to the SPC team, EU Delegation and the GCCA: PSIS team during a one day workshop in Suva.

Deliverable 6: Short report on main outcomes of workshop

7. Prepare a second version of the country reports, case studies and the overall report (v2) and circulate to the SPC Team, EU Delegation and the GCCA: PSIS team for comment.

Deliverable 7: Version 2 of the country reports, case studies and the overall report

8. On receipt of the SPC response and the EU response, prepare the final overall report and the final country reports and case studies.

Deliverable 8: Final version of the country reports, case studies and overall report

4. Specifications of Consultant team

The evaluation will be undertaken by a team of minimum 2 consultants with the following profile:

Essential:

- An advanced university degree (Masters/PhD) related to monitoring and evaluation, economics, natural resources management, climate change or related field
- Minimum 10 years' experience in qualitative and quantitative evaluation methods

- Experience interacting with national governments in small island developing states, international organisations, bilateral donors, and civil society representatives
- Ability to travel to remote and challenging areas to conduct data collection and analysis activities
- Excellent interpersonal skills and teamwork
- Excellent writing skills
- Strong computer skills
- Excellent English skills

Desirable

- Experience with monitoring and evaluation in Small Island Developing States, especially in the Pacific and/or Caribbean
- Professional knowledge of the European Commission
- Professional experience with climate change related matters in the Pacific

5. Institutional Arrangements

The consultancy will be managed by the GCCA: PSIS Project Manager with assistance from the SPC Strategic Engagement, Policy, and Planning Facility (SEPPF) team.

6. Duty Station and Travel

The duty station will be **Suva, Fiji** with travel to Kiribati, Palau and Tonga.

7. Duration

This consultancy will be conducted within a 10-week period mid-January – 31 March 2016.

Competency Requirements	Score Weight (%)	Total Obtainable Score
1. To what extent is the Consultant's approach and methodology appropriate to address the Scope of Work outlined in the Request for Proposals (RFP)?	15%	15
2. To what extent does the Consultant's proposal demonstrate an understanding of the specific issues around climate change adaptation in small island developing states?	15%	15
3. To what extent does the Consultant's proposal demonstrate experience with monitoring and evaluation of large, complex regional projects, incorporating several different sectors, and focusing on small island developing states?	25%	25
4. To what extent is the Consultant's delivery schedule for the work comprehensive and realistic?	10%	10

5. Do the qualifications of the Consultants meet the requirements for this consultancy for the Final evaluation of the GCCA: PSIS project?	20%	20
6. Based on their proposal how would you assess the Consultants' analytical, reporting and presentation skills	15%	15
Total Score	100%	100
Qualification Score	70%	

8. Scope of bid price and schedule of payments

This is an output based contract and will be paid in accordance with the payment schedule below:

Outputs	Deadline (Date)	% of payment
<u>Deliverable 1</u> : Signed contract and work schedule	20.01.16	20%
<u>Deliverable 2</u> : Detailed work plan and revised schedule <u>Deliverable 3</u> : Study methodology and key questions for each country <u>Deliverable 4</u> : Draft country report for each of the nine countries, and three case studies one from each of the three countries visited. <u>Deliverable 5</u> : Draft overall report	28.02.16	40%
<u>Deliverable 6</u> : Short report on main outcomes of workshop <u>Deliverable 7</u> : Version 2 of the country reports, case studies and the overall report <u>Deliverable 8</u> : Final version of the country reports, case studies and overall report	31.03.16	40%

A maximum of 100 working days is available for the consultancy team to consist of a senior monitoring and evaluation (M&E) resource person and a second M&E resource person. The daily rate and level for both positions should be specified in the proposal. (The maximum rate for a senior M&E resource person is USD 800/day and a mid-level person is around USD300-500 per day depending on qualifications and experience).

Funding for return airfare from the Consultants' home base to Fiji and thence to the three countries, and per diem rates will be provided by SPC separately to the consultancy fee. All airfares will be by the most direct and economical rate, using economy class airfares, taking into account constraints such as airline schedules. Per diem will be paid at SPC rates as follows:

- a) Fiji, Suva FJD280
- b) Tonga TOP 290
- c) Kiribati AUD 185
- d) Palau USD 200

The SPC team will be responsible for making arrangements, bookings and payments for the consultant team's travel and per diem and will also assist with making meeting arrangements in the four countries.

7.2 Annex 2.Independent evaluation of the 'proposal preparation using the Logical Framework Approach' activities

This report has been provided as a separate attached to enable direct feedback to Chris from Torqaid.

7.3 Annex 3. Evaluation Methodology

This section provides details on the methodology used to conduct the evaluation. It draws upon both the stand-alone M&E plan and project plan documents that were created by PREA and reviewed and signed off by SPC.

Purpose of the evaluation

The purpose of the evaluation is to provide the decision-makers from the European Union, SPC, partner countries and regional organisations with an overall independent assessment about the performance and impact of the project, clarify key lessons and practical recommendations for follow-up actions. The results of this evaluation will inform future project design.

Scope of the evaluation

Time

The evaluation will consider project activities, outputs and outcomes that were achieved or took place between the project implementation period of July 2011 to December 2015.

Geographic area

The evaluation considers project activities, outputs and outcomes in the nine participating GCCA: PSIS countries (Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu). The evaluation will also consider relevant work undertaken by SPC in Fiji.

Content

The evaluation includes all activities implemented, outputs delivered and outcomes achieved as part of the GCCA: PSIS project within the noted time and geographic area.

Out of scope

The evaluation acknowledges final narrative reporting and financial reporting will not be completed until June 2016 and therefore these project outputs will be excluded from the evaluation as they fall outside of the defined evaluation timeframe.

Evaluation audience

When developing the evaluation questions and writing the evaluation report, the needs of the following evaluation audience stakeholders will be considered.

The primary evaluation audience are:

- European Union decision makers
- SPC, in particular the GCCA: PSIS team and Strategic Engagement and Policy Planning Facility
- Nine partner country Governments (Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu)

Secondary evaluation audiences include:

- Regional organisations (SPREP, PIFS)

Evaluation Questions and Criteria

The GCCA: PSIS evaluation RFP (SPC 15/112) documentation outlined eight evaluation criteria to use to inform the evaluation questions. The first five evaluation criteria items come from the Organisation for Economic Co-operation and Development Assistance Committee OECD-DAC:

1. **Relevance (problems and needs):** The extent to which the objectives of the project are consistent with beneficiaries' requirements, country needs, global priorities and partners'/EU's policies, and SPC's Climate Change Engagement Strategy
2. **Effectiveness (achievement of purpose):** The effectiveness criterion, concerns how far the project's results were attained, and the project's specific objective(s) achieved, or are expected to be achieved.
3. **Efficiency (sound management and value for money):** The efficiency criterion concerns how well the various activities transformed the available resources into the intended results in terms of quantity, quality and timeliness. Comparison should be made against what was planned.
4. **Impact (achievement of wider effects):** This criterion should assess the project's achievements to date and the likelihood of achieving its intended impacts. It should also assess if any unintended or unexpected impacts have been produced, and if so, how these have affected the overall impact and if impacts to date have been facilitated or constrained by project management. The impact of project activities on cross-cutting issues such as gender should be considered.
5. **Sustainability (likely continuation of achieved results):** This criterion relates to the potential for the overall sustainability of the project beyond project life-time, and should include recommendations for the project sustainability plan, with specific focus on the in-country climate change adaptation projects and mainstreaming activities.

The last three criteria are included to meet the evaluation needs of the European Union:

6. **Coherence (mutual reinforcement):** Considering other climate change activities undertaken by national governments, SPC and other donors, this criterion considers the likeliness that results and impacts will mutually reinforce one another or duplicate/conflict with one another.
7. **EU value added:** This criterion relates to the extent to which the project complements other EU interventions in the region.
8. **Visibility:** The extent to which the project's communications strategy achieves the desired impact in the beneficiary countries and the region.

These criteria and the required format for the final report are described in more detail in Annex III of the RFP.

Reflecting on the evaluation audience, purpose and the eight key evaluation criteria, PREA has drafted a set of evaluation questions based on those presented in the original evaluation RFP (SPC 5/112). These questions and their associated evaluation criteria were documented in an Evaluation Plan. The evaluation plan includes:

- Specific monitoring questions that will inform the broader evaluation questions
- Indicators to describe the data to inform the monitoring question
- Targets for indicators (where relevant)
- Chain of reasoning and data analysis strategy (where relevant)

- Judgement criteria to document what results and findings will lead to a positive or negative response to the monitoring question (where relevant)
- Indicator sources and data collection tools.

Evaluation questions have been assessed against Europe Aid's Evaluation question checklist to ensure questions are useful, aligned to the intervention logic (logframes) and address the two cross-cutting theme environment and gender.

Evaluation methodology summary

The timeframe for conducting the evaluation is from mid-January 2016 to 14 April 2016. A detailed evaluation timeline is presented in the "Project Plan: Global Climate Change Alliance: Pacific Small Islands States (GCCA: PSIS) Project Evaluation" document. The evaluation will be informed by mostly qualitative methods and data. Existing quantitative data will be considered in the evaluation where it exists (for example, existing household survey results or water quality test results data).

The GCCA: PSIS project has been split into two components that will be evaluated by different evaluation consultants. This separation has been deliberately created to eliminate a potential conflict of interest if PREA were to evaluate the component (component one) in which it had an active role in the implementation.

Component one – LFA/proposal preparation training

Component one of the GCCA: PSIS project consists of the in-country capacity building workshops in proposal writing informed by the Logical Framework Approach (LFA). The evaluation of this component will be undertaken by Chris Piper from Torqaid, an external evaluation consultant from Australia. Torqaid has been sub-contracted by PREA to undertake the evaluation of component one.

Data collection methods to be used for component one will consist of desktop research and key informant interviews. Chris Piper will deliver an independent report, whose key findings will be integrated into the overall evaluation report.

Desktop research which will involve the review of the following documents:

- 2012 Regional Workshop report on Climate Finance led by SPREP that covered proposal preparation
- Post workshop reports from the Cook Islands (November 2015)
- Two regional impact reports that provide a summary of the 17 LFA training workshops conducted
- 10 minute YouTube "Looking Above and Beyond Climate Change in Tonga"

Interviews with relevant project stakeholders:

- Conduct 10 telephone or Skype interviews with:
 - PREA (the workshop facilitators, 1 interview),
 - SPC (2 interviews or 1 interview if SPC can coordinate a group interview)
 - Sample of country-coordinators (4 interviews),
 - William Tuivaga, SRIC Manager, Climate Change Cook Islands, Office of the Prime Minister. Willie from CCCI partly funded the second training in Cook Islands
 - Two workshop participants:

- Dahiri'h Hokafonu, Ridge to Reef project coordinator, Tonga who was a participant at the LFA training. In the Tonga documentary covering LFA training, she described how the LFA training helped her move her thinking from project level to strategic level
- One workshop participant who also attended the one-on-one mentoring in Cook Islands.

Component two – Remaining Components of GCCA:PSIS project

Component two includes all other aspects of the GCCS: PSIS project. Damien Sweeney and Martin Pritchard from PREA will be responsible for the evaluation of this component.

Data collection methods will consist of desktop research, key informant interviews and onsite field observations of demonstration measures.

Desktop research which will involve the review of the following documents:

- SPC project management documents (Agreements, meeting minutes, annual reports)
- Project logframe (Revised)
- Regional collaboration project documents
- Nine country spotlight reports
- Supporting project documents for nine countries (Agreements, PDDs, reports etc)
- Past project evaluations
- GCCA: PSIS YouTube channel videos

A shared Dropbox folder has been created to store the compilation of documents provided by SPC.

Interviews with relevant project stakeholders:

- SPC GCCA project manager, project officers and Northern Pacific region Climate Change Adviser
- Nine GCCA: PSIS country coordinators (3 face to face and 6 via telephone / Skype)
- Project partners (e.g. SPREP)
- Target beneficiaries from demonstration projects (in the three countries visited)

Observations:

- Visits to demonstration sites in Tonga (coastal protection), Kiribati (health sector) and Palau (fresh water sector) where direct observations of demonstration measure outputs and outcomes can be observed.

Reporting

Component One

Chris Piper will prepare a concise stand-alone independent evaluation report following the format presented below:

- Front cover and table of contents
- Introduction (2 – 3 paragraphs)
- Methodology (2 – 3 paragraphs, including the M&E questions the evaluation is responding to)

- Findings.
 - Include two or more paragraphs for each of the nine countries which responds to relevant monitoring and evaluation questions outlined in ANNEX 1. These paragraphs will be later repositioned into country reports created by PREA.
 - Approximately one to two pages of content responding more broadly to relevant monitoring and evaluation questions in ANNEX 1 and should include key findings from the analysis. PREA will integrate this content into the overall project evaluation report.
- Conclusion (2 – 3 paragraphs). Includes recommendations.

First draft due date: 4/3/2016.

Component Two

The evaluation report will be presented in the format outlined in Annex III of the RFP.

The evaluation will also prepare nine short country reports, and three case studies for the three countries to be visited.

Evaluation ethics

The evaluation will be conducted following the ethical standards and conduct of the [Australasian Evaluation Society](#).

A key consideration is the ownership of information and transparency in the evaluation process, especially in dealing with beneficiaries. The evaluation team will outline the reason for the evaluation, and how information will be used, when engaging with stakeholders.

The evaluation team will be considerate of cultural factors, particularly when engaging with in-country stakeholders during interviews (phone and face-to-face) and site visits.

Evaluation work plan summary

The following steps outline the action taken to complete the evaluation.

1. Inception skype call and draft work schedule

Skype call with SPC.

Draft work plan.

Draft M&E plan.

2. Conduct two-week inception mission to Fiji

PREA's two consultants undertook a two-week mission to Suva to:

- finalise the M&E plan and include judgement references (an evaluation rubric) to more objectively answer the evaluation questions based on predetermined ratings and stated evidence and findings that relate to each rating.
- consult with the SPC Team including the GCCA: PSIS team, and the Delegation of the European Union for the Pacific
- meet with other regional partners
- review necessary documents

- prepare a detailed work plan and revised schedule for how the consultancy will be conducted

A detailed work plan and revised work schedule to action the M&E plan was prepared.

3. Prepare a methodology and key questions to be addressed in all nine countries

Building on the M&E plan, PREA prepared a detailed methodology and pulled out key questions relevant for each of the nine countries.

PREA engaged an external consultant (Chris Piper) from Torquaid for the evaluation of the capacity building activities focussed on proposal preparation using the logic framework approach. This is to ensure that the evaluation of this component of the GCCA: PSIS project is undertaken independently of PREA⁶⁶. The evaluator for this component will combine desktop review and interviews. This will include a desktop review of some of the post-workshop country reports, as well as the regional impact reports. A review of the workshop reports for the 2012 Regional Workshop focused on climate change financing will also be included to provide background context.

4. Implement evaluation plan for nine countries

Three country visits

PREA undertook field visits to three countries identified in the RFP (Kiribati, Tonga, Palau) in February 2016. During the field visits, PREA consultants interviewed country level implementation staff, partners, and target group/beneficiaries regarding the demonstration activities and mainstreaming activities. PREA also visited the on-ground demonstration projects and access any missing documentation to assist in evaluating the country projects.

Six remaining countries

PREA undertook a desktop review of documents and organised Skype or phone calls with project staff and partners.

PREA prepared short draft country reports for each of the nine countries.

PREA prepared three case studies, one from each of the countries visited.

Draft country evaluation reports and case studies were submitted to SPC for review mid-March 2016

5. Prepare draft overall report

PREA reviewed the findings from the country assessments in addition to information gathered during the inception mission and prepared draft overall report as per the outline in Annex III of the RFP. The draft report was submitted to SPC.

6. Prepare second version of country reports, case studies and overall report

SPC provided feedback on the first draft reports. A Skype meeting was held to review feedback and go over some comments that required further exploration. PREA developed a second draft of all reports and submitted them to SPC at the start of April 2016

⁶⁶ PREA was engaged to design and deliver the capacity building workshops on proposal preparation using the logical framework approach.

7. Presentation to the SPC team, EU Delegation and the GCCA: PSIS

A presentation was held in Suva on Tuesday 12th April where PREA presented key findings and recommendations from all reports to SPC and the EU. PREA facilitated report walkthroughs and Q&A sessions to gather feedback from SPC and EU.

A summary post-workshop report was created that contained the feedback and recommendations from the session.

SPC Management Response

SPC's management team will also have the opportunity to provide a management response to the second draft if they choose to initiate this process.

8. Finalise country reports, case studies and overall report

PREA considered the feedback from the key stakeholders and finalised all reports, which were subsequently submitted to SPC and the EU for their final review and consideration.

A Skype debrief meeting with SPC was held to discuss the evaluation methodology and identify any lessons that could be applied to future multi-country, multi-intervention evaluations.

Annex 1. M&E Plan

The table below documents the M&E plan which will guide the project evaluation. Targets were not present for all indicators. In some cases it is not practical or foreseeable to set a realistic meaningful target at the start of a project (e.g. Number of knowledge products created and shared). In other cases it can be very difficult to describe or quantify the target for qualitative indicators (e.g. Perceived and real benefits identified by key stakeholders).

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
Evaluation objective: Assess the degree to which project activities have achieved the defined objective, purpose and expected results using the intervention logic (log frame) endorsed at the Second Regional Steering Committee Meeting, 3-5 December 2012, and accepted by the EU Delegation (12.02.14), noting that indicators have been updated to reflect the situation as of 31.12.14.					
Relevance Coherence EU-value added	To what extent have the objectives of the GCCA:PSIS project been consistent with beneficiaries' requirements, country' needs, global priorities and partners' EU's policies, and SPC's Climate Change Engagement Strategy?	Have country projects been consistent with, and supportive of, the Joint EU-Pacific Declaration on Climate Change, SPC's Climate Change Engagement Strategy, the Pacific Islands Framework for Action on Climate Change, and national climate change policies within each beneficiary country?	Alignment of GCCA: PSIS project objectives and activities with the EU PDCC, SPC CCES, PIFACC and national CC polies (where they exist)	High degree of alignment for all projects for at least two of the four mentioned frameworks / policies.	Desktop review of frameworks and polices. Mapping of framework objectives and activities to GCCA: PSPS project objectives and activities.
		Have country projects been consistent and complementary with on-going initiatives of SPC, EU, and other partners in the Pacific region which are indirectly related to the project?	Alignment of GCCA: PSIS project objectives and activities with existing initiatives of SPC, EU and other partners Instances of duplication	High degree of alignment for most (7 out of 9) projects with the initiatives of one or more stakeholders mentioned. No more than one example of duplication	Desktop review of SPC, EU and other partner initiatives. Mapping GCCA: PSIS project activities to these initiatives.
		Have country project's stated objectives addressed identified problems and social needs, taking into account changes in national contexts.	National problems and social needs (as identified by countries)	All projects address one or more problems identified and address one or more social needs.	Desktop review of inception meetings and reports to obtain country feedback on problems / social needs. Interviews with national coordinators to verify problems / needs. Compare problems / needs identified with national project objectives.
		Has the EU been involved with coordinating the implementation to increase complementarity and reduce duplication?	Level of EU involvement in coordination and implementation of project.		Desktop review of Annual reports Interviews with core project team.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
					Interview with EU delegate.
		Has the project strengthened SPC's engagement with its member countries and territories?	Level of perceived and actual engagement # of in-country missions Frequency of communication with member countries		Interview – national coordinators Interview – core project team Desktop review of sample of country reports.
Effectiveness	To what extent has the GCCA:PSIS project attained, or is expected to attain, its specific objective(s)?	KRA1: Have country projects resulted in climate change being mainstreamed into national and/or sector response strategies?	# of new or revised sector policies, plans and strategies incorporating climate change resilience created or amended as a result of the project		Desktop review of annual reports and country reports Review of new / amended sector policies, strategies and plans
			# countries with a new or revised national climate change policy as a result of the project	National climate change policy in at least one country by 09/ 2015	Desktop review of annual reports and country reports Review of new / amended national CC policies.
		KRA2: Are partner countries better equipped to access climate change funds through different financing modalities as a result of project activities?	# of countries with increased access to climate change funds through new financing modalities	Review conducted in at least 4 countries of the extent to which climate change is mainstreamed in national and sector policies so as to inform the delivery of funds via modalities such as budget support by 06/2014.	Desktop review of annual reports and country reports Interview with national coordinators
			# of countries where capacity to apply the Logical Framework Approach to project design has been built	Capacity to apply the Logical Framework Approach to project design built in at least six countries by 12/2014.	Desktop review of regional impact reports, post-workshop report (Cook Is) Interviews with national coordinators, SPC, PREA and participants. See LFA and proposal writing M&E Plan for more details
		KRA3: Have countries successfully implemented national climate change adaptation projects?	# of national climate change adaptation projects successfully implemented	Nine successful projects (one in each country, with projects focused on one of three sectors, fresh water, agriculture or health) by 12/2014	Desktop review of annual reports and country reports Photos of demonstration projects GCCA: PSIS Videos

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
					Observations from site visits (3 countries)
			# lessons documented and shared	Lessons learnt about (on-the-ground) climate change adaptation activities compiled, analysed and shared by 12/2015.	Desktop review of annual reports and country reports Interview with SPC
			# of lessons learnt sharing activities (e.g. presentation or workshop) implemented (national, regional)		Desktop review of annual reports and country reports Interview with SPC
			# knowledge products created and shared.		Desktop review of annual reports and country reports. Interview with SPC.
		What percentage of project activities were delivered partially or in full (by country)?	# and % of activities completed	95% of activities completed	Desktop review of annual reports and country reports. (work plan) Interview with SPC.
		KRA ₄ : Has the project enhanced the level of coordinated technical assistance provided by regional organisations for country level climate change adaptation responses	# of new regional coordination tools available	Two new regional coordination tools available, by 12/2012.	Desktop review of annual reports and country reports. Interview with SPC.
			# of regular contributors to the Climate Change Portal (by country)	Minimum of three national representatives representing a minimum of three countries regularly contributing to the Climate Change Portal by 12/2015	Climate Change Portal search (review publishers). Interview with SPREP.
			# of regional/sub-regional climate change resilience building activities implemented collaboratively by regional organisations	At least ten regional/sub-regional climate change resilience building activities implemented collaboratively by regional organisations by 12/2014.	Desktop review of annual reports and country reports.
			Country level CC / environment staff perception of the level of coordinated technical assistance provided by regional organisations	Increased perception of coordination of TA.	Interviews with national coordinators.
Impact	To what extent has the GCCA:PSIS project supported the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and	Has the project provided technical assistance that address climate change adaptation?	# activities implemented by technical assistance that address country requests for climate change adaptation.	Ten new activities implemented with support of GCCA: PSIS technical assistance that address country requests for climate change adaptation undertaken in an effective and sustainable manner.	Desktop review of annual reports and country reports.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
	Tuvalu, in their efforts to tackle the adverse effects of climate change?				
		Do countries have increased capacity to integrate climate change into sector policies, strategies and plans?	Level of capacity of national sector specialists responsible for integrating climate change adaptation into one or more sectors.	Capacity of a minimum of 40 national sector specialists responsible for integrating climate change adaptation into one or more sectors (coastal protection, health, agriculture and freshwater food security) built from minimal level to moderate level.	Interviews with national coordinators.
		Part A: Have country projects promoted a long term/strategic approach to adaptation planning and budgets at the country level?	# of countries with a national climate change policy that integrates disaster risk management and includes a budgeted action plan (by country)	National climate change policy that integrates disaster risk management and includes a budgeted action plan prepared in a minimum of two countries by 12/2015	Desktop review of annual reports and country reports.
			# number of policies or strategies that were revised to include CC, CCA, DRM as a result of the project (by country, by status (draft, final, endorsed))	National climate change policy in at least one country by 09/ 2015	Desktop review of annual reports and country reports. Interviews with national coordinators.
		Part B: Have country projects resulted in more effective and coordinated aid delivery modalities at the national and at regional level?	# and use of new formal mechanism in SPC to coordinate different donors/partners engaged in delivery of climate change resilience.	At least one new formal mechanism in SPC used to coordinate four different donors/partners engaged in delivery of climate change resilience by 09/2015.	Desktop review of annual reports and country reports. Interviews with SPC.
		What benefits have key stakeholders (including beneficiaries) experienced as a result of the project?	Perceived and real benefits identified by key stakeholders		Desktop review of annual reports and country reports. Interviews with SPC, national coordinators and beneficiaries (for the 3 countries visited)
		Were there any unintended positive or negative results?	unintended positive or negative results		Desktop review of annual reports and country reports. Interviews with SPC, national coordinators and beneficiaries (for the 3 countries visited) Observations in-country
Efficiency	To what extent does the GCCA:PSIS project demonstrate timely implementation, sound	Did country projects have sufficient funds to deliver their demonstration projects?	Non-completed demonstration project activities or re-scoped activities that resulted from funding shortfall.		Desktop review of annual reports and country reports.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
	financial management and value for money?				Interviews with SPC (Finance) and national coordinators
		Were project outputs produced of a high level of quality considering the funds invested?	Perception from national coordinators and SPC		Interviews with national coordinators and SPC
		Did the selection of the chosen Climate Change Adaptation Activity consider the efficient use project finances (e.g through CBA)?	CBA or other cost efficiency criteria used in the selection of project approach / activity (Demo project)	CBA or other appropriate measure used and result considered in the selection of project CCA activity	Desktop review of annual reports and country reports. Interviews with SPC and national coordinators
		Did projects collect monitoring data to track project progress, and project results? Was monitoring data used to inform decision making?	Monitoring data Decisions making inputs Creation and use of monitoring plan Establishment of baseline data (where relevant)	Monitoring data collected, analysed and reported in all countries and also for other regional activities (training, TA capacity building, PCC Portal) Decisions influenced by monitoring data in all countries All projects collect relevant baseline data or baseline data already exists.	Desktop review of annual reports and country reports. Interviews with SPC and national coordinators.
		Did countries demonstrate the use of risk management during project implementation?	Risk Management Plan Resulting activities from risk management plan (contingency / mitigation) implemented		Desktop review of annual reports and country reports and risk plans. Interviews with SPC and national coordinators
		Were project funds delivered to countries in a timely manner as per the agreed rules for disbursement and contract agreements?	# weeks between funds request, authorisation, delivery and availability. Support or hinder implementation Perception from national coordinators.		Desktop review of annual reports (Challenges) and country reports. Interviews with SPC (finance) and national coordinators and national project finance officers for the 3 countries visited.
		Were projects implemented in a timely manner as per the project timeline?	# and % of projects running to approved timeline / schedule. # of extensions granted for project deliver at national level and whole of project level (SPC & EU) Reason for delays and extensions.		Desktop review of annual reports (Challenges) and country reports. Interviews with SPC and national coordinators.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
		Were projects delivered within their planned budget allocation?	Actual costs v's planned budget (by entire project and national projects)	Projects delivered on or under budget	Desktop review of annual reports (Finance) and country reports. Interviews with SPC (finance) and national coordinators and national project finance officers for the 3 countries visited.
		Did projects make efficient use of human resources (project staff, consultants etc) to implement the project?	Staff hired or contracted to address capacity constraints (internal, external, by country)		Review of project reports. Interview with national coordinators.
		Was SPC reasonable and flexible in its responses to risks and issues that arose and did their response reflect changes in circumstances (risk events / disasters / staff changes, budget changes, timelines changes etc)?	SPC's response to risks and change in circumstance. Perception from national coordinators.	SPC show a degree of flexibility to respond to risks and challenges within the bounds of the SPC – EU contract.	Review of project reports. Interview with SPC and national coordinators.
		Did countries produce reports of a sufficient quality to inform stakeholders (SPC, EU and beneficiaries) on progress and issues, inform decision making and demonstrate accountability in the use of project funds?	Report usefulness (relevant timely data in all relevant sections) Decision making informed by report data Perception of being kept informed		Interview with SPC & Partners and beneficiaries in the 3 countries visited.
Assess the issue of sustainability					
Sustainability	To what extent will the project benefits in the targeted sectors be sustainable over the longer term (5years)?	Have country projects put in place exit strategies for the demonstration project, including budget and maintenance plans?	Exit strategy implementation. Maintenance plans. National / department budgets.	Exit strategies exist and activities are being implemented (if in scope of the evaluation timeframe) for all projects. All projects have maintenance plans. Budget line items exist for project maintenance.	Documented in table-country/likelihood of sustainability (next X years)
		Do partner countries and beneficiaries demonstrate national ownership of project activities outputs, climate change adaptation projects, technical assistance and training activities??	Level of autonomy in which national level projects were implemented (v's intervention required by SPC). Countries proactive to request TA and training.		Review of project reports. Interview with SPC and national coordinators.
		Have knowledge management products been created and made accessible to country partners, regional institutions and donors?	# and type of KM products (by country & regional level) Channels used to distribute KM products	Channels appropriate to the target audience used. KM products promoted.	Review of project reports, YouTube, Pacific Climate Change Portal, GCCA: PSIS website.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
					Interview with regional partners (re: access to KM products)
Assess the project's sensitivity to environmental and gender issues					
Cross-cutting	To what extent has the project demonstrated sensitivity to environmental and gender issues?	Did country projects implement appropriate environmental management measures for demonstration projects?	Environmental Impact Assessment (EIA) , Environmental Management System (EMS) Activities from EMS implemented Environment considerations in project design	EIA conducted where appropriate EMS created where required by law or based on EIA. Activities to mitigate environmental risks (from EIA / EMS) implemented Project design modified to respond to environmental issues	Review of project reports. Interview with SPC and national coordinators.
		Did projects lead to any negative environmental impacts?	Negative environmental impacts and how addressed		Review of project reports. Interview with SPC and national coordinators. Observations of demonstrations projects for 3 countries visited
		Were gender issues considered at the project design and implementation stages? Gender issues refer to social roles, relations and power of men, women, youth, elders, and geographical groups such as persons living in outer islands.	Gender issues considered Targeted activities for women and other groups	Gender issues considered in the project design. Broad stakeholder engagement demonstrates views from range of vulnerable / marginalised / minority / remote / powerless stakeholders considered. Resulting project design responds to gender issues raised. Project implementation is inclusive and involves both genders and vulnerable, marginalised, powerless, remote etc (where appropriate).	Review of project reports. Interview with SPC and national coordinators. Interview with beneficiaries in 3 countries visited.
Review the issues and challenges faced, lessons learnt and successes achieved which could strengthen institutional capacity and future planning within the partner countries and SPC?					
Lessons	What factors facilitated and hindered the achievement of project objectives?	Did partner countries have sufficient human resource capacity and capability to deliver projects?	Staff shortages Skills shortages (e.g. adding finance officers)		Review of project reports.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
			On-time delivery of projects		Interview with SPC and national coordinators.
		Did SPC provide sufficient project and financial management?	<p>Project level</p> <p>Issues and risks identified are tracked, managed and responses actioned.</p> <p>Clear instructions relay decisions made.</p> <p>Programme level</p> <p>Reporting back to EU on time.</p> <p>Financial management</p> <p>Good / poor management factors (trust, professional working relationships built), project management systems, forward planning, M&E)</p> <p>Financial reporting (shows project status and informed decisions)</p> <p>Acquittals completed as required.</p>		<p>Review of project reports.</p> <p>Interview with EU delegate, SPC and national coordinators.</p>
		Did project partnerships support the planning and delivery of project activities?	<p>Partnerships (cross-Government, in-country and regional)</p> <p>Role of partners in planning and delivery</p>		<p>Review of project reports.</p> <p>Interview with SPC and national coordinators.</p>
		What lessons can be learnt from the approach of treating climate change as a cross-cutting issue?	Lessons learnt		Interview with SPC and national coordinators and regional partners.
		What internal (staff, funding, shared responsibilities to implement etc.) factors facilitated and hindered the project?	<p>Internal enabling factors</p> <p>Internal hindering factors</p> <p>Lessons Learnt</p>		<p>Review of project reports.</p> <p>Interview with SPC and national coordinators.</p>
		What external (e.g. environmental, social, economic, political) factors facilitated and hindered the project?	<p>External enabling factors</p> <p>External hindering factors</p> <p>Lessons Learnt</p>		<p>Review of project reports.</p> <p>Interview with SPC and national coordinators.</p>

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
		Have lessons learnt during the project been shared at the national / regional level?	# lessons documented and shared # of relevant people lessons have been shared with # of lessons learnt sharing activities implemented and related knowledge products created and shared.		Review of project reports. Interview with SPC and national coordinators. Website statistics.
Visibility	To what extent have project activities and results been made visible in both the beneficiary countries and the European Union countries?	Was the project-wide communication plan developed and implemented?	Communications plan activities implemented # KM products (by type) Effectiveness of the comms plan to raise awareness of the project		Review of project reports. Interview with SPC .
		Did country develop and deliver communication plans?	Communications plan activities implemented # KM products (by type, by country) Effectiveness of the comms plan to raise awareness of the project		Review of project reports. Interview with national coordinators.
		Were communications methods, tools and products tailored to target specific / different audiences?	Audience perception of KM products Communications product type , distribution channel and language		
Review and assess the relevance of the original project design and climate change adaptation project design documents in light of achievements or failures to achieve the expected objective and SPC's commitment to results-based programming [updating only]					
	Was the revised project logframe support the implementation of the project? Logframe main revision finalised in February 2013 (Logframe 2.) and subsequently minor revision to indicators in December 2014 (Logframe 3)	Was the revised logframe used to guide project planning and activities?	Logframe used to inform work plans and reporting (against targets) Usefulness of the logframe. Degree to which revised logframe (2 and 3) was followed during implementation during their relevant implementation periods.		Review of logframe and project work plan(s).

LFA and Proposal Writing Capacity Building

The following M&E plan will be implemented by Chris Piper from Torquaid.

Criteria	Evaluation question	Monitoring question	Indicators	Target	Source & Method
Evaluation objective: Assess the degree to which project activities have achieved the defined objective, purpose and expected results using the intervention logic (log frame) endorsed at the Second Regional Steering Committee Meeting, 3-5 December 2012, and accepted by the EU Delegation (12.02.14), noting that indicators have been updated to reflect the situation as of 31.12.14.					
Effectiveness Impact	To what extent has the LFA training built the capacity of government staff to design projects and prepare funding proposals?	Did participants increase their knowledge/skills in LFA?	Evidence of use of new LFA knowledge and skills being used		Regional LFA impact reports and post-workshop reports Interview with SPC, national coordinators, PREA and workshop participants
		Did participants find the training valuable to their jobs/role?	Relevance and usefulness of training		As above
		Are participants likely to use the LFA to design future projects?	Likelihood of future use of LFA in proposal design.		As above
		Have LFA steps been applied to write funding proposals?	Use of LFA in proposal writing		As above
Lesson	What worked and what did not work in the delivery of the LFA training?	What worked well?	Enabling factors		Regional LFA impact reports and post-workshop reports Interview with SPC, national coordinators, PREA and workshop participants
		What did not work well?	Hindering factors Areas for improvement Lessons		As above
		What improvements can be made?	Areas for improvement Lessons		As above
		Should the provision of post-workshop one-on-one mentoring that was piloted in Cook Islands (Nov 2015) be considered in other capacity building activities managed by SPC?	Usefulness of one-on-one mentoring. Outcomes from one-on-one mentoring.		As above
Sustainability	Are benefits, (if any), experienced from attending LFA training likely to continue into the future?	What is the likelihood that the benefits of the LFA training will continue into the future?	LFA Reference materials provided to participants. Participants' use of reference materials post-workshop.		As above

			<p>Commitment at national level to continue capacity building (refresher training) or encourage staff to put in place new skills.</p> <p>Community of practice exists for LFA or proposal writing; or national or regional focal point to support LFA / proposal writing exists.</p> <p>Use of LFA knowledge and skills post-workshop (as proxy for future use)</p>		
		<p>What are the barriers and enablers to the benefits of LFA workshop being sustained into the future?</p>	<p>Enabling factors to facilitate use of LFA.</p> <p>Barriers to use of LFA in work duties and proposal writing.</p>		<p>As above</p>

7.3.1 Evaluation Consultant CVs

Martin Pritchard

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Skype: pritchardmartin



OBJECTIVE

To develop close working relationships with clients to understand their needs and deliver services (project design, delivery, management, evaluation, training) to meet requirements and exceed expectations. Focused on solving problems to create a more sustainable, equitable and just future.

CAREER SUMMARY

2012 – current Director Pacific Research & Evaluation Associates

Martin has provided training, research and evaluation services across Australia and the Pacific region in for over 20 projects. Martin is the co-creator or the Evaluation Toolbox evaluationtoolbox.net.au.

Several recent projects include:

- Development of Monitoring and Evaluation Learning Framework (MELF) for Oxfam Australia Trading (2015)
- Development of a Knowledge Sharing Framework for Metropolitan Waste and Resource Recovery Group (2015)
- Assisting Solomon Islands government in completion of Project Design Documentation (PDD) for application to the EU-funded and GIZ-administered Adapting to Climate Change and Sustainable Energy programme (ACSE) (2015)
- Design and delivery of training on proposal preparation for the Adaptation Fund, for Secretariat of the Pacific Regional Environment Programme (SPREP) (2014-15)
- Provision of monitoring and evaluation support to the Pacific Adaptation to Climate Change (PACC) programme, for the Secretariat of the Pacific Regional Environment Programme (SPREP) (2014-15)

2009- 2012 Project Manager National Centre for Sustainability, Swinburne University of Technology

Responsible for management, design, delivery and evaluation of sustainability themed projects for private, government and community clients to secure work that delivers positive sustainability outcomes. Oversee maintenance of department website and newsletter.

1997 – 2004, 2007 – 2009 Lead Analyst Programmer National Australia Bank

Perform business systems and software analysis, design, development, testing, documentation and deployment of Internet and Intranet thin client (accessible using an Internet Web browser) software applications using J2EE (Java) and World Wide Web technology.

2005- 2006 Australian Youth Ambassador for Development Tonga Community Development Trust

EDUCATION SUMMARY

- 2012 Certificate IV in Training and Assessment, Swinburne and NMIT
- 2005 Master of Social Science (International Development), RMIT University
- 2004 Certificate IV Project Management, University of New England
- 1997 Bachelor of Information Technology, Swinburne University of Technology
- **Memberships:** Australasian Evaluation Society, Melbourne Development Circle, Earthship Australia
- **Participates in:** M&E of Gender in Development Discussion Forum organised by Oxfam and the AES.



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Email: damien@prea.com.au

Skype: sweeneyconsult

Nationality: Australian & French

OBJECTIVE

A strong team-player, Damien's strength is to bring a wide range of knowledge, skills and experience to complex issues in order to understand the diverse reasons to problems, and working with clients and stakeholders to find practical solutions. Damien seeks to foster a knowledge sharing culture, through identifying lessons from projects, and communicating them clearly and concisely.

CAREER SUMMARY

2012 – current Director Pacific Research & Evaluation Associates

Established Pacific Research & Evaluation Associates (PREA) as a means to work with partners on meaningful projects that create change towards a more just and sustainable society. PREA has provided services across Australia and the Pacific region in project design and evaluation, and research and resource development for various sectors. Recent projects include:

- Evaluation of the Litter Hotspots Project for Metropolitan Waste and Resource Group (2015)
- Evaluation of the Makira Community-based Climate Change Adaptation and Disaster Risk Reduction project for World Vision Solomon Islands (2015)
- Assisting Solomon Islands government in completion of Project Design Documentation (PDD) for application to the EU-funded and GIZ-administered Adapting to Climate Change and Sustainable Energy programme (ACSE)
- Provision of monitoring and evaluation support to the Pacific Adaptation to Climate Change (PACC) programme, for the Secretariat of the Pacific Regional Environment Programme (SPREP) (2014-15)
- Evaluation of the Temotu Community Sustainable Livelihoods and Resilience project for World Vision Solomon Islands (2014)

2008- 2012 Project Manager National Centre for Sustainability, Swinburne University of Technology

The National Centre for Sustainability (NCS) at Swinburne was part of a collaboration of tertiary educational institutions whose aim was to progress sustainability in education, community and the workplace. Responsible for project managing research and evidence building initiatives for business, industry and government clients, reporting to funding bodies, and communicating results to stakeholders.

2006- 2008 Sustainability Officer Townsville City Council

2006- 2008 Project Officer International Ocean Institute, Australia

EDUCATION SUMMARY

- 2011 Master of International Development and Community Development, Deakin University
- 2011 Certificate IV in Training and Assessment, Swinburne and NMIT
- 2010 Short Course in Sustainability Reporting (GRI certified), Swinburne
- 2009 Short Course in Carbon Accounting, Swinburne
- 1999 Bachelor of Applied Science (Environmental Management), James Cook University
- **Memberships:** Australasian Evaluation Society, Melbourne Development Circle, Earthship Australia
- **Participates in:** M&E of Gender in Development Discussion Forum organised by Oxfam and the AES.

7.4 Annex 4. Documents reviewed to inform the evaluation

Over 900 documents were reviewed to inform this evaluation. This annex includes only a list of the main documents reviewed. The first documents presented are related to SPC's project management and regional activities. Following this initial list, documents relevant to each participating country are presented. First will be a short list of documents present for each country. Then each country will be listed with the key country specific documents.

SPC'S PROJECT MANAGEMENT AND REGIONAL DOCUMENTS

SPC Project Management Folder

- Contribution agreements and addendums (3)
- Project progress (half-year) and annual reports (2011-2015)
- Steering committee (1-5, for years 2012-2015) minutes and reports
- ROM evaluation reports (2012, 2013, 2015)
- Mid-term evaluation report (2014)
- Project logframes (original and revised)
- 2012 Regional climate finance workshop report and annexes
- Guidelines for developing project proposals produced by Natural Solutions (2012)
- SPC Learning event presentation – Impact of training in proposal preparation using LFA (2014)
- Lessons learnt roadshow compilation 'Advancing climate change adaptation in the Pacific: Experiences from the past five years'
- Lessons learnt fact sheet
- National lessons learnt reports for nine countries
- Lessons learnt videos (YouTube)
- Summary country finance expenditures February 2016 (Excel)

Addressing environmental issues folder

- Addressing environmental sustainability during the Global Climate Change Alliance: Pacific Small Island States Project

Addressing gender issues folder

- Addressing Gender through the Global Climate Change Alliance: Pacific Small Island States Project
- Gender breakdown for trainings and consultations (Excel)

Communication folder

- Climate change communication by the Global Climate Change Alliance: Pacific Small Island States Project
- SPC Communication plan
- GCCA: PSIS Communication plan
- List of 2015 media releases
- Monitoring report of articles appearing in Climate Change Matters (November 2014 - December 2015)
- Number of hits for Climate Change Matters articles on PCCP
- Climate Change Matters videos (links)
- Web analytics and stats reports 2012

- Climate Change and Disaster Risk Newsletters (Vol 1&2, 2013)

Regional Collaboration Folder

- Spotlight report on regional collaboration

Supporting document sub-folder

- PCCP documents and website hits
- PCCP portal stats and graphic analysis
- Agreement between SPC and SPREP
- 2014 Work plan for CC Coordination Officer
- SPC Climate Change Support Matrix
- PCCP training reports (Fiji and FSM)
- Donor database directory
- PCCR meeting report 2013
- Statement from Joint Meeting of the Pacific Platform for Disaster Risk Management & the Pacific Climate Change Roundtable 2013
- Letter of Agreement for Adaptation Fund Meeting 2014
- Learner Guide for Adaptation Fund Meeting 2014
- Cap4Dev Article 'GCCA Pacific Small Island stories featured at the Pacific Climate Change Roundtable'
- The 2015 Pacific Climate Change Roundtable (PCCR) : Lessons Learnt from the ten-year implementation of the Pacific Islands Framework Action on Climate Change (2006-2015)
- Draft (ver17) Strategy for Climate and Disaster Resilient Development in the Pacific (SRDP), 18 June 2015
- Compendium of Case Studies on Climate and Disaster Resilient Development in the Pacific, 2015
- Side Event Report, 2014, Third International Conference on Small Island Developing States
- Concept for Collaborative Implementation of Strategy for Climate and Disaster Resilient Development in the Pacific(SRDP) for EU Global Climate Change Alliance +
- RTSM brochure

Supporting documents folder

- SPC Climate Change Strategy
- Declaration by the Pacific Islands Forum States and the European Union on Climate Change
- Pacific Islands Framework for Action on Climate Change 2006-2015

COUNTRY DOCUMENTS

Common across all nine countries:

- Spotlight report
- Concept note
- PDD (original and revised where relevant)
- Project logframe
- Letter of agreement
- Sample of project finances

- Quarterly reports
- Trip reports
- Country Climate change profile
- Country GCCA Fact sheet
- Media releases and newspaper articles
- Photos
- Review of mainstreaming of climate change into national plans and policies
- Lessons learnt report
- Project design planning meeting report
- Project / Climate Change / Sector specific awareness raising materials
- Work plan
- Tender documentation and bid review (where relevant)

Cook Islands Folder

- Water quality results (sample)
- Marine resource surveys and reef surveys
- The Manihiki Pearl Farming Management Plan
- 'Using local knowledge to understand climate variability in the Cook Islands' report
- Te Tarai Vaka Communication Plan
- 'Monitoring Pearl Industry for Climate Change' presentation
- Monitoring buoy data
- Photos of billboard, monitoring buoy and refurbished laboratories
- 'Manihiki Work Programme – Working with Pearl farmers' presentation
- Senior citizen tablet training workshop reports

FSM Folder

- FSM Nationwide Climate Change Policy, 2009
- 'Technical Guideline For Installation Of Water Infrastructure In The Outlying Islands Of FSM' checklist
- Fais Baseline Survey Report & Follow-up Survey Report
- 'Fais Is, Yap, Rainwater Harvesting Systems Maintenance Training' presentation
- Fais rainwater harvesting system improvements agreement

Kiribati Folder

- Vector control support for Outer Islands summary
- EHU outcomes from water surveillance summary
- Kiribati Cyclone Pam Response LOA
- National Climate Change and Health Action Plan for the Republic of Kiribati
- Kiribati National Environmental Health Action Plan 2015-2019
- Public Health Ordinance Law 1977
- List of equipment
- Sample water monitoring data

- 2016 class 5 curriculum including SODIS
- Epidemiology Workshop Report
- 'Public health lab-based surveillance training, for healthcare workers ministry of health & medical services', Kiribati workshop report
- Kiribati Climate Change and Climate Risk Communications Strategy 2014 – 2018
- Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management (KJIP) 2014-2023
- SODIS roadshow plan
- Whole of Island approach booklet
- Abaiang Needs Assessment
- Workshop On Food Safety In Kiribati Report
- Kiribati development plan 2012 – 2015
- Kiribati National Adaptation Program Of Action (NAPA), 2007
- Water champions contracts
- Technical attachment reports
- SODIS resources
- Baseline and Endline Knowledge, Attitudes and Practices (KAP) Survey summary
- SODIS communication plan
- Vector workshop report
- Christmas Island Rapid Response training report

RMI Folder

- RMI Strategic Development Plan Framework 2003 – 2018
- Ailinglaplap Coastal & Climate Change Vulnerability Survey
- Woja Causeway Project: Coastal Processes and Feasibility Study
- Woja Causeway Project: Detailed Design and Monitoring Plan
- RMI First National Climate Change Dialogue, 9 – 10 September 2014 Report
- Glossary of Climate Change Terms English - Kajjin Majel
- Environmental Management Plan
- Woja progress reports
- Pacific Climate Change Finance Assessment Report 2014

Nauru Folder

- Preliminary Report - Design improvements to Nauru water storage capacity
- Final design report - Design improvements to Nauru water storage capacity
- Assessment of Rainwater Harvesting Systems On Nauru Roofing Assessment - Final Report
- Reallocation of funds among countries, June 2015
- Republic of Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt)
- Nauru Water And Sanitation Master Plan Report
- Water Supply, Sanitation & Hygiene (WASH) Training of Trainers for Nauru
- Pacific Climate Change Finance Assessment Report 2013

- Capacity Building Training attachment in Water Quality Monitoring, Analysis and Reporting – South – South Cooperation Nauru and Kiribati, SPC, GCCA: PSIS Project

Niue Folder

- Least-Cost Analysis Of Water Supply Options In Niue (Integrated Water Resource Management Technical Report)
- Niue PACC & GCCA demonstration measures - Community Briefing
- Water quality capacity building training
- Design Of An Institutional Framework For A Climate Change Division In Niue
- PACC Rainwater Harvesting Project NIUE Technical Report
- Niue Pacific Adaptation to Climate Change (PACC) Water Sector Demonstration Project - A Cost Benefit Analysis Aaron Buncl, August 2012

Palau Folder

- Terms of Reference for Technical Assistance on Water Resources Assessment and Preliminary Design in the islands of Angaur, Kayangel, Peleliu, of Palau
- Palau Public Utilities Corporation - Standard Operating Procedures Manual
- PPUC - Water conservation and climate change education activities in Palau
- Review Of Palau Water Conservation Incentive Program
- Process for Developing Palau Climate Change Policy
- A synthesis report of "successful" community based resource management in Palau Implications for developing a community engagement strategy for Palau's Climate Change Policy Framework
- Gaps and Needs Analysis towards the development of a Climate Change Policy Framework, 2013
- Palau Climate Change Policy Framework - Stakeholder Consultations
- Palau Climate Change Policy For Climate and Disaster Resilient Low Emissions Development, 2015
- Palau-Tonga Exchange Workshop Report
- PPUC Outer Island Questionnaire Results 2015

Tonga Folder:

- The State of the Beaches Before and After Construction of Two Coastal Erosion Options for Eastern Tongatapu, Tonga
- Final consultation report - Preparation of a Diagnostic Study to Inform an Integrated Coastal Management Plan For Tongatapu, Tonga
- Tonga Climate Change Policy 2015 – 2020
- Final report – Tonga National Climate Change Fund
- Tonga Climate Change Fund Bill 2015
- Report of Coastal Feasibility Studies – March 2012
- Coastal Design and Costings Report – March 2012
- Review of Historical and Recent Studies

- Pertaining to Erosion of Eastern Tongatapu, Tonga – May 2013
- Environmental Impact Assessment Of Four (4) Proposed Coastal Engineering Interventions For Five (5) Communities On The Eastern Side Of Tongatapu
- Final Design of Two Coastal Erosion Options for Eastern Tongatapu, Tonga
- Monitoring and Evaluation Plan for Two Coastal Erosion Options for Eastern Tongatapu, Tonga
- Beach profiles

Tuvalu Folder:

- Tuvalu Cyclone Pam LOA
- Crop Database
- Questionnaire for Farmers- Tuvalu
- Agroforestry pamphlet
- Talofa Trade Fair & Go Local Campaign Report
- Consultations with stakeholders: Tuvalu Agriculture Strategic Marketing Plan 2015- 2020
- Tuvalu Agriculture Strategic Marketing Plan 2015-2025
- List of crops provided by SPC CePaCT for the Department of Agriculture Tuvalu under the EU-GCCA Project from 2014-2015
- Attachment Reports
- Narrative Report on the Home Gardening Workshop Held with the Tuvalu National Council of Women
- Tuvalu climate change media training report
- Tuvalu Agroforestry Workshop Reports

7.5 Annex 5. Stakeholders interviewed to inform the evaluation

Stakeholder Name	Position	Organisation	Country
Mr Teina Rongo	GCCA: PSIS National Coordinator	Climate Change Cook Islands	Cook Islands
Ms Ana Tiraa	Director	Climate Change Cook Islands	Cook Islands
Ms Vanessa Jenner	UN Project Officer	Development Coordination Division	Cook Islands
Mr Teariki Rongo		Ministry of Marine Resources	Cook Islands
Ms Dorothy Solomona	Director, Pearl Support Division	Ministry of Marine Resources	Cook Islands
Jeremy Cole	Chief of Party, USAID C-CAP	DAI	Fiji
Nicholas Hopgood	C-CAP Senior Technical Adviser	DAI	Fiji
Martin Chong	Infrastructure & Natural Resources	European Union	Fiji
Alvaro Luna	Coordinator, EU-GIZ Adaptation to Climate Change and Sustainable Energy Program (ACSE)	GIZ	Fiji
Clinton Chapman	Former GCCA Climate Change adviser, now with ACSE	GIZ	Fiji
Mr Exsley Taloiburi		Pacific Islands Forum Secretariat	Fiji
Emily Sharp		SPC	Fiji
Gillian Cambers	GCCA: PSIS Project Manager	SPC	Fiji
Mr Sheik Irfaan	Finance Officer, GCCA: PSIS Project	SPC	Fiji
Mr Wolf Forstreuter	Geoscience Division	SPC	Fiji
Mr Zhiyad Khan	Communications Assistant, GCCA: PSIS Project	SPC	Fiji
Ms Logo Waqainabete	OIC, Centre for Pacific Crops and Trees (CePaCT), Land Resources Division (LRD)	SPC	Fiji
Mr Sanivalati Tubuna Ms Juliana Ungaro Ms Pasha Carruthers	GCCA Climate Change Adviser	SPC	Fiji
Ms Sarah Hemstock	Team Leader, ACSE/TVET	SPC	Fiji

Stakeholder Name	Position	Organisation	Country
Ms Valerie Saena Tuia	Genetic Resources Coordinator, Centre for Pacific Crops and Trees (CePaCT), Land Resources Division (LRD)	SPC	Fiji
Ms Vuki Buadromo	Project Manager, USAID Project	SPC	Fiji
Ms Vuki Buadromo	Project Manager, USAID Project	SPC	Fiji
Nicol Cave	Regional Rights Resource Team (RRRT) Formerly at Public Health Division	SPC	Fiji
Kevin Petrini	Regional Climate Policy Specialist for Asia and Pacific	UNDP	Fiji
Mr Andrew Yatilman	Director	Division of Environment & Sustainable Development	FSM
Ms Cindy Ehmes	Assistant Director	Division of Environment & Sustainable Development	FSM
Ms Belinda Hadley	GCCA: PSIS National Coordinator	OEEM, Environment Unit	FSM
Ms Lorna	Finance Officer	Office of Environment and Emergency Management	FSM
Mr Aden Suwel	Curriculum Specialist	Yap Department of Education	FSM
Mr James Lukan	Director R&D	Yap State	FSM
Mr Raymond Tamow	Yap Project Officer	Yap State	FSM
Ms Christina Filmed	Executive Director, EPA	Yap State	FSM
Ms Eva Buthung	E&A consultant		FSM
Mr Tearinaki Tanielu	Program Manager, Infrastructure & Climate Change	DFAT	Kiribati
Mr Tebiria Kabiriera	Supervisor	Health Information Unit, MHMS	Kiribati
Ms Maryanne Utiera	Officer	Health Information Unit, MHMS	Kiribati
Mr Antokana Teerua	Videographer	Health Promotion Unit, MHMS	Kiribati
Mr Kiatoa Tio	Project Finance Officer	Health Promotion Unit, MHMS	Kiribati
Mr Tebikau Tibwe	Chief Health Inspector	Health Promotion Unit, MHMS	Kiribati
Mr TianuareTaeuea	Project Officer	Health Promotion Unit, MHMS	Kiribati
Ms Bungia Kaitaake	Health Inspector	Health Promotion Unit, MHMS	Kiribati

Stakeholder Name	Position	Organisation	Country
Ms Mweritonga Rubeiariki	Health Officer	Health Promotion Unit, MHMS	Kiribati
Mr Aboro Henry	Health Officer	Health Promotion Unit, Ministry of Health & Medical Services (MHMS)	Kiribati
Ms Clare Anterea	Project officer	KAP III Project	Kiribati
Ms Teretia Tabutoa	SODIS water champion supervisor	Kawan Bairiki Community	Kiribati
Ms Gretna Tauma	Technician	Medical Laboratory, MHMS	Kiribati
Ms Rosemary Tekoaua	Supervisor	Medical Laboratory, MHMS	Kiribati
Dr Teatao Tiira	Secretary	MHMS	Kiribati
Mr David Teaabo	Pacific Plan & SIS Desk Officer	Ministry of Foreign Affairs	Kiribati
Ms Kate Cushing	Urban Development Coordinator	NZAid	Kiribati
Mr Choi Yeeting	National coordinator	OB	Kiribati
Mr Bryan Star	Director	Department of Environment	Nauru
Ms Claudette Wharton	GCCA: PSIS National Coordinator	Department of Environment	Nauru
Mr John Limen	Director	Economic Planning, Ministry of Finance	Nauru
Mr Ali Mohammed	Manager, Water Unit	Nauru Utilities Corporation	Nauru
Mr Michael Aroi	Secretary	Ministry of Foreign Affairs	Nauru
Dr Shaw Mead	Director, coastal engineer	eCoast Marine Consulting and Research	New Zealand
Mr Haden Talagi	GCCA: PSIS National Coordinator	Department of Environment	Niue
Mr Sauni Tongatule	Director	Department of Environment	Niue
Mr Andre Soihane	Director General	Treasury	Niue
Ms Lani Milne	Chief of Coastal, Land & Conservation Division	EPA	RMI
Mr Melvin Dacillo	Architect, Project Management Unit	Ministry of Public Works	RMI
Mr Wilbur Allen	Secretary	Ministry of Public Works	RMI
Mr Lowell Alik	Director	Office of Environmental Planning and Policy Coordination	RMI
Dr Riyad Mucadam	Senior Adviser	Office of Environmental Policy Planning and Coordination	RMI
Mr Ywao Elanzo	GCCA: PSIS National Coordinator	Office of Environmental Policy Planning and Coordination	RMI
Dr Netatua Pelesikoti	Director of the Climate Change Division	SPREP	Samoa
Ms Tagaloa Cooper	Climate change coordination adviser	SPREP	Samoa

Stakeholder Name	Position	Organisation	Country
Karika Tuake	CEO	BB Construction	Tonga
Lu'isaTu'i'afitu-Malolo	Director	Climate Change Division, MEIDECCC	Tonga
Manu Manuofetoa	GCCA: PSIS National Coordinator	Climate Change Division, MEIDECCC	Tonga
Aneti Havili	Project Finance Officer	Climate Change Division, Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change & Communication (MEIDECCC)	Tonga
Taniela Kula	Director	Geology Division	Tonga
Pesi	Principal	Makaunga/Talafol'ou Primary School	Tonga
Mr Taniela Takitaki	Town Officer	Manuka Community	Tonga
Valentine	Principal	Manuka/Navutoka Primary School	Tonga
Ofa Fa'anunu	Director	MET	Tonga
Pesa Tu'iano	Director	Ministry of Infrastructure	Tonga
Quddus Fielea	Seinior Engineer	Tonga Water Board	Tonga
Sela Bloomfield	Legal drafter consultant		Tonga
Selina Finau	Talafo'ou community member		Tonga
Sisilia Lamipet	Makaunga community member		Tonga
Mr Itaia Lauseveve	(retired) Director	Department of Agriculture	Tuvalu
Ms Enalizer Fuiono	Finance Officer	Department of Agriculture	Tuvalu
Mr Mataio Tekinene	Director	Department of Environment	Tuvalu
Mr Faoliu Teakau	GCCA: PSIS National Coordinator	Government of Tuvalu	Tuvalu
Mr Lutelu Faavae	Director General	Ministry of Foreign Affairs	Tuvalu
Mr Falasese Tupau	Assistant Secretary	Ministry of Natural Resource Development	Tuvalu
Mr Erbai Matsutaro	GCCA: PSIS National Coordinator	Office of Climate Change, Ministry of Finance	Palau
Ms Amand Alexander	Office Manager, OERC (now PALARIS)	Office of Environmental Response and Coordination	Palau
Ms Charlene Mersai	Coordinator, OERC (now PALARIS)	Office of Environmental Response and Coordination	Palau
Dalter	PPUC Water Technician, Peleliu State	Palau Public Utilities Corporation	Palau
Etam Lewis	PPUC Water Technician, Abguar State	Palau Public Utilities Corporation	Palau
Fustino Robert	Resident, Koror		Palau

Stakeholder Name	Position	Organisation	Country
Jeffrey Titiml	Governor, Kayangel	Kayangel State	Palau
Mr Gus Aitaro	Director, Foreign Affairs	Government of Palau	Palau
Hasinta	Acting CFO, PPUC	Palau Public Utilities Corporation	Palau
Hensley	PPUC Supervisor, Peleliu State	Palau Public Utilities Corporation	Palau
Ms Judy Dean	Grants Coordinator, Office of the President	Government of Palau	Palau
Ken	Lieutenant Governor, Angaur	Anguar State	Palau
Maggy Antonio,	EO Planning, Koror State	Koror State	Palau
Mr Wong	Chairman Koror Planning Commission	Koror State	Palau
Ms Lynna Thomas	EQPB	Palau Environmental Quality Protection Board	Palau
Resident, Peleliu	Resident, Peleliu		Palau
Ms Tarita Holm	Consultant, Climate Change Policy, USAID		Palau
Ms Tiare Holm	Consultant	Sustainable Dimensions	Palau
Fialua Monise	Acting Ag Technical Officer	Department of Agriculture	Tuvalu
Umai Basilius	Consultant	Palau Conservation Society	Palau
Karla West		National Development Bank of Palau	Palau
Billy Umang		National Development Bank of Palau	Palau
Johnny Kintaro Jr.	GCCA: PSIS Project Officer PPUC	Palau Public Utilities Corporation	Palau
Governor of Tobi	Governor, Tobi	Hatohobei(Tobi) State	Palau
Ex-Governor of Tobi	Ex-governor, Tobi	Hatohobei(Tobi) State	Palau
Governor of Sonsorol	Governor, Sonsorol	Sonsorol State	Palau

7.6 Annex 6. Country Evaluation Reports

7.6.1 Cook Islands Evaluation Report

Sector for Climate Change Adaptation Project

Marine resources

Project

Environmental Monitoring to Enhance Community Livelihoods and Build Resilience to Climate Change in Low-Lying Atolls of the Cook Islands

The project built capacity within the Ministry of Marine Resources (MMR) to better manage the pearl industry and monitor the water quality of Manihiki Lagoon. A refurbished water quality monitoring buoy was deployed in the Manihiki Lagoon.

Three MMR laboratories were refurbished with new water quality testing equipment and staff have been trained in water quality testing and analysis as well as maintenance of the buoy. A new marine biologist based at Manihiki conducted water quality monitoring and worked with pearl farmers to improve their farming practices.

The project funded the purchase of a new boat and water quality monitoring probe for Penryhn. marine survey assessments were undertaken in four northern islands to assess marine stocks including capacity building of MMR staff in the respective islands, Rarotonga MMR staff and selected community stakeholders (Pukapuka Pure (ra'ui wardens, 2 Penryhn islanders)). Total of four notice boards for Manihiki and Pukapuka.

Implementing Entity

The MMR is responsible for project design, management and implementation of the climate change adaptation project. Overall coordination of the GCCA: PSIS project activities in the Cook Islands was provided at the national level by the Office of the Prime Minister through the Climate Change Cook Islands (CCCI) Office. The Cook Islands Climate Change Platform involving MMR, CCCI, Ministry of Health and NGOs was also used to inform stakeholders and engage them in implementation where appropriate. This implementation arrangement was effective.

Relevance & EU Coherence

The GCCA project is highly relevant to national priorities as documented in numerous plans and policies. The project sector focus (marine resources) and overall objective 'to build resilience to climate change in the Cook Islands' is aligned to strategic area 4 of the existing Joint National Action Plan (JNAP) for Disaster Risk Management and Climate Change Adaptation 2011-2015 which focuses on strengthening economic development and increasing resilience to climate change. The project is also aligned to Priority Area 5, Strategy 4 of the National Strategic Development Plan (NSDP) for 2011–2015. Additionally, the demonstration project is closely linked to the adaptation needs and priorities documented in the Cook Islands second national communication to the UNFCCC as they relate to monitoring and managing marine resources and water quality. The National Environment Strategic Action Framework 2005–2009 (NESAF) third goal also refers to resilience to climate change variability.

Several other climate change projects were being implemented in Cook Islands during the planning and implementation stages of the GCCA project. These projects include:

- Pacific Adaptation to Climate Change (PACC) – Focused on mainstreaming climate change in national and sector policies and implementing measures to climate proof key infrastructure.
- Strengthening Resilience of our Islands and Communities to Climate Change (SRIC-CC).
- University of the South Pacific-European Union Global Climate Change Alliance project (USP-EU GCCA). Focused on water and food security.

Potential overlap and duplication between PACC and GCCA mainstreaming and demonstration pilot activities was avoided as both projects focused on different sectors. Involvement of SRIC-CC in both projects helped identify and realise collaboration opportunities.

Many outer island communities are semi-dependant on local marine resources (including fishing and the pearl industry) for their subsistence, food security and economic development. The project responded to address a number of short and long-term causes (some climate change related) that are responsible for the decline in the Cook Islands pearl industry based in the outer islands.

Effectiveness

Most effective in building capacity within MMR to monitor water quality in Manihiki lagoon

Overall the project was found to be effective with the project purpose being achieved and nearly all components of the key results areas delivered as documented in the revised logframe (February 2015).

Expected result	Indicator	Indicator achieved
<p>Overall Objective: To build resilience to climate change in the Cook Islands</p>	Climate change issues are included in at least four island community development plans by December 2014	Not achieved: Island community development plans were not revised to incorporate climate change issues. Plans are not scheduled for revision until 2017. A report titled 'Using local knowledge to understand climate variability in the Cook Islands' produced by this project will be used to inform future revisions.
<p>Purpose: To strengthen environmental monitoring and its relevance to the communities of the northern atolls</p>	At least one northern atoll community is engaged in environmental monitoring by December 2014	Achieved: Manihiki atoll community (pearl farmers and school) participating in water quality monitoring (water clarity, chlorophyll levels). Water quality test kits were distributed to support monitoring. Monitoring is voluntary. (Q2 2015) Marine Biologist on Manihiki conducted weekly water quality analysis and reporting.

	At least two communities in the northern atolls are publicly displaying the results of the environmental monitoring by June 2015	Achieved: Community notice boards in Manihiki and Pukapuka display water quality monitoring results and climate change information in English and Cook Islands Maori.
	At least one school in the northern atolls is involved in monitoring water quality by June 2015	Exceeded: Two schools in Manihiki participating in water quality monitoring through an amended curriculum. Local Penryhn community (youth) engaged in marine survey work.
Key Result Area 1: Awareness and understanding of the results from environmental monitoring of the lagoon system advanced.	One new effective communication tool prepared collaboratively and used widely in the communities by June 2015	Exceeded: Mobile phones used to communicate critical information and alerts to pearl farmers. Notice boards constructed on Manihiki and Pukapuka to share water quality monitoring data.
	At least 10 pearl farmers are trained in water quality monitoring and climate change resilience building activities by June 2015.	Partial: Six pearl farmers were trained. Target not met as there was a selection criterion that required trainees to be compliant with a number of conditions (reporting to MMR, adhering to quotas, compliant with Lagoon Management Plan). Not enough farmers met these compliance requirements to qualify for training.
Key Result Area 2: Existing environmental monitoring system strengthened especially in Manihiki	One fully operational environmental monitoring system in place in Manihiki by June 2014	Partial: Refurbished monitoring buoy deployed June 2014, however, there were technical issues. Buoy re-deployed in September 2014 and was operational until December 2014 when it stopped transmitting data. Buoy re-deployed after repairs and recalibration in December 2015, however the weather component (Vaisala) broke off and MMR await assistance from SPC-GSD Technician. The buoy also stopped transmitting data on 1 st January 2016. The SPC-GSD

		website ⁶⁷ displaying monitoring data from the buoy is unreliable and currently not functioning.
	MMR laboratory upgraded so that all nutrient analysis will be analysed in-house by June 2015	Exceeded: Three laboratories (Manihiki and Rarotonga x 2) upgraded with new equipment (including co-financing a new auto nutrient analyser). 2 staff trained and carrying out sample analysis.
	At least four people in Manihiki are trained in maintenance of monitoring equipment by July 2014	Achieved: Three MMR staff and one trainee trained in maintenance of monitoring buoy, disassembly and cleaning of sensors. Staff have used skills to remove sensors for recalibration.
	At least two MMR personnel trained in water quality monitoring and data analysis by June 2015	Achieved: Two MMR staff trained in water quality monitoring, including the use of new nutrient analyser.
	At least one publication about project activities by December 2014	Exceeded: Articles in OPM Climate Change monthly Newsletter summarise project activities, Lessons Learnt Meeting in YAP State where lessons learnt videos were shared. Other relevant publications also produced.
Key Result Area 3: Feasibility study of appropriate marine-resource related livelihood activities conducted in Penryhn, Rakahanga, Pukapuka and Manihiki in light of changing climate	Feasibility study completed on marine resources management in the four northern atolls by September 2015	Achieved: Marine resource feasibility study conducted in Penryhn, Rakahanga, Pukapuka and Manihiki. Results being used in the planning of SRIC-CC projects in the outer islands. This included support to marine resource surveys for Mauke and Mitiaro in the Southern Cook Islands. Reports for each survey were published.
Key Result Area 4: Community engaged in implementing the pearl farming management plan	Revised compliance structure completed for the pearl management plan by September 2015	Achieved: Revised Manihiki Pearl Lagoon Management Plan approved by Government in 2016. Revised permitting

⁶⁷ SOPAC website displaying monitoring buoy data displays a Java error. <http://ict.sopac.org/buoy/main.jsf>. The website was viewed by the evaluator on one occasions after SPC requested SOPAC to investigate the error. The error has since returned and the website does not load.

		system and permit forms endorsed by Island Government.
	At least 20 pearl farmers provide input to the review of the pearl management plan	Achieved: Revised Manihiki Pearl Lagoon Management Plan and related documentation reviewed by 20 pearl farmers through consultations. Four meetings held with key stakeholders – Manihiki Island Government, pearl farmers in Tukao and Tauhunu and Manihiki Pearl Farmers Association. One pearl farmer reported there was still need for more dialogue about the Plan and more public meetings in Manihiki.

The logframe was modified during the course of implementation to reflect more realistic targets and some re-scoped activities. The only notable modification was the removal of targets and activities relating to the update of the existing Pearl Economic Model. This activity was removed and funds were diverted to other activities. Acceptable justification was provided for the removal of this activity⁶⁸.

The refurbishment of the existing technically sophisticated Sound Ocean Systems Inc. (SOSI) monitoring buoy could have been a cost effective solution to provide real-time water quality monitoring data in Manihiki. However, technical errors (transmitting data), the need for recalibration, issues with a short battery life and unintentional damage (leaks, broken weather sensors) have greatly reduced its effectiveness in providing useful, reliable, timely data. The buoy has only provided data for approximately four months over a two-year period between 2013 and 2015.

The buoy was originally purchased in 2006 through the support of another project. Because the buoy was custom designed, local and regional staff (even SPC-GSD) are not familiar with the maintenance and repair procedures which makes the buoy maintenance dependant on support from the USA manufacturer. Given the past track record, it is unlikely the buoy will continue to function correctly without ongoing intervention and investment.

In mid-2014 SPC had suggested to MMR that it may be wise to abandon further investment in the buoy. However, MMR decided to continue with the existing plan of repair and redeployed the buoy. The challenges (cost, time and technical expertise required) of repairing or replacing parts is made more difficult by SOSI being located in the USA. Overall it is questionable whether sophisticated technology is appropriate for remote locations. With the benefit of hindsight, increased water quality

⁶⁸ Only one person was ever trained in the use of the existing economic model. Some components of the economic model were going to be included in the revised pearl permit application process. Existing interaction between marine biologist and pearl farmers included discussion on business practices and planning which also covered some aspects of the pearl economic model.

monitoring in Manihiki may have been more effectively achieved through weekly water testing conducted in the laboratory or daily testing using a water quality monitoring probe.

A new MMR website which would have increased project visibility was planned, but not delivered due to a shortage of staff with the required skills.

Additional Activities beyond the Focus of the Marine Resources Sector

Tablet training provided for senior citizens in the Southern Island Group was well received. However, there was very limited uptake of tablet use at Telecom centres post-training. An evaluation – conducted 10 months after the training – revealed that many seniors had forgotten how to use the tablets or were fearful of breaking the devices. The Cook Islands Lessons Learnt report indicated that approximately half of those trained continued to use the IT skills learnt at the workshop. Some unexpected benefits from the tablet training include cost savings to one business who now uses email instead of the phone to place orders. Overall, benefits gained were more related to improved communications (with family and friends) with little evidence of improvement in ability to learn about climate change. Fortunately the tablet training was complemented by a presentation on climate change delivered in Maori which helped to partially fulfil the activity objective. Whilst building skills in tablet use to access climate change information has merit, more follow-up training and support will be required to enable seniors to use new technology like tablets to access climate change information.

The tablet training has been expanded to the northern group of islands by the SRIC-CC project in 2015-2016. Communications are much poorer in the northern group (only one scheduled flight every 2 weeks to Manihiki) and here the uptake of the tablet training has been much better.

As part of the tablet training, local knowledge from senior Cook Islanders on observed changes in the local ecosystems has been documented and analysed together with scientific data to determine linkages between observed changes and climate variability. A publication and video has been published.

The project provided funding and technical assistance to support the Cook Islands government make a submission to obtain National Implementing Entity (NIE) status for the Adaptation Fund (AF). Whilst the application is still under consideration by the AF, the process helped build institutional capacity and improve Government financial management processes across a number of areas:

- financial management manual updated
- internal audits now up to date
- procurement guidelines revised
- environment and social safeguard policy and anti-corruption policy developed
- training in Te Tarai Vaka (project management system) facilitated

These improvements will deliver long-term benefits to government effectiveness and efficiency whilst also creating a strong position on which to base future applications to obtain direct budget support or funding through the Green Climate Fund.

A review of climate change mainstreaming into national plans and policies in Cook Islands was conducted in 2013. A subsequent assessment report of budget support readiness indicated that Cook Islands had a medium to low likelihood to qualify for direct budget support. The improvements resulting from NIE accreditation work will likely support a higher rating and likelihood of receiving direct funding in future reviews.

Training in 'Proposal preparation using the Logical Framework Approach (LFA)' was delivered to 43 people (26 women, 17 men) over two training sessions in May 2013 and October 2015. The post-training evaluation indicated that the training was successful in building capacity and motivation of Cook Islands government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. The second workshop was part funded by the SCRIC-CC project and this training also include four days of one-on-one mentoring with participants and other individuals interested in applying the LFA to their project. The mentoring was highly valued by the eleven participants that took up the opportunity. Project design work for initiatives that were worked on during the first week of training were further progressed and design work for new projects was also started.

Overall, the training was highly valued as demonstrated by the following comment from one *Cook Islands workshop participant*.

"I have attended many workshops/training (national/regional/international) over the years and I have to say, especially given the topic presented, that this ranks as one of the best/most useful trainings (if not the best). The potential for this training to have been dull/boring was high but I found that it was engaging/interactive/well spaced/understandable/interesting. We leave with useful tools that will be used. I only wish that more of my colleagues could have participated. Great job. Thanks to the donors too."

Impact

Increased economic resilience of pearl farmers in Manihiki through increased ability to reduce the negative impacts of climate variability on their pearl shells

Increased monitoring of water quality provides pearl farmers with timely water quality information that enables them to take action to respond to changes in water quality. Such action involves altering the depth of pearl shells in the water column or choosing not to work on their shells to reduce stress. Pearl farmers have been trained in climate change adaptation techniques as they relate to pearl farming. They have also been up-skilled in best-practice pearl farm management skills. MMR Pearl Biologist has been instrumental in raising awareness and helping the farmers to relate the science to practical application.

More timely water quality monitoring results to pearl farmers and fishermen

New laboratory equipment installed at three laboratories has sped up the water quality testing and helped reduce the long backlog (up to 3 years behind for Rarotonga and Aitutaki data analysis).

Improved government governance

The Cook Islands government NIE application to AF has advanced it one step closer to being able to directly access new multilateral climate change adaptation funds. Benefits from going through the application process have included increased institutional capacity across a number of areas (audit, procurement, anti-corruption, environment and social safeguard, project management).

Efficiency

Time

Nearly all planned project activities were completed within the allotted project timeframe. However, many activities were delayed and not completed as per the timeline in the PDD. Delays in

implementation were caused by both external and internal factors. For example, the delays in deploying and having an operational monitoring buoy in Manihiki were caused by technical faults with the buoy, long transport route back to the manufacturer based in the USA for repair and recalibration, shipping delays and the unavailability of the SPC-GSD technician to assist with redeployment. The planned Penryhn marine resources feasibility study was delayed due to a change in shipping schedules. Additionally, a planned consultation in Palmerston did not occur due to people being off-island for the Cook Islands 50th Anniversary Celebrations. In another example, the national project communications plan was delivered one year late.

At the end of the planned implementation period (December 2015), some activities were incomplete. One outstanding activity, the installation of a fume hood in the chemistry laboratory, was completed in Quarter 1 2016.

Planning and implementing activities in outer islands is extremely challenging from a logistical point of view. The evaluation notes that flights and boat transport to the outer islands is infrequent, expensive and often over-booked. Importantly the project reported the status of its planned activities and where significant delays were encountered, the project team responded to address the delays. For example, to respond to transport difficulties of getting to Penryhn to conduct the marine resources feasibility study, the project chartered a flight from Rarotonga to Penryhn (co-financed by SRIC-CC). The evaluation acknowledges that there were delays in task implementation; however, these did not significantly impact on the ability of the project to deliver on most of its key results areas and achieve its purpose.

Cost

Cook Islands had acquitted 97% of its €500,000 allocation for the on-ground project by March 2016 and all remaining funds are allocated which will result in 100% expenditure by the end of the project. €54,000 was allocated for national coordination and 100% of these funds were acquitted.

The funds available to support the Cook Islands demonstration project was €541,737. This included additional funding requested to support new activities in Penryhn to replicate some of the work in Manihiki, share knowledge and lessons, and conduct pearl oyster spat trials. As of March 2016, the project had spent 100% of its available and budgeted funds which is a positive result.

The cost of transportation and logistics to deliver projects activities on Manihiki was high. Basing the Marine Biologist in Manihiki helped reduce the need for extensive travel to conduct the activities they were responsible for. The project was fortunate to secure some in-kind logistical transport support provided by the NZ Airforce to transport goods and people to and between outer islands.

There was consultation between MMR and SPC-GSD about the decision to repair and use the existing SOSI buoy, however, there was no evidence that a cost-benefit analysis or other tool were used to assess different approaches to improving water quality monitoring in Manihiki. Such an assessment would have been particularly useful for comparing, the up-front and ongoing costs of purchasing a new monitoring buoy or refurbishing and redeploying the existing buoy, versus less technologically sophisticated measures. It is noted that discussions between MMR and SPC-GSD informed the decision to refurbish the existing buoy. Whilst it may have been complicated, a model could have been created to determine the benefits of having real-time data supplied to pearl farmers by a water monitoring buoy against the benefits of daily sampling conducted manually by the marine biologist or other staff. The sustainability of the chosen approach could also have been more explicitly considered in the decision making process.

Staffing

The core national project team consisted of a project manager, a supporting MMR officer to assist with communications and a contracted Marine Biologist (based out of Manihiki). Technical assistance, specifically that provided by SPC-GSD (for the buoy) and Frankfurt School of Finance and Management (NIE accreditation for AF) were also notable resources allocated to the project.

Resourcing allocated was sufficient to deliver the project. The presence of the Marine Biologist in Manihiki and the training of staff in outer islands to assist with the current and future marine resource surveys provided efficiencies to the project by reducing the need for frequent transport between Rarotonga and Manihiki.

Overall the evaluation finds the project achieved an acceptable positive result in terms of its efficiency considering, time, financial investment and staffing.

Sustainability

With the exception of receiving real time water quality data from the monitoring buoy, the outcomes of the project are highly likely to continue in the short to medium term (1 to 5 years). Factors contributing to the sustainability of outcomes relate to the benefits delivered by the mainstreaming of staff and activities into national budgets and plans, additional donor funds committed and some private sector engagement. Specific examples of these sustaining factors include:

- capacity has been built to support project activities:
 - basic maintenance of monitoring buoy (instrument cleaning and disassembly)
 - water quality monitoring
 - marine resource surveying
 - proposal preparation to obtain additional donor funding
 - funding support for Project Manager to do AUT project management course to finish in 2017
 - funding support for the MMR Information Officer to do an e-learning course on Digital Media
- project staff (project manager, national coordinator, Marine Biologist) will continue employment/contracts through SRIC-CC and Ridge to Reef project funding with a plan to absorb the Marine Biologist into MMR's future core budget or a co-financing arrangement with the Cook Islands Pearl Authority
- Laboratory Manager employed by SRIC-CC to ensure MMR laboratories are run effectively
- Future funding to support project activities may come from other sources:
 - Climate Early Warning Systems Programme (SPREP)
 - Ridge to Reef
 - SRIC-CC (senior citizen IT training in the northern island group – already ongoing in 2016)
- A cost recovery model to fund the pearl research farm in Manihiki has also been proposed which if implemented stands a high degree of likelihood of being successful

Whilst it was documented that the monitoring buoy maintenance costs and Manihiki Lagoon Pearl Management Plan implementation will be incorporated into MMR's business plan and budget, there is no evidence to indicate that MMR will have sufficient budget to cover the monitoring buoy maintenance costs in either the short or medium term. There is a high likelihood the existing buoy will be abandoned due to ongoing technical issues and high maintenance costs. Simpler more robust buoys or manual water testing probes may prove to be both more effective and cost-efficient options.

Overall, project outcomes are highly likely to continue in the short to medium term. The main risks to sustainability are the continuation of the Marine Biologist based in Manihiki and prolonged technical issues with the monitoring buoy.

Cross-Cutting

Gender

The project concept note reflects upon life and businesses in small vulnerable atoll communities where everyone in the family / community has a role to play. Either directly or indirectly, men, women, children and elderly were project beneficiaries and also had a role to play in project implementation. There was an even gender representation at the PDD planning meeting, and at other national training activities. Senior citizens were identified as a vulnerable group who are sometimes neglected when planning projects. A Request for Assistance submitted by the Manihiki Island Council in 2013 to address their needs resulted in the project delivering presentations about climate change and IT training in the use of tablet computers. Seniors also contributed their past observations of changes in the local eco-system to inform the 'Using local knowledge to understand climate variability in the Cook Islands' report.

Youth were targeted as beneficiaries in SCUBA training and also actively participated to deliver project outputs (marine resource survey).

Environment

The project documented a risk management matrix in the PDD that identified different types of risks. Outside of external events (natural disasters) no environmental risks were identified. The low risk nature of project activities and the lack of major capital works meant there were very few environmental risks to identify and manage. GCCA project staff and MMR are engaged in a related follow-up activity funded by NZAID to clean-up the Manihiki lagoon.

Other key project activities also sought to improve the water quality of the Manihiki lagoon through sharing pearl farming best practices. The revised Manihiki Lagoon Pearl Management Plan was endorsed by the Manihiki Island Government (MIG) in February 2016 reinforces these best practices.

Visibility

The project developed a communications plan in 2014. This should have been created much earlier in the project. However, even without the communications plan in place, the team had been active in sharing news about the project through a number of channels starting from 2012.

The evaluation found evidence of communications tools and knowledge management products that created awareness about the project, visibility of the implementation agency (SPC) and donor (EU). Visibility was created by the insertion of text acknowledgements and logos into all official reports and publications.

Visibility was also given to the project, SPC and the EU through attendance at or presentations given at events:

- [Pacific Climate Change Roundtable](#) (Samoa, 2015)
- SPC GCCA: PSIS Lessons Learnt Workshop (Yap State, FSM, 2015)
- Manihiki Lagoon Schools Science Fair 2015

Videos were also used to create visibility:

- [Adapting to Climate Change in the Cook Islands: The Human Health Dimension](#)⁶⁹
- [Effectively managing marine resources in remote communities in the Cook Islands](#)⁷⁰
Screened at regional meetings and The Pacific Way
- [A lifetime of change: Marine fisheries](#)⁷¹

Other products created include:

- Cook Islands project fact sheet
- Cook Island News articles
- Climate Change Cook Islands newsletters
- Content for SPREP's Climate Change Matters newsletter
- Project banners

The project had planned to include the project on the MMR website, however, capacity constraints within the IT department delayed this task to such an extent that a contingency measure of promoting the project on the MMR Facebook page was implemented instead.

A national lessons learnt workshop (February 2016) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

Overall, there was sufficient visibility about the project and its support for implementation from SPC and funding from the EU.

Best Practice and Recommendations

Best Practice

1. Locate technical assistance staff in outer islands.
2. Project activities deliberately targeted vulnerable or often excluded groups (seniors and youth).

Recommendations

1. Technology solutions deployed in remote outer islands must be proven, robust and require minimal maintenance.

⁶⁹ https://www.youtube.com/watch?v=sOdAA3T_CY

⁷⁰ <https://goo.gl/Prastx>

⁷¹ <https://www.youtube.com/watch?v=RejAyW2Ewmk>

7.6.2 FSM Evaluation Report

Sector for Climate Change Adaptation Project

Water sector

Project

Increasing coastal water security for climate change in selected Federated States of Micronesia (FSM) state outlying islands

The project installed 1,200 gallon rainwater tanks in 40 households and five government buildings in three villages in Fais Island, Yap State. An additional 23 existing tanks were refurbished (First Flush Diverters (FFD), guttering, fascia boards).

Training was delivered in the installation of rainwater tanks and appurtenances in Yap. Fais community members were trained in monitoring and maintenance of rainwater harvesting systems.

The project also refurbished a groundwater well with a solar pump on Fais. Members of the community and Yap State Public Services Corporation (YSPSC) were trained in the operations and maintenance of the well and solar pump.

Designs for community water tanks on the islands of Eot and Udot in Chuuk State were completed.

Hydrological assessments of water resources were conducted in four outlying islands of Yap State⁷².

There was an extensive community education and awareness raising component that included a partnership with the Water for Life project. A demonstration site consisting of 2 rainwater harvesting systems was established at the Community Centre in the Yap capital Colonia, which also facilitated sharing products resulting from the project (e.g. reports, videos, etc.).

Implementing Entity

The Office of Environment and Emergency Management (OEEM) at the national government level provided a facilitation/coordination role for the project. The National Coordinator was based in OEEM, in Pohnpei.

The implementing entity was the Yap State Resources & Development (Energy, Water, Agriculture). Yap State Environmental Protection Agency (EPA) was an implementation partner, as well as Yap States Public Works Department and Yap State Public Service Corporation (YSPSC). The Yap State Project Steering Committee provided oversight of the on-ground water security project in Yap.

This structure worked relatively well, though it was reported that it would have been better if the National Coordinator spent more time in Yap (either based there, or longer stays). An increased on-site presence would have made it easier to work with different agencies.

Relevance & EU Coherence

The project was highly relevant to the needs of FSM, Yap State and the Fais Island community.

The project is consistent with FSM's Environmental 5-year Plan and strategic goals; Climate Change Policy; Federal Emergency Management Agency (FEMA) Mitigation Plan, Vulnerability and

⁷² Ifalik, Eauripik, Satawaal, and Ulithi

Adaptation Assessment; Food and Agricultural Organisation (FAO) Food Security, Water Declaration and Sustainable Development Plan; as well as state plans which prioritise water resources.

Fais was selected as it had previously been the subject of scientific studies of the water sector by the University of Guam Water and Environmental Research Institute (WERI). The WERI report for Fais outlined costs of implementing a range of recommendations to improve water security, based on a socio-economic and hydrological assessment conducted in 2006.

The initial consultations that took place with community leaders prioritised the need for improving water and food security for sustainability of the community. Improving water security has the additional benefit of supporting crop and food security improvements, including the Yap seed bank project which has a site in Fais.

The original project design included a component in Chuuk State. Community survey, consultations, land use agreement and design for two large rainwater storage tanks were completed for Udot and Eot (two islands in Chuuk State Lagoon), replicating a GEF-funded IWRM model for communal water storage. Following detailed costings indicating insufficient funds to complete both Yap and Chuuk components, the procurement of the tanks and on-ground activities in Chuuk were removed in late 2014. A number of factors influenced the decision to remove the Chuuk component and progress works in Yap. Firstly there were delays by the Chuuk State government in appointing a designated counterpart/project officer within Chuuk EPA or another agency with suitable water sector experience to manage both reporting and implementation in Eot/Udot sites. Secondly, there was a lack of baseline data on water resources for the Chuuk sites. Lastly, the Chuuk State government could not make decisions as to a narrowed project selection within the timeframes provided. The final decision to not fully implement the Chuuk component was made by the FSM national government after consultation with the Chuuk State government.

GCCA's focus on the water sector ensures that it does not duplicate efforts made under the EU-funded *North Pacific ACP Renewable Energy and Energy Efficiency Project (North-REP) 2010–2015* that focuses on energy. The GCCA project complements the German-funded *Coping with Climate Change in the Pacific Island Region (CCCPIR) 2009–2015*, which in FSM primarily looked at coastal fisheries management.

Effectiveness

The project was most effective in providing new rainwater capture and storage infrastructure to the outlying island of Fais

The project was successful in achieving most of its expected results outlined in the revised logframe (revised August 2014)

Expected result	Indicator	Indicator achieved
Overall Objective: Contribute to water security as a climate change adaptation strategy for FSM	Document on lessons learnt in FSM outlying islands about sustainable use of quality water in the context of climate change	Achieved: The lessons have been shared with all four states of FSM during a 2-day lessons learnt workshop. Lessons included, the need for baseline data and the use of the logical framework approach to inform project selection; and the

Expected result	Indicator	Indicator achieved
		importance of accurate cost estimates to inform project design, as well as a high contingency budget for outer island activities. Participants identified ' <i>outer islands need special attention</i> ' as a key lesson to share at the regional lessons learnt meeting.
	Checklist for the planning of water infrastructure installation, monitoring and maintenance available by 09/2015	Partial: A checklist for the planning of rainwater harvesting systems has been drafted. It currently covers regulatory requirements, site conditions. It has not yet been finalised.
<p>Purpose: Contribute to increased access and sustainable use of quality water in the outlying islands of FSM states</p>	Demonstration model showing implementation of water security measures for climate change adaptation and disaster risk management in place in one outlying island by 06/2015	<p>Achieved: The project installed 1,200 gallon rainwater tanks in 40 households and five government buildings in three villages in Fais, Yap State, providing an additional 54,000 gallons of rainwater storage. The project also funded fascia boards and guttering. (17 homes improved roofing through assistance from AusAID). An additional 23 existing tanks were refurbished.</p> <p>The project also refurbished a groundwater well with a solar pump on Fais.</p>
	5% of Yap State population adopt a long term water conservation measure by 06/2015	<p>Achieved – Fais population is approximately 5 % of Yap State total, all 65 households now have improved rainwater harvesting systems including first flush diverters which reduce need to manually divert water at commencement of rain events.</p> <p>The education awareness programs on radio and events such as World Water Day, as well as community training in water tank maintenance reached a significant proportion of the population. The education and awareness</p>

Expected result	Indicator	Indicator achieved
		consultant indicated an approximately 18-19% increase in awareness from the baseline and end-line surveys. The current Yap State of Emergency (due to drought) has resulted in water rationing and increased uptake of tanks nationally.
Key Result Area 1: Education and awareness on sustainable water use and conservation in the context of climate change enhanced in FSM	Water security education and awareness plan distributed by 01/2015	Achieved: A work plan and tentative schedule was developed. The plan could have been improved by identifying target audiences, key messages, and appropriate communications methods for each target audience, rather than a list of activities and dates. The report on awareness activities provides a better example of an education and awareness plan (target audience & approach), though it was produced post-activity.
	Printed materials on water conservation and maintenance distributed to at least two outlying islands by 05/2015	Achieved: Fais and Ulithi islands received copies of translated stickers, brochures and posters.
	At least two awareness programs conducted in Yap state so as to reach 15% of the population by 05/2015	Achieved: The education and awareness team comprised of inter-agencies from the government sector and from private sectors and NGO's namely PREL-Water for Life. Awareness programs included World Water Day activities, logo drawing and essay competition for students, community workshops, and radio programs. The community workshops reportedly had strong community participation. The awareness raising activity report indicates a good number of students participated in the logo and essay contests, and participated in the World Water Day activities.

Expected result	Indicator	Indicator achieved
<p>Key Result Area 2: Improved water infrastructure for catchment, storage and emergency services in place for at least one outlying island</p>	<p>Final designs for communal water supply completed for 2 outlying islands in Chuuk State by 09/2014</p>	<p>Achieved: Procurement plan for communal water storage in two islands (Udot & Eot) in Chuuk prepared. This includes a costing, timeline, and a schematic diagram for Udot installation. These can be used to support future funding applications.</p>
	<p>New installation or upgrade of water catchment storage in place for 80% of Fais Island population by 09/2015</p>	<p>Achieved: There are approximately 360 residents on Fais, living in 65 compounds. The project installed 40 household tanks and refurbished 23 (2 compounds had relatively new systems), as well as installed 5 rainwater tanks in community buildings. All of the Fais population spread over the three communities have access to new community storage during water rationing.</p>
	<p>Emergency water supply operational for Fais Island by 04/2015</p>	<p>Achieved: Groundwater well specifications, procurement and installation of a quality solar pump system for Sahagow Well completed and operating almost immediately following typhoon Maysak. Further work to address minor defects, conduct training, and monitor water quality continued to early 2016. Community now has access to emergency back-up groundwater which is in regular use due to the current Yap state of emergency associated with the El Niño related drought.</p>
<p>Key Result Area 3: Household and communal water systems maintained, monitored and managed sustainably in at least one outlying island</p>	<p>Monitoring, management and maintenance program for all households in Fais Island agreed by Fais community by 02/2015</p>	<p>Achieved: Households receiving new or refurbished rainwater tanks signed an agreement to maintain rainwater tanks, and agree to water quality monitoring. The project assisted in the purchase of equipment and chemicals required for the</p>

Expected result	Indicator	Indicator achieved
		water quality testing which will continue beyond project life.
	Maintenance training tool kit trialled in one outlying island of Yap State by 06/2015	Achieved: Kit procured by GCCA Technical Adviser, who conducted the first training in July 2015. Training was continued by Project Officer Raymond Tamow in late 2015. One of the demonstration tanks at the Yap State community centre was damaged in late 2015 and this provided an opportunity to successfully test the welding kit.
Key Result Area 4: Improved information on available water resources in at least five outlying islands of Yap State	Basic inventory of all existing water infrastructure in all outlying islands of Yap available by 12/2014	Achieved: International Organisation for Migration commissioned the work, and allowed the project to use and disseminate the report. The accuracy of the report is based on infrastructure before the Fais upgrade- as such it notes 54 plastic tanks, and 3 concrete tanks present. The project installed 45 new plastic tanks and refurbished a further 23.
	Hydrological assessment of water resources in four outlying islands of Yap State available by 09/2015	Achieved: WERI conducted desktop hydrological assessment of four outlying islands- Ifalik, Eauripik, Satawaal, and Ulithi. The results indicate that there is much variability in future groundwater resources, depending on future rainfall patterns and the expected rate of sea level rise. A detailed field study completed for two islands (Ifalik & Eauripik).The assessment results were published in two articles ⁷³ , and recommend practices to improve groundwater

⁷³ Beikmann, A., Bailey, R., (2015) *Freshwater Resources for Selected Atolls - Recommendations based on Modeling Study*, & Taborosi, D. and Kottermair, M. (2015) *Ifalik Atoll Freshwater Resources - Recommendations based on field observations and interviews*. In: Kottermair, M., Taborosi, D., and Jenson, J. W. (Eds.), *Enough Water for Everyone? A Field Study of Freshwater Resources on Ifalik and Eauripik atolls, Yap State, FSM*. WERI Technical Report 157. Water and Environmental Research Institute of the Western Pacific, University of Guam, Mangilao, Guam.

Expected result	Indicator	Indicator achieved
		management and rainwater storage.

The GCCA project in Yap demonstrated an effective use of partnerships between national and state government, the community, and with other organisations (e.g. IOM, PREL-Water for Life). It was reported that the project had led to improved relationships between the national level and state level departments and agencies.

All education and awareness activities focused on water conservation, maintenance of rainwater harvesting systems, climate change, and water-related health topics. The education and awareness component had partnerships with national and state departments and agencies, IOM, PREL-Water for Life, College of Micronesia, private businesses like Drops of Life, Adalbai's Enterprises, and community groups such as the Fais Health Board to deliver the education messages.

The education and awareness activities used different communication methods to ensure effectiveness. Traditional leaders and community elders were engaged in a formal manner where meetings were pre-arranged with the Chief's permission, refreshment provided, and information was communicated through presentations and printed materials.

Members of the Health Board were consulted separately and some of their feedback got incorporated into the development of materials produced. They also received some training to be able to assist in the end-of-campaign survey.

The community workshops were intended to encourage participation from women and youth through group activities, presentations, and practical demonstrations. Women were also engaged through one-on-one consultations during home visits. The World Water Day specifically targeted youth through essay and drawing contests, raffle drawings, short quizzes with school supplies handed out as prizes, displays and demonstrations. Radio programs were developed to reach all target groups.

Funds reallocated from the Nauru GCCA project to FSM were allocated to FSM's National Disaster Fund for the Typhoon Maysak recovery effort.

Additional Activities beyond the Focus of the Water Sector

The project, through the national coordinator and the Climate Change Advisor based in Pohnpei, contributed to the consultations leading up to the enactment of the FSM nationwide Integrated Disaster Risk Management and Climate Change Policy, 2014, as well as the Yap, Kosrae, and Pohnpei Joint State Action Plans for Climate Change and Disaster Risk Management.

Though FSM now has a nationwide Integrated Disaster Risk Management and Climate Change Policy, 2014, it was reported that there is still a need to raise awareness of climate change with the leadership of different sectors, especially at the State level. A participatory process for developing Joint State Action Plans for Climate Change and Disaster Risk Management is being undertaken in partnership by OEEM and State Governments as well as the EU funded Building Safety and Resilience in the Pacific Project (EU BSRP). Yap State is the first to endorse their JSAP, while Chuuk is developing theirs in the first third of 2016.

A review of climate change mainstreaming into national plans and policies in FSM was conducted in 2013. A subsequent assessment report of budget support readiness indicated that FSM had a low likelihood to qualify for direct budget support for climate change given its capacity constraints.

The project also provided assistance to FSM for preparation of the Green Climate Fund Readiness Grant. FSM was successful in its application.

A sub-regional climate change and energy efficiency media training was held in Pohnpei in October 2012.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 104 people in all four States in February and May 2014⁷⁴. The post-training evaluation indicated that the training was successful in building capacity and motivation of government staff and community based groups to use the LFA approach to design projects and inform the preparation of proposals.

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

An additional 54,000 gallons of rainwater storage was provided in Fais

Sixty-three of the 65 residential⁷⁵ compounds in Fais now have access to new or upgraded water storage infrastructure. A total of 54,000 gallons of additional rainwater storage was provided by the project. People no longer have to walk long distances to access water. All tanks have leaf eaters and first flush diverters which have been shown to reduce bacterial contaminants entering the water from the roof by over 95%.

Fais is located next to Ulithi, one of the most populated islands in Yap, so in an emergency, Fais can be used as a water source.

The project built local capacity and skills in maintenance of tanks, and how to install FFDs. This means that there is no longer a need to call on experts, and the people trained can be used to train others in FSM.

The Sahagow Well is providing a valuable back up supply of water during the current drought

The installation of a solar pump at the Sahagow Well means that there is a back-up supply of water during times of water rationing and droughts, as is currently occurring. It was reported that the community was happy about getting the pump at the Sahagow Well, as the well had been in place for many years but the government never had funds to put in a pump. As such the well was never really used prior to the GCCA project's support.

Efficiency

Time

The on-ground water infrastructure activities did not commence until early 2015. It was not until late 2014 that the Chuuk on-ground activities were removed and the decision was made to concentrate on Yap.

Delays were also caused by the logistical constraints related to outlying islands. The project had to wait for scheduled cargo transport. The project also procured HDPE tanks from New Zealand, due to the outcome of the procurement best practice international bidding process, which added to the logistical delays.

⁷⁴ 28 people in Chuuk, 25 in Kosrae, 33 in Pohnpei, 18 in Yap.

⁷⁵ Two compounds had relatively new systems.

There were delays in payments to some contractors due to incomplete deliverables or incorrect invoices.

Despite the short on-ground implementation time-frame, the project managed to complete all infrastructure work within 12 months which is a testament to willingness of the project partners at all levels to work towards a shared objective.

Cost

FSM had acquitted 63% of its €710,000 allocation for the on-ground project by March 2016 and all remaining funds are allocated which will result in 100% expenditure by the end of the project. €54,000 was allocated for national coordination and 100% of these funds were acquitted.

FSM National and Yap State Governments requested during the project design workshop (January 2013) that the bulk of procurement and other payments be facilitated by SPC. Therefore no funds were released to the State, except for funds allocated to the project officer position, which was direct from the FSM national government.

The detailed costing for the project turned out to be 77% higher for both Fais and Chuuk. Reasons for the discrepancy were that original estimates were not based on direct quotations, and the amount and cost of labour, aggregate, and travel was underestimated. One of the suggestions from the lessons learnt meeting in FSM was to include a contingency of 10 - 20% for outer island projects.

Some cost savings were achieved through a joint purchase of rainwater tanks for FSM and Palau, which led to cost efficiencies especially on the transportation. Some cost savings were also achieved on transport for some rainwater tanks as boats supported by other funding were going to Fais for the Typhoon Maysak recovery effort.

It was suggested that basing the national coordinator role in Yap would have reduced the costs on transport (flights from Pohnpei to Yap). However, this could have meant the link with partners, SPC NPRO, national government, and financial reporting would have been weakened.

The detailed hydrological study was originally planned for one island, but as the most costly aspect is to get the hydrologist on an island, the project ended up doing two islands that were close together. The desktop modelling assessment work was also extended from four islands to all the outlying islands of Yap and some of Chuuk.

Yap stakeholders reported that it was difficult for Yap State to implement the project with the finances controlled at the national level. There was often a need for immediate funds to take a plane or ship (as a contingency) but there were no up-front funds available to do this. Whilst a small up-front funding of approximately US\$2,000 may assist, the lack of immediate funds is likely a reflection of a need for better project management, especially with regards to scheduling activities and preparing budgets. It was reported that it often fell to the national coordinator, or SPC, to plan and acquit for last minute supplies for community engagement activities. It was also reported that there was frequently insufficient documentation to acquit DSA and other advance payments.

Stakeholders reported that SPC's financial reporting period needed to recognise FSM's financial system procedures and limitations, suggesting that a longer financial reporting period was required⁷⁶. This reinforces the need for improved financial management across FSM as a step towards increasing its likelihood of getting direct budget support for climate change finance.

⁷⁶ FSM usually have up to 90 days to close transactions which did not match up to SPC reporting.

There was a considerable level of community contribution in the water infrastructure activities, which included making sure that the roofing was suitable, and providing sand, aggregate, other materials and the labour required to complete the rainwater project. Seventeen households required roofing improvements and this need was addressed by applying for an Australian Aid community grant.

Staffing

The project funded a national coordinator in Pohnpei, and a project officer in Yap. The national coordinator role was important in facilitating the project between the state and national government, and contributing to national level policy discussions. It was suggested by some stakeholders that positioning the national coordinator in Yap would have been more efficient as it would have helped move the project along at a faster rate. However, this would likely have negatively impacted the national coordinator's impact in contributing to national level climate change adaptation discussions in Pohnpei. An alternative would have been to fund a project coordinator in Yap to act as the local liaison to the national coordinator, whose role would focus on project management tasks (budgeting, acquittals, timeline) whilst the project officer could focus on the technical implementation.

Efficiency-related issues (e.g. incomplete invoices, delayed acquittals, last minute planning for trips etc.) may have been overcome had the project officer received more training in project management, including scheduling and budgeting, or a project coordinator been employed.

The education and awareness consultant was from Ulithi and spoke the same language as on Fais, which is likely of great benefit during community engagement activities.

Sustainability

The project outputs and outcomes are highly likely to be sustained. The community was well consulted during the project design, and demonstrated a high level of involvement and contribution to the project implementation.

Community members had to sign recipient agreements for the water tank project. These agreements outline household maintenance responsibilities and requirements (cleaning and repairs) in cooperation with state agencies and community leaders (chiefs). The agreement also provides permission for Yap EPA to undertake water quality testing.

Designated focal points in EPA and Yap State Resources and Development have agreed to follow up and sustain project activities within their agencies' mandates. It is reported that the YSPSC and EPA will continue water quality testing of rainwater tanks.

Technical support and training and further education and awareness activities will be continued by PREL-Water for Life and the Yap Department of Education. Yap State has joined with other UN countries to designate 20th March as World Water Day.

The Integrated Disaster Risk Management and Climate Change Policy, 2014 has prompted the development of sector and state plans. These have been identified for elaboration and implementation including through the Green Climate Fund.

Participants in the media training continue to cover climate change matters in a more accurate manner (e.g. through the FSM Public Information Office page and on radio).

Cross-Cutting

Gender

Gender was considered at all stages of the project due to the cultural context in Yap. The initial consultations that took place with community leaders included representation from the various community groups including women, youth, and children. Separate consultations were undertaken with women so that they were encouraged to speak up and share information.

Women and children are primarily responsible for collecting water for daily use, and were the main beneficiaries from the water project as it reduced the distance required to travel to access water. First flush diverters help improve the quality of water, and should reduce the incidence of water-related illnesses that impact the most on the children and elderly. The project also provided water containers to make it easier to collect water. It was reported that women expressed gratitude for the project.

Training participants were predominantly men (Table 1), particularly for the training on installation of rainwater harvesting systems. There was a greater balance of male and female participants in the LFA training in Pohnpei and Kosrae.

Table 1. Male and female representation in country training activities

Date	Training	Male	Female	Total
May 2014	Chuuk Proposal Preparation Training	22	6	28
Apr-May 2014	Kosrae Proposal Preparation Training	16	9	25
Feb 2014	Pohnpei Proposal Preparation Training	23	10	33
Mar 2014	Yap Proposal Preparation Training	13	5	18
May 2015	Yap Training on Installation of Rainwater Harvesting Systems	35	0	35
Total		109	30	139

Environment

There was no requirement for an environmental impact assessment. A checklist for the installation of water infrastructure in the outlying islands was been prepared which included all water resource and environmental management issues. No negative environmental risks were encountered during the project implementation.

The hydrological assessments at four of the outlying islands of Yap State will provide input for future planning of water management in those islands.

The project raised awareness and understanding of environment issues through regular participation in and presentations on climate change issues at events such as the National Women's Council, Youth Day, International Day for Disaster Risk Reduction, and World Food Day.

Visibility

There was a high level of EU visibility from the project. The education and awareness material in English, Yapese and Ulithian (bumper sticker, tank sticker, poster) featured the required logos. The World Water Day event featured the project banners with logos. Signage has been placed on the Sahagow Well Site. The project was featured in a number of media releases (e.g. 2015 SPC Media Release: Food, water and energy security tops SPC concerns following Typhoon Maysak) and regional newsletters. A number of videos were produced and screened, including:

- 2012 GCCA Global Learning Event Cynthia Ehmes Video Interview and Pasha Carruthers Video Interview
- 2013 video Adapting to Climate Change in the FSM: The Food and Water Security Dimension
- 2014 FSM video on 'Improving water security for traditional island living' is one of nine country-specific videos in the series 'Climate Change Adaptation – the Pacific Way'. Shown extensively at regional meetings, available on YouTube, and shown on television throughout the Pacific on the Pacific Way.

Best Practices & Recommendations

Best practices

1. The project engaged staff or contractors that spoke local dialects for community engagement activities.
2. The project translated materials into local languages to improve the effectiveness of education and awareness raising activities.
3. The procurement process for rainwater tanks was combined with the purchase for Palau, which achieved efficiencies in transport costs.
4. The project leveraged off existing programs (e.g. PREL-Water for Life. Awareness programs) to reduce duplication, and to make efficient use of resources.

Recommendations

1. Use the "rule of thumb" developed by the GCCA: PSIS project to realistically deliver projects in outer islands: carefully plan schedules and budgets and then multiply by 2.
2. Implement projects in one State at a time where there are large distances between proposed project sites (e.g. Yap and Chuuk).
3. Consider funding a project coordinator (could be part time), acting as the State-based liaison between the national coordinator and technical project officer, to ensure project is run efficiently at the State level.
4. Provide project management training, particularly in scheduling and budgeting, in project staff if required.

7.6.3 Kiribati Evaluation Report

Sector for Climate Change Adaptation project

Public Health

Project - Improving Implementation of Environmental Health Surveillance and Response to Climate Sensitive Health Risks in Kiribati

The project has built capacity within the Environmental Health Unit (EHU) in Kiribati's Ministry of Health & Medical Services (MHMS) to undertake surveillance of climate sensitive diseases. Key areas where capacity was built include vector, food and water borne disease surveillance.

The project supported the refurbishment of laboratories, purchase of new laboratory equipment and vehicle to facilitate more water-borne, food borne and vector-borne disease testing. Attachments and in-country training has built the capacity of MHMS staff in the use of enhanced surveillance and response work and in the use of the new laboratory equipment. A new Health Information System database with GIS functionality has sped up the entry of accurate data related to incidences of climate sensitive diseases and water quality. Data can now be analysed to identify disease outbreaks and target potential sources of the outbreaks.

A National Environmental Health Action Plan (NEHAP) 2015-2019 was created and endorsed that provides guidance on priority objectives and actions to progress environmental health in Kiribati. The GCCA project supported the implementation of several actions included within the NEHAP.

A behaviour change programme was designed and implemented to introduce the use of hands-free tippy-tap hand washing stations and Solar Water Disinfection System (SODIS).

The project funded the revision of the Kiribati Public Health Ordinance regulations to provide legal backing to the EHU to remove hazardous items that may help spread diseases.

Implementing Entity

The implementing entity for the climate change adaptation project was the Ministry of Health & Medical Services, while the Office of the President (OB) was responsible for overall project implementation especially cross-ministry coordination.

The Kiribati National Expert Group (KNEG) provided oversight for the entire project whilst the Communicable Disease Surveillance Committee (CDSC) was appointed as the technical oversight committee for the health adaptation project. While oversight meetings were only held as required, these appear to have been sufficient given the general lack of issues requiring high level attention and intervention.

The implementation arrangement was effective and can be recommended in the future. The project attracted cross-ministry support (e.g. from the OB, Public Works, Education and Foreign Affairs), and from multiple departments within MHMS (health information, health promotion, medical lab).

Relevance & EU Coherence

The project is highly relevant to national priorities as documented in the Kiribati Joint Implementation Plan (KJIP) for Climate Change Adaptation and Disaster Risk Management 2013-2018, specifically strategy 4 (water and food security) and strategy 5 (strengthening health-service delivery to address climate change impacts). The project assisted the implementation of the three

strategic focus areas identified in the National Climate Change and Health Action Plan (NCCHAP) for the Republic of Kiribati (1. water safety and water-borne diseases; 2. Food safety and food-borne diseases; 3. Vector-borne diseases). The project also follows the NCCHAP recommendation that disease surveillance is treated as a priority topic. The overall objective is also linked to key priority area 3 (health) of the Kiribati Development Plan (KDP) 2012-2015.

The project is highly relevant to the general population and target communities in Kiribati. Rates of childhood mortality from diarrhoea in Kiribati are among the highest in the Pacific with contaminated water being one of the leading causes of diarrhoea. Communities also suffer from illnesses from vector-borne disease and food-borne diseases. The health impacts of climate change which are targeted by this project are specifically noted in the Kiribati National Adaptation Programme of Action (NAPA, 2007).

The target community (Kawan Bairiki) for piloting SODIS is one of the poorest and most densely populated areas of Tarawa.

Many other related projects were being implemented or planned in Kiribati during the planning and implementation stages of the GCCA project. Some relevant projects include:

- South Tarawa Sanitation Sector Improvement Project Loan and Grant commencing 2013.
- University of the South Pacific-European Union Global Climate Change Alliance project (USP-EU GCCA). Focused on water sector.
- Climate Change and Health Adaptation Project 2010-2013 (WHO). Focused on environmental health surveillance and response to climate sensitive health risks. The NCCHAP was a major outcome of this project.
- Integrated water quality monitoring programme for water and sanitation-related planning and operational decision-making in Tarawa 2012-2014 (NZAID through NIWA).

The project formed very close links with the NZAID NIWA project as both had shared objectives. This collaboration avoided any duplication of work. Additionally, NIWA assisted to implement activities that complemented the GCCA project. For example, NIWA provided procurement advice and training in the use of laboratory equipment purchased by the GCCA project.

Effectiveness

Overall the project was found to be highly effective with the project purpose being achieved and nearly all components of the key results areas delivered as documented in the revised logframe (April 2015). The results for four indicators exceeded the target.

Expected result	Indicator	Indicator achieved
Overall Objective: To increase resilience of i-Kiribati to the adverse health impacts of climate change	More than 50% of the population of Kiribati covered by environmental health surveillance and appropriate response mechanisms by 09/2015	Achieved: More than half of the population of Kiribati live in South Tarawa where project activities and surveillance work are focused. The majority of the population will benefit from the strengthened Public Health Ordinance Regulations (drafted, awaiting endorsement) and from the actions prioritized in the NEHAP.

Expected result	Indicator	Indicator achieved
<p>Purpose: To contribute to the prevention and control of climate sensitive diseases through improving environmental health surveillance and response</p>	<p>One laboratory equipped and functioning for environmental health monitoring by 06/2014</p>	<p>Exceeded: EHU laboratory and medical laboratory renovated with new laboratory equipment purchased, installed and operational (April 2014). Field water quality testing also purchased and operational. Capacity to undertake climate sensitive disease surveillance greatly increased.</p>
	<p>Minimum 2 technical trainings by 09/2015.</p> <p>Attachments for 6 environmental health staff for surveillance and response to climate sensitive diseases by 09/2015</p>	<p>Exceeded: – Approximately 20 technical trainings conducted (water quality testing, vector-borne disease surveillance, food-borne disease surveillance, media training). See Table 1 for details.</p> <p>Partial: Five staff attended attachments with SPC-GIS, Pasteur Institute and Fiji Ministry of Health. A sixth attachment was planned in Guam for food safety, however, due to a last minute family illness the participant was unable to attend. Capability to undertake climate sensitive disease surveillance and identify disease outbreaks greatly increased from trainings and attachments.</p>
<p>Key Result Area 1: Information provided to communities to address health risks of climate change</p>	<p>Environmental health education resources prepared collaboratively and incorporated into new curriculum for at least one grade level by 12/2015</p>	<p>Achieved: SODIS education resources created (poster, fact sheet, FAQ booklet, video). Year 5 curriculum includes new environment health content (including SODIS).</p>
	<p>At least 1 awareness campaign on climate change resilience building activities and environmental health conducted by 12/2015</p>	<p>Exceeded: Community behaviour change campaign promoting the use of SODIS and tippy-taps was implemented in Kawan Bairiki. In December 2014, 51% of households in Kawan Bairiki were using SODIS. By March 2015, this number had risen to 76%, and by June 2015, 85% (as</p>

Expected result	Indicator	Indicator achieved
		per KAP survey). At a more localised level, the water champions supervisor reported that 135 out of 150 (90%) of the local houses engaged by the water champions who were surveyed in Bairiki were using SODIS. This is an exceptionally high take up rate for the desired behaviours. This campaign was then launched nationally by the Minister of Health in March 2015. Ongoing awareness raising on SODIS has been held since across Kiribati by multiple partners. See Table 2 for a list of events in South Tarawa aimed at spreading SODIS nationally.
Key Result Area 2: Routine systems for surveillance of environmental hazards and climate sensitive diseases strengthened	Health database for environmental health parameter and disease outbreaks operational by 12/2015	Achieved: Health database designed and built with GIS capability. Spreadsheet (disease incidence) data uploaded to database and analysed to identify outbreaks. Enhancements (database server to link EHU and Health Information Unit) installed by SPC-GIS.
	20 persons trained in monitoring, data analysis and data application procedures for environmental health risk and disease surveillance by 03/2015	Exceeded: 41 people trained (26 women, 15 men) through two Data for Decision Making workshops: Basic Epidemiology and Data Analysis Workshop (2013) and Outbreak Surveillance and Response Workshop (2014)
Key Results Area 3: Preparedness for response to outbreaks of climate sensitive diseases strengthened	National Environmental Health Action Plan (NEHAP) in place by 12/2015	Achieved: NEHAP approved by MHMS (2015) to guide future EHU work. NEHAP was used to design EHU's 2016 work plan.
	Contribute to minimum 3 national events for awareness on climate sensitive diseases by 09/2015	Exceeded: Project contributed to at least six events (World Water Day 2014 and 2015; World Hand Washing Day 2014; National Health Day 2015; Independence Day 2014; and EBOLA outbreak response workshop led by WHO).

Expected result	Indicator	Indicator achieved
Key Result Area 4: Coordinating, planning and budgeting mechanism improved	Maintenance and financing plan for EHU prepared by 12/2015	Achieved: 'Kiribati Climate Change and Health Adaptation Project: Recurrent costs for beyond project life' created to inform 2016 budget request.

Capacity building through technical and non-technical workshops was a strong component of the project. Tables below summarise the key documented training and workshop activities.

Table 1. Technical training summary

Capacity building focus area	Number of events	Men participating	Women participating	Total participants
Water quality surveillance	4	2	5	7
Food safety surveillance	3	5	7	12
Vector-borne disease surveillance	5	4	6	10
Health database and GIS	3	9	13	22
Epidemiology Data for Decision Making	2	13	20	33
Public health surveillance	1	8	18	26
National Public Health Emergency Plan (rapid response – Christmas Island)	1	12	11	23
Media training	1	10	11	21
Total	20	63	91	154

Additionally, five behaviour change workshops were delivered to assist the design of the community behaviour change campaign with more women than men attending each workshop (average of 29 participants).

Once the success of the SODIS community campaign was evident and the method was endorsed by MHMS, the project supported expanding the campaign across South Tarawa. SODIS training and awareness events were held with community groups, schools, kava bars and hospital clinics (for people being treated from outer islands) reaching at least 1,407 people (21 men, 72 women, 268 children and 1,046 unspecified attendees). The known demographics of event attendees reflects the project's key target groups (women and children).

Table 2. SODIS training and awareness events summary

Target group	Number of events	Men participating	Women participating	Children	Not specified	Total participants
Community	10		40	29	249	318
Kava bar	5	12	17		370	399
Clinics	4				300	300
Schools	4	9	15	239	127	390
Total	23	21	72	268	1046	1,407

The original project logframe was modified during the course of implementation to reflect revisions to the project design. Notable changes were the reduction of 'awareness campaigns on climate change resilience building activities and environmental health' from two to one. This reflects the decision made during the community behaviour change workshops (after the PDD was signed off) to focus on water and sanitation as a combined approach using SODIS and tippy taps.

The target of '4 persons trained in monitoring, data analysis and data application procedures for environmental change' was revised upward to 20 persons. This revision reflects a modification in the project design to conduct broader in-country training of MHMS staff as opposed to a narrow scope focusing only on the EHU.

A four-wheel drive truck and two motorcycles were purchased to support surveillance work and assist staff to commute to work. Vehicles were in good condition and were observed being used for their intended purposes. A dedicated driver is responsible for the maintenance of the truck.

As part of Kiribati's 'whole of island' approach, the GCCA project participated in an integrated vulnerability assessment in Abaiang. The project purchased and installed eight rainwater tanks for health clinics on the island in response to the assessment recommendations for the water sector. The EHU also made three visits to outer islands (Aranuka, Arorae and Nikunau) to conduct food, water and vector surveillance work.

Additional Activities beyond the Focus of the Public Health Sector

A Climate Change and Climate Risk Communications Strategy 2014-2018 was created and published to guide national level climate change communications. A communications officer, based in the Office of the President (OB), was hired for one year to begin implementation of this plan.

There were two project activities that helped advance access to climate change finance via new modalities in Kiribati. The first was the creation of a report documenting the extent of mainstreaming of climate change into national plans and policies. Mainstreaming of climate change is one of the key criteria set by the EU that must be met before countries might be able to access climate finance through direct budget support. The review for Kiribati looked thorough and a set of recommendations were provided to progress mainstreaming. The second activity to progress climate change finance access was a review of readiness for Kiribati to qualify for accessing climate change funding through budget support modalities. Kiribati's likelihood was rated medium to low.

Training in 'Proposal preparation using the Logical Framework Approach (LFA)' was delivered to 46 people (26 women, 20 men) over two training sessions in September 2013 and June 2015. The post-training evaluation indicated that the training was successful in building capacity and motivation of Kiribati government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. Weaknesses identified during the first workshop (budgeting and project

monitoring) were addressed in the second workshop. Overall, the training was highly valued as demonstrated by the following comments from two Kiribati participants.

"I now understand how to do a LFA and it will help me a lot in carrying out my activities at work."

"Very intensive for us to cram things into our heads. Participatory approach to teaching and learning is very good. Facilitators are very efficient and effective in teaching new concepts. Contextualised to our Kiribati setting. AWESOME and thank you."

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

Improved health and environmental benefits through using SODIS

Bairiki health clinic data indicates a reduction in reported cases of diarrhoea (235 cases per month baseline, 163 cases per month with intervention⁷⁷) around the time of the project's SODIS communications campaign. Interview data backs up the general finding of reduced water-borne illness (especially diarrhoea and skin rashes) in the Bairiki community. Whilst these positive results are promising, it is not possible to attribute this decrease solely to the GCCA project activities of promoting SODIS and tippy taps as there are other health and water improvement projects being implemented in Kiribati and several of these include Kawan Bairiki in their target areas.

Interview data indicates that the use of SODIS has reduced the need to boil water using kerosene or wood fuel. This has resulted in less air pollution and it has been reported that this has reduced respiratory diseases (coughing) in children and increased eye health for the elderly women who are often tasked with boiling water.

Reduced household expenditure

Switching from boiling water using kerosene to using SODIS to disinfect water can save a household up to AUD \$1 per day in fuel costs. Small savings are valued by Bairiki's community which can be categorised as a low socioeconomic group with high rates of unemployment. As SODIS has been launched nationally, these benefits are also expected in other communities.

Improved decision making

The new Health Information System with GIS functionality has allowed the EHU to quickly identify disease outbreaks and locate the potential sources of these outbreaks for faster targeting and response. For example, in March 2016, an outbreak of diarrhoea and Acute Respiratory Infection (ARI) was identified and traced to a location which allowed for specific disease response targeting.

Public Utility Board (PUB) and communities better informed about water quality

Community rain and well water quality is being tested on a request basis to determine if it is safe to drink or boil/ use with SODIS. PUB receives more frequent water quality test results that enable it to respond faster to poor water quality test results. This monitoring over the past three years is likely to have caused the improvement in regular chlorination of PUB water.

⁷⁷ Figures represent number of cases per month averaged out over the periods January- September 2014 and January- September 2015

Efficiency

Time

All planned project activities were completed within the allotted project timeframe and all key activities were completed as planned according to the timeline in the PDD with the number of training activities significantly exceeded. On review of the number of activities completed and the project time allocated, the evaluation finds that the project made efficient use of the time available for implementation. Regular visits⁷⁸ by the SPC climate change advisor helped to keep project activities progressing at an acceptable pace. Without these visits it was noted by both SPC and the EHU that project activities would have taken much longer to complete putting at risk the delivery of some later project tasks.

Cost

Kiribati had acquitted 99% of its €520,000 allocation for the on-ground project by March 2016 and all remaining funds are allocated which will result in 100% expenditure by the end of the project. €54,000 was allocated for national coordination and 100% of these funds were acquitted.

As at February 2016, Kiribati had spent all of its core budget allocation (€500,000) and still had some additional funding (€5,000) available from its Cyclone Pam response fund allocation. The largest project expenditure items were for the purchase of laboratory refurbishment, equipment, capacity building training and workshops, wages for project staff and new vehicles. Whilst there is generally a high degree of scrutiny when projects funds are allocated to purchase vehicles, the project had a justified need (as per baseline information) for transport to conduct surveillance activities.

Multiple in-kind contributions from different partners have increased the overall cost efficiency of the project. Cost savings achieved by having the NZ Navy transport laboratory equipment to Kiribati contributed to increased project cost efficiency. In-kind support from the Pasteur Institute and the Fiji Ministry of Health to host attachment staff also added to the total value of the project. NIWA, supported by NZAID funding, and Fiji National University, helped to implement essential and complementary training activities. A Cost-Benefit Analysis (CBA) was not conducted to justify the chosen project interventions; however, a CBA is less relevant considering the project closely implemented priority actions already listed in the KJIP and NCCHAP.

Staffing

The project team had sufficient capacity and capability to implement the project. Project funds were used to hire a national coordinator, communications officer, project officer, finance officer and vehicle driver. Six water champions (including a supervisor) were employed between November 2014 and March 2015. Other staff were recruited for shorter periods as required to carry out EHU activities. Both the project officer and finance officer brought to the project a high degree of knowledge and experience in their respective fields. The national coordinator was a recent university graduate and has matured and grown extensively to take on many additional non-project climate change responsibilities, including representing Kiribati at the Conferences of the Parties (COP) annual meetings. The workload allocated to the national coordinator by OB sometimes detracted from their involvement in the climate change and health aspects of the project. However, sufficient contribution to national mainstreaming activities and coordination of all climate change projects, such as the 'whole of island approach', was given.

⁷⁸ 14 trips between 2012 and 2015

The water champions' supervisor had experience working at Australian AID. Her skills, competency and ability to innovate helped to ensure the other water champions were effective and not limited by small challenges.

Overall the evaluation finds the project was delivered with a high degree of efficiency in terms of financial investment and staffing.

Sustainability

It is highly likely that the benefits obtained from the SODIS communications campaign will continue in the short to medium term future. Firstly, the local Kawan Bairiki community has ownership of the initiative and continue to use SODIS when a reliable water source is available (PUB or rainwater) and there are appropriate weather conditions. This visible use of SODIS helps to create a new social normative behaviour that reinforces the behaviour and encourages continuation. Secondly, the water champions continue to answer questions from community about SODIS and tippy taps.

Outside of the community, a SODIS awareness campaign was carried out reaching approximately 1,400 residents of South Tarawa. Finally, other partners and projects (WHO, NZAID, UNICEF, STSISP, KAP III), are including SODIS as part of their programs, although none to date are replicating the behaviour change model using the water champions. SODIS and tippy tap communication materials have been shared with partners for continued distribution. SODIS tables have been installed in most health clinics and schools in South Tarawa. SODIS has been included into the Year 5 school curriculum which will help with the longer term sustainability of the behaviour.

Cloudy weather, irregular supply of PUB water, bottles going missing and access to PET bottles are all barriers to performing SODIS. However, the last barrier has been reduced through the supply of bottles from external contractors, hotels, and the New Zealand recycling centre.

The new water, food and vector-borne disease testing equipment in the refurbished laboratories should continue to run with minimal maintenance. Consumable supplies (reagents, vehicle fuel) are now costed into the MHMS core budget. The WHO allocates AUD 33,000 to EHU each year, so these funds could cover costs for consumable lab supplies if needed.

New projects have funded the continued employment of the national coordinator, project officer and finance officer. Staff retention will help ensure that capability built is not lost and can be used to assist in continuing project activities (e.g. surveillance work).

Under existing arrangements with NZAID, NIWA continue to engage with the MHMS through regular missions to run refresher training in water quality testing and to ensure staff are following the new Standard Operating Procedures. These visits and trainings help address staff turnover in the MHMS Medical Laboratory.

Other PSIS (Tuvalu, Marshall Islands, Solomon Islands, FSM, Nauru) have also expressed an interest in learning more about SODIS and potentially piloting the technique in their countries which may lead to possible replication.

Overall, the benefits of the project are highly likely to continue in the short to medium term (1 to 5 years). Longer term sustainability is likely, based on the fact that EHU was recently allocated nine new support staff by the ministry, recognizing the staffing need by EHU for their extensive surveillance programme.

A south-south exchange involving Nauru Government staff visiting Kiribati was held in December 2015 and February 2016. The exchange allowed Nauru Government staff to see firsthand how Kiribati

undertook water quality testing, and may allow for the benefits of the project to spread to another PSIS.

Cross-Cutting

Gender

Women and children were the main target beneficiaries of the SODIS and tippy taps behaviour change campaign. However, the entire family, including elderly members also directly benefited. For example, all family members benefit from bacteria-free drinking water and increased family savings from reduced expenditure on fuel for boiling water. Elderly women indirectly benefited from not needing to sit by the fire (exposed to smoke) as often to boil water.

Women were highly representative at the Project Planning Meeting (14 women, 11 men). The majority (4) of the water champions contracted were women and women were majority beneficiaries from health training workshops⁷⁹. Women were also highly representative (18 women, 9 men) in the community behaviour change workshops used to design the SODIS and tippy taps campaigns.

Environment

The PDD risk management matrix did not identify any specific environmental risks outside of the impacts of natural disasters (drought). Due to the low impact nature of the work, no Environmental Impact Assessment (EIA) or Environmental Management Plan was required to assess and manage environmental risks. The project, through the SODIS initiative, collected and reused PET bottles from various sources, thus reducing the need to buy new bottles and potentially reducing litter and waste to the landfill. A monetary incentive to recycle PET bottles (already in place before this project) encourages people to recycle their PET bottles once they are past their best (scratched) for SODIS. Additionally, the project supported sanitation awareness and community clean-ups to prevent food, water, and vector-borne diseases, which had an unintended positive benefit on the environment.

Visibility

The EU, SPC and GCCA logos was represented in all key project collateral and relevant deliverables (project fact sheet, SODIS poster, research report, fact sheet, FAQ booklet and research poster for UNISDR conference). The project banner was also featured at all local capacity building workshops.

Stickers promoting the EU and SPC GCCA were placed on all major equipment procured (medical equipment, truck). The EU's funding contribution was also acknowledged on all press regional press releases for the project and a plaque was also unveiled by the EU Ambassador for Development at the 2014 official opening of the renovated laboratories. A song and videos promoting SODIS and tippy taps in i-Kiribati language were produced for local communities. Videos (local and international) demonstrating SODIS were effective tools to persuade local community members that SODIS worked and was safe to use. A lessons learnt video and video summarising project activities was also produced to promote the project. These videos are available on YouTube and have been screened regionally on Pacific Way. SPC's involvement and the EU's funding contribution were highlighted in these products.

SODIS was also promoted on local radio and attracted regional radio coverage on ABC and Radio NZ. Newsletters (Climate Change Matters) and media releases have also been used to create awareness

⁷⁹ 59% of technical training participants were women. No accurate percentage of women and children attendance at non-technical workshops can be made, however, it is known that over 340 women and children attended.

about the project. Visibility was also given to the project, SPC and the EU through attendance or presentations at regional events (SPC CRGA meeting in Niue, GCCA Lessons Learnt Workshops and roadshows).

Overall, there was sufficient visibility about the project and both SPC and the EU were acknowledged for their roles in implementation and funding.

Best Practices & Recommendations

Best practices from the project in Kiribati

1. Include a properly resourced and designed behaviour change campaign when trying to change behaviours.
2. Work with multiple partners during implementation to enhance sustainability of the project.

Recommendations

1. Get support from all health departments before rolling out behaviour change campaigns.

7.6.4 Marshall Islands Evaluation Report

Sector for Climate Change Adaptation Project

Coastal Protection

The water sector was originally selected in 2012. This was changed to coastal protection in 2013 on recommendation from the RMI Chief Secretary, based on consultation with the Climate Change Committee, who indicated that the water sector was adequately covered by other projects.

Project

Building Capacity to Address Coastal Protection in the Marshall Islands

The project successfully constructed a new causeway on Woja Island, a remote outer island situated in Ailinglaplap Atoll, Republic of Marshall Islands (RMI). The project built capacity within the Ministry of Public Works (MPW) to plan and implement coastal protection projects in small outer island atolls. Capacity was built through the experience of implementing the project, observing the feasibility and detailed design process, the placement of an external civil engineer within MPW to oversee the coastal works and the purchase of a used excavator, compactor and rock truck.

The implementation was preceded by a feasibility study, and a detailed design based on an integrated coastal management approach with both soft and hard coastal protection measures included.

Community education on climate change, coastal protection measures, coastal planting and home food gardening increased local knowledge and capacity of school children and the general community on Ailinglaplap Atoll to adapt to climate change.

Implementing Entity

A collaborative partnership between the Office of Environmental Policy Planning and Coordination (OEPPC), MPW and the Environmental Protection Authority (EPA) was formed to implement the project. This is one of the first times this level of multi-agency collaboration has occurred to implement a climate change project in RMI and similar arrangements could be used in future projects as all three agencies play important roles in coastal protection projects. There were some challenges in the collaboration, specifically, a general lack of clear and frequent communication between parties, including communication to SPC.

The RMI Coastal Management Advisory Council (CMAC) was involved in the Project Planning Workshop in February 2014 and one member of the CMAC was involved throughout the implementation phase.

There was little evidence of any active oversight committee at the national level. Two stakeholders recommended that RMI's retired National Climate Change Committee (NCCC) should be reinstated with broader cross-government representation to facilitate a whole of government coordinated approach to climate change projects and potentially take on this oversight role.

Relevance & EU Coherence

The RMI project is highly relevant to national priorities as documented in the RMI National Climate Change Policy Framework 2011 (Goal 2, Adaptation and Reducing Risks for a Climate Resilient Future), the RMI's Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management⁸⁰ and National Climate Change Policy Framework 2011 (Goal 2, Adaptation and Reducing Risks for a Climate Resilient Future).

The Woja causeway project in Ailinglaplap Atoll was already listed as one of many priority projects in the MPW's Proposed Climate Change Related Infrastructure Projects (2010) document. OEPPC conducted further survey work in 2013 to verify Woja causeway as the priority target area. The Woja causeway was selected because coastal erosion was advanced and impacting copra production and community access to key services (school and drug dispensary) during high tide.

The project is also highly relevant to meeting the needs of local communities. Chiefs and communities in Ailinglaplap Atoll were consulted regarding the preferred site for the intervention. After discussion involving assessments of all the possible intervention sites, consensus was again formed around the Woja causeway.

Other complementary climate change projects were being implemented in RMI during the planning and implementation stages of the GCCA project. These projects include:

- Pacific Adaptation to Climate Change (PACC) – Focused on mainstreaming climate change in national and sector policies and implementing measures to improve water security.
- Coastal Community Adaptation Project (C-CAP) 2013-2017 – Focused on building the resiliency of vulnerable coastal communities.

Effectiveness

Most effective in remediating and raising the Woja causeway to enable safe passage at high tide

Overall the project was found to be highly effective with the project purpose being achieved and all components of the key results areas delivered as documented in the revised logframe (February 2015).

Expected result	Indicator	Indicator achieved
Overall Objective: Improve resilience to coastal climate change impacts in RMI	Use of integrated coastal management tools demonstrated as effective resilience building approach	Achieved: Combination of hard (elevated causeway constructed) and soft (coastal replanting) engineering methods applied to Woja causeway. Integrated approach also achieved through collaboration between MPW, OEPPC and EPA.
Purpose:	Skills and capacity of MPW enhanced to implement	Achieved: MPW capacity has been enhanced through

⁸⁰ Two objectives relate to the project: a) Public education and awareness of effective CCA and DRM from the local to national level; b) Enhanced local livelihoods and community resilience for all Marshallese people

Expected result	Indicator	Indicator achieved
Increase capacity of RMI stakeholders to plan and implement effective coastal protection measures that reduce vulnerability to climate change	coastal protection measures, especially in outer islands by 10/2015	managing the planning, design, implementation and monitoring of the project. Capacity to undertake future hard coastal protection works (and maintenance) has also been increased through the purchase of used machinery-excavator with claw attachment, a compactor and a rock truck.
Key Result Area 1: Increased awareness in some local communities in RMI about integrated coastal management practices	Schedule of education and awareness activities prepared by 03/2015. At least four education and awareness activities conducted by 08/2015.	Achieved: Very basic schedule developed detailing five trips to Ailinglaplap. Trips involved community consultations and more than four education and awareness activities led by the EPA and partners (Ministry of Education, CMI-Land Grant). Education activities included topics: school gardens, replanting activities, creating temporary natural berms, GIS, integrated coastal management awareness, water quality management and Sandwatch.
Key Result Area 2 Capacity of Ministry of Public Works to plan and construct coastal protection measures enhanced	Minimum 2 community consultations conducted to provide input to project design by 06/2014	Achieved: Community leaders and Women's Group representatives consulted on Woja (February 2013, November 2013). Project planning workshop also held (February 2014) with various Government and non-Government stakeholders, however, logistical issues prevented representation from the Woja community attending the planning workshop. Consultations also helped provide a historical context to coastal erosion on Woja.
	Coastal protection measures selected, designed and costed by 06/2014	Achieved: Coastal protection measure selected, designed and costed, evidenced by Woja Causeway Project: Coastal Processes and Feasibility Study (February 2014) and

Expected result	Indicator	Indicator achieved
		Woja Causeway Project: Detailed Design and Monitoring Plan (March 2014) developed by consultant e-Coast Marine Consulting and Research.
	Heavy duty equipment (compactor, large rock truck and excavator with claw attachment) procured and purchased by MPW by 07/2015 and available for coastal protection works	Achieved: Compactor, rock truck and excavator with claw attachment procured by MPW (April 2015). The rock truck only came into MPW's possession in February 2016 after project works had been completed. An existing rock truck was used for the project on Woja.
Key Result Area 3 Marshallese glossary of climate change terms available for use in primary and secondary schools and local communities	Report on National Climate Change Dialogue by 09/2014	Achieved: First ever National Climate Change Dialogue was conducted (September 2014). The two dialogue objectives ⁸¹ were achieved. 320 people attended the events (including RMI's President) and 84 survey responses were also received as input into the process.
	Marshallese glossary available for use in primary and secondary schools by 08/2015	Achieved: National glossary produced including definitions of climate change terminology as it relates to key sectors in RMI (coastal protection, water security) in both Marshallese and English (December 2015). Marshallese language arts and science students were involved in glossary development. Opportunity exists to add more illustrations to visually complement text definitions.

The project logframe is missing an indicator to measure one of the key project outputs, the completion of coastal protection works on the Woja causeway covering 70 meters of coastline (priority area 1⁸²). This indicator was deliberately omitted from the logframe because it was unclear in February 2015 whether the causeway could be completed by the end of 2015 due to ongoing

⁸¹ Dialogue objectives: 1). Discuss the long term future of the Marshall Islands in the context of climate change; and 2). Share and receive feedback on climate change policies, plans and actions in the Marshall Islands.

⁸² Priority area 1 at the southern end of causeway was more vulnerable and heavily eroded. Priority area 2 is less vulnerable, but still impassable by vehicular traffic for one to two hours either side of high tide.

challenges with marine transportation to the outer islands. However, at that time, MPW committed to finishing the causeway outside of the project timeframe if necessary.

Works to build the causeway and raise the height of the road were completed⁸³ by MPW for priority area 1 (November 2015) and a temporary road further inland was constructed to provide transport access along the longer Woja road section (150 meters) at priority area 2. MPW noted that without works on the Woja road (priority 2) the causeway project will not be beneficial. The shortfall in funding (and time) to complete the coastal works as per the specified design for the priority 2 site puts into question the desirability for relatively small projects like SPC GCCA to fund coastal protection work on outer islands where the costs can be very high and difficult to estimate. Ideally, projects would have sufficient funding to implement the project as per the design as opposed to scaling back the design and scope of works to fit the project budget.

The arrangements to implement the coastal works in Woja changed from those documented in the first signed PDD (June 2014). An exploration of the reasons for the change in arrangements is presented below.

When procuring services to undertake the Woja causeway works, interest was received from two national bidders. However, only one submitted a bid response after a site visit and further clarification of works was provided. The one bid was rejected as the price quoted far exceeded both the project's estimated costs and GCCA project funds available. The estimated cost for priorities 1 and 2 as per the feasibility and detailed design documents was approximately USD 0.98 million. The bid price received was USD 1.35 million. Pre-procurement costing estimates included in e-Coast's detailed technical design document were based on cost estimates from RMI contractors. Recognising that there was a lack of competition in the bid process, the bidder may have inflated their price⁸⁴. Negotiations with the one bidder resulted in an informal revised lower offer being made, however, the revised bid amount still exceeded the project budget and conditions transferred additional costs to MPW⁸⁵. Additionally, a proposed two month increase in construction time increased the risk the works would not be completed within the project timeframe.

Following the review of the one bid received by the Bid Review Committee, the bid was rejected and the Review Report recommended an alternative (MPW-led) implementation arrangement that would see MPW use the project funds to procure heavy equipment and MPW would cover the cost of building the causeway (labour, transportation, fuel, supplies). SPC's preference was to accept the revised bid and they were willing to invest a further USD 100,000 to contribute to the funding shortfall, however, this would still have not bridged the funding gap. The RMI bid review committee rejected the revised offer and preference was given to the alternative implementation arrangements. These alternative arrangements were later supported through a revised PDD being signed off in February 2015. Stakeholders interviewed indicated that the change in procurement arrangements and progress being made in this regard could have been better communicated with all stakeholders, including with SPC.

A project engineer – recruited from overseas and positioned within MPW – was contracted to oversee the construction works.

⁸³ An 'Irish Crossing' structure at priority area 1. It is designed to allow over-topping of the causeway in extreme cases (cyclone or storm surge events).

⁸⁴ The bidder in question provided much lower estimated costing to e-Coast during the design phase.

⁸⁵ MOPW potentially needing to supply and transport heavy equipment to Ailinglaplap Atoll. MOPW reported that they were unable to fulfil these requirements.

The alternative implementation arrangements were successful in completing the project works despite some issues⁸⁶ in the procurement of the heavy equipment and some logistical issues resulting in two additional (one potentially unnecessary) barge trips to Ailinglaplap to provide additional fuel and supplies to complete the project.

Stakeholders consulted as part of the evaluation had differing views regarding the implementation arrangements for the causeway project. There was some criticism levelled at the selection of the project engineer as well as design consultants. Interestingly, some criticism was levelled at SPC's role in the selection process; on one hand for not being sufficiently involved in the recruitment of the project engineer⁸⁷, and on the other hand for playing too much a role in the selection of the design consultant without sufficient local input⁸⁸. It should be noted OEPPC were involved in the selection of the design engineer and that MPW were involved in discussions with the design engineer during his preparation of the design documents.

Additional Activities beyond the Focus of the Coastal Protection Sector

The project funded a review to examine the extent of mainstreaming of climate change into national plans and policies. The mainstreaming of climate change into government plans and policies is one indication of readiness to obtain direct budget support. The resulting report⁸⁹ indicated that climate change was mainstreamed into national policies and plans; however, improvements were recommended⁹⁰ that could be supported by future projects.

A succinct assessment⁹¹ of RMI's likelihood to qualify for climate change funding through direct budget support was completed in 2013. The government budget was regarded as having poor transparency and there was also a need to strengthen monitoring, evaluation and external audit capabilities. A lack of information made the assessment difficult and overall the likelihood of RMI accessing climate change funding through budget support modalities was rated as low.

A comprehensive assessment of climate change funding in RMI was conducted in 2014⁹² supported by multiple donors⁹³ (including the SPC GCCA project) through financial and technical assistance. Lengthy findings and recommendations were consolidated in a Climate Change Finance Action Plan to guide future progress. The costed plan presents an opportunity for RMI to invite future donor projects to support key initiatives.

⁸⁶ Short bid time focusing only on national tenderers resulting in only one bid received for the truck, potentially reducing value for money. Rock truck price increased at time of procurement as budgeted model was not available on-island. Rock truck delivered past the project end-date. Decision to use national tenders only based on Cabinet Decision C.M 173 (2014) which waived the normal international bidding procedures.

⁸⁷ One stakeholder questioned if the project engineer had the skills and experience to oversee the project. They had allegedly not ever been to an Atoll island before the project.

⁸⁸ One stakeholder reported that MOPW should have played a greater role in selection of the coastal engineer. Some shortfalls in the design were experienced during implementation.

⁸⁹ 'Review of mainstreaming of climate change into national plans and policies: Republic of the Marshall Islands' (November 2013)

⁹⁰ a) Development of sector plans (Vision 2018 Masterplans, with costed and prioritised activities and specific reference to climate change; b) establishment of a monitoring and evaluation framework for Masterplans; c) identification of climate-relevant expenditure within departmental budgets.

⁹¹ 'Project countries that are most likely to qualify for accessing climate change funding through budget support modalities' (2013)

⁹² 'Pacific Climate Change Finance Assessment, RMI National Assessment' (August 2014)

⁹³ Australian Aid, USAID, United Nations Development Programme (UNDP) and PIFS

A first ever climate change glossary was created that provided climate change terms and definitions as it relates to key sectors in RMI (coastal protection, water security) in both Marshallese and English.

A national climate change dialogue, the first of its kind in RMI was hosted in Majuro to discuss the long term future of RMI in the context of climate change and to share and receive feedback on climate change policies, plans and actions.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 29 people (8 women, 21 men) in July 2014. The majority of participants were youth leaders from outer islands and many did not have strong English language skills, and a number of participants had limited secondary education. For many, this was their first training workshop following their school education. These barriers were addressed through simplifying and reducing the amount of content covered and using government staff to translate content as it was delivered. A post-workshop evaluation found that most of the respondents indicated a fair to high degree of confidence in being able to complete the steps of the logical framework approach. Whilst overall the training was successful, the full benefits of the training were not realised due to the constraints mentioned above. The training impact survey revealed that only one participant had used the LFA and submitted a proposal since the training. Due to a very low response rate to the impact survey, this result may not be representative of all participants⁹⁴.

Impact

Increased access to essential services on Ailinglaplap Atoll

The Woja causeway can now be crossed at all hours of the day (including high tide) which has increased the community's access to a school and pharmaceutical drug dispensary. It has also enabled uninterrupted travel for friends and family members visiting homes on either side of Woja Island. Without the Woja causeway project, the trade and transport of copra would likely have been impacted in the medium to long term.

Increased capacity of MPW to undertake coastal protection work

MPW now have three additional items of heavy machinery in their inventory to undertake capital works (including but not limited to coastal protection work). The additional experience they gained by implementing the capital works component as well as observing the consultation, feasibility study and detailed design work serves as a model for them to replicate in future projects.

⁹⁴ Five participants out of 29 responded to the impact survey.

Efficiency

Time

With the exception of the arrival of the rock truck, all planned project activities were completed within the allotted project timeframe. The project was set back by 12 months by a change in target sector. Some stakeholder acknowledged the slow progress that was made during implementation. The procurement process also took additional time as a result of the change from contracting out the Woja coastal work to MPW purchasing heavy equipment and conducting works⁹⁵. At one stage, June 2014, the project was at risk of having its funding re-allocated to other countries due to a lack of progress. SPC made 14 visits to RMI (five in the 2015) which indicates that a high degree of intervention and encouragement was required to progress the project. The risk of losing all project funds and SPC's repeated visits helped to resolve issues and move the project along. On-ground implementation of coastal works was completed within a short timeframe (5 months).

Consulting with and obtaining consent from the communities took a significant amount of time due to the need for approval from three levels of chiefs and then land owners. A lack of communication between MPW and EPA regarding activity timing resulted in EPA coastal replanting rehabilitation works being delayed. However, as mentioned above, works were completed before the end of the project.

Cost

Marshall Islands had acquitted 97% of its €500,000 allocation for the on-ground project by March 2016 and all remaining funds are allocated which will result in 100% expenditure by the end of the project. €69,295 was allocated for national coordination and 87% of these funds were acquitted with the remaining funds fully committed.

The bulk of the funding was allocated to purchasing the heavy equipment. Government co-funded through both financial and in-kind contributions to undertake three project tasks⁹⁶. Additionally, MPW provided an estimate of over USD 50,000 of in-kind labour to undertake the Woja coastal protection work.

The purchase of the rock truck ended up costing more than budgeted (reasons explained in effectiveness section) and this exceeded the amount of project funds available. As per agreements in place, the MPW was responsible for filling this funding shortfall.

When selecting approaches to address coastal erosion at Woja causeway and road, there is little documentation of the project using cost-benefit analysis or other tools to weigh up alternative solution options to achieve the same outcome. The only alternatives (a barge-and-pulley system or large-scale replanting across the whole area) were discussed at a design planning meeting in February 2014 where it was noted that these ideas came too late in the project planning process. Furthermore the barge and pulley system would have resulted in extensive environmental impact and been beyond the project budget. Replanting was not a feasible option for the type of erosion being experienced in Woja.

The cost of undertaking coastal protection work in outer islands is high. Estimates (which were found to be insufficient) in the detailed design document assumed the project would be contracted out to a

⁹⁵ This effectively required two rounds of procurement to be initiated.

⁹⁶ a) The detailed design and costing and monitoring plan work; b) engaging key stakeholders in the selection of the final design; c) submission of permit application to EPA.

third party to implement. The estimates provided are evidence of the high cost – approximately USD0.98 million for protection for a total of 220 meters of coastal area. A very rough calculation provides an average rate of USD4,450 per meter of coastline.

Currency exchange rate fluctuations worked against RMI resulting in missed local (USD) currency to invest in the project. Alternatives to fix rates or guarantee the amount of funds in local currency at the start of the project should be investigated.

Staffing

The project funded a national coordinator and project engineer (in the final year). The PMU was very small in RMI with representatives from OEPPC, MPW and EPA. SPC and the national coordinator noted that staffing was sufficient, but that the project was also fortunate to have leadership support from the highest level (the President) which helped mobilise support and action for the project. Without this high level of support, additionally-funded PMU staffing would likely have been required to progress the project and achieve outcomes. The need for more project staff in the PMU (specifically OEPPC) was highlighted by both the EPA and other OEPPC staff. Additionally, the detailed climate change financing assessment report for RMI (p.12) also noted that “*OEPPC needs strengthening to enable it to fulfil its coordination mandate and act as the information hub for climate change-related activities as presently it is unable to meet its international meeting commitments and fulfil its domestic coordination obligations*”.

Overall the evaluation finds the project achieved an acceptable positive result in terms of its efficiency considering, time, financial investment and staffing.

Sustainability

The outcomes of the project are highly likely to continue in the short-term and reasonably likely to continue in the medium term (3 to 5 years) provided the monitoring plan is followed and maintenance work is funded.

Factors contributing to the sustainability of the Woja coastal works include:

- The engineering design for work on Woja considered sea level rise and maximum wave heights projected over the estimated 30-year life of the asset.
- A monitoring plan was developed during the engineering design work and the MPW has been tasked with monitoring the site. The EMP also mentions community involvement in monitoring, however, no project activities focused on building this capacity with the community.
- The need for maintenance was considered during the project design phase. Ongoing maintenance of the causeway structure(s) has become the responsibility of the MPW.

The maintenance of the new heavy machinery purchased will be covered by MPW's core budget.

The increased capacity within MPW through the experience of implementing the works and additional heavy machinery will assist them to plan, design, implement and monitor coastal protection measures on other outer islands. Whilst technical design work was carried out by e-Coast, MPW have learnt from the process of undertaking feasibility studies to select or verify the most appropriate coastal protection measure before developing detailed designs and costing.

In the longer term, the new Marshallese Climate Change Glossary will help build student and community literacy in climate change concepts which should help them better understand and contribute to projects in the future.

The GCCA: PSIS national coordinator was absorbed into the Ministry of Finance in 2016 where he has the potential to play a leading role in enhancing financial management of projects and progressing measures to access new modalities (or sources) of climate change funding.

One potential risk to sustainability of the project is the expected life of the temporary Woja road (priority area 2). The road was acknowledged as a temporary stopgap measure and both MPW and EPA are uncertain how long the temporary road will remain in place and provide safe transport access at high tide. Regular monitoring and maintenance of the site may be needed to ensure the full benefits of the Woja causeway project are continued into the future⁹⁷. Additional funding is required to implement the proper road works to implement the design as specified by e-Coast in the detailed design document. There are no immediate or short term plans or funding to conduct these works.

Cross-Cutting

Gender

Men (12) and women (8) were represented during the key project design meeting. The project discussed complementary activities during the project design phase that could have directly benefited women; however, there is no evidence that these activities⁹⁸ were implemented.

Local men benefited from the project through local employment opportunities to support rock removal and re-vegetation. Increased income would have likely benefited the entire family and broader community, however, there was no time or scope in the evaluation to verify this outcome. Youth were involved in the replanting and home gardening activities in Woja.

Youth from outer islands were targeted for the proposal preparation training, however, this brought with it additional challenges, since many of the youth had an inadequate command of English to be able to fully benefit from the training.

Environment

The inclusion of the EPA in the PMU from the project outset assisted the project to follow correct environmental protection processes. After a review of the detailed engineering design and monitoring plan, and the marine survey that was conducted by the College of the Marshall Islands, it was determined that an EIA was not required and that the development of an Environmental Management Plan (EMP) would suffice. The EPA also oversaw that the correct permits for earth moving were obtained and that correct processes were followed to obtain consent from chiefs and land owners. A post-construction review conducted by the EPA revealed some violations⁹⁹ of the EMP. MPW addressed these issues to the satisfaction of EPA. Whilst EPA involvement was beneficial, it was also discussed that there was a lack of monitoring from the EPA during the construction period as a result of limited funding. Alternative arrangements through a local island representative national EPA staff member on-site for longer periods during construction should be considered in future projects to provide additional monitoring.

Longer term environmental outcomes (reduced erosion, increased biodiversity, improved water quality) may result from coastal revegetation work undertaken by communities, schools and the EPA.

⁹⁷ Prior to the project, the priority 2 site experienced minor flooding during high tides.

⁹⁸ Support for local handicraft development, training of women in weaving.

⁹⁹ Violations: a) gap in (lowering) of the beachrock ledge; b) 2 holes in the beach where material had been removed; c) restoration of the crew camp site; d) reconstruction of roadway near priority site 2; and e) coastal replanting not completed.

Visibility

The project did not develop a communications plan. However, there was some local media coverage of the project, specifically the opening with coverage in The Marshall Islands Journal and promotion by SPC's media release. The RMI EPA Facebook¹⁰⁰ and YouTube channel¹⁰¹ page also promoted the project through a short video. Unfortunately the locally produced video focussing on the coastal replanting activities did not have acknowledgement of SPC or the EU.

The evaluation did find evidence of communications tools and knowledge management products that created awareness about the project with acknowledgement of the role played by SPC and the EU. These items include the project fact sheet, banner, technical reports, newsletters (SPREP Climate Change Matters) and videos¹⁰². The National Climate Change Dialogue also helped to raise the profile of the project at the national level. The Capacity 4 Development website¹⁰³ also provided visibility about the project.

A national lessons learnt workshop (November 2015) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

Overall, there was adequate visibility about the project and its support for implementation from SPC and funding from the EU. A communication plan should have been developed early in the project to guide more frequent communications through for example, a project webpage or photo stories or the creation of additional visibility products (e.g. hats or tote bags for school children).

Best Practices & Recommendations

Best practices

1. MPW now equipped to undertake 'small' coastal protection measures in outer islands.

Recommendations

1. Projects undertaking coastal protection measures on outer islands need to allocate a large contingency to their estimated costs or use the "x 2 rule of thumb" described in the lessons learnt from the overall SPC GGCA project in their planning and costing.
2. Where possible, project design elements should not be left out in order to fit within a prescribed budget. Perspectives from all parties (donors, implementing agencies and national governments) need to be considered. The pros and cons of selecting a new project or continuing with a project that does not fully address or resolve the core problem need to be considered.
3. Regional and national projects should investigate ways to accommodate exchange rate variations so countries are assured of the level of funding they will receive to deliver their projects.

7.6.5 Nauru Evaluation Report

Sector for the Climate Change Adaptation Project

¹⁰⁰ <https://www.facebook.com/rmiepa.outreach/videos/1690162314601656/>

¹⁰¹ <https://www.youtube.com/watch?v=AunhShfoE5o>

¹⁰² "Strengthening Coastal Resilience in the outlying atolls of the Marshall Islands", <https://goo.gl/Prastx>

¹⁰³ <http://capacity4.dev.ec.europa.eu/gcca-community/blog/coastal-protection-projects-opened-tonga-and-marshall-islands>

Water sector

Project

Expanding national water storage capacity and improving water security in Nauru

The original project design targeted the repair of household roof catchments. This was re-scoped to demolish and replace a 4 million litre national water storage tank used for storing desalinated water. Funding and time shortages resulted in the project scope being further reduced to only the demolition of the large water storage tank.

A 20-year Water and Sanitation (W&S) Master Plan (plan for water supply and sewerage infrastructure needs of Nauru for the next 20 years) was prepared and proposals prepared for approaching donors for funding.

Other activities included training in Water, Sanitation and Hygiene (WASH) and a south-south exchange visit on water quality with Kiribati.

Implementing Entity

The project was implemented by the Department of Environment under the Ministry of Commerce, Industry and Environment (CIE). The project worked with an existing water Technical Working Group (TWG) that included the Nauru Utilities Corporation (NUC) and the Department of Health. Under the original PDD, the role of the TWG was to provide guidance on water-related initiatives and the GCCA: PSIS national coordinator was to provide secretariat services to the TWG.

This arrangement was decided at the country level. Whilst this may have worked for the original roof restoration project, the change to a national water storage project should have seen the implementing entity change to NUC as the agency with the specific sector experience.

Relevance & EU Coherence

Nauru's selection of the water sector is relevant to national needs. Nauru's project also demonstrates coherence with other EU programmes, and aligns with SPC's Climate Engagement Strategy.

The National Sustainable Development Strategy 2005-2025 (NSDS, last revised in 2009) identifies priority needs for the water sector including refurbishment of national water storage tanks, installation of new household water tanks (a target of 100 per year), and expansion of water storage capacity by 2015. These water sector priorities are also identified in the National Water, Sanitation and Hygiene Policy 2012.

The provision for increased rainwater collection and storage, and increased desalination are both identified as priority actions in RONAdapt (October 2014; developed with GCCA: PSIS funding).

Projects being implemented in Nauru at the time of project design that were complementary to the original concept note included:

- 2012 AusAID Household water tank project for 250 water tanks (implementation in progress following delays¹⁰⁴).

¹⁰⁴ "A water tanks project, part of an Adaptation to Climate Change program was behind schedule. DFAT provided additional support to address implementation issues. The project is now progressing." Nauru Aid Program Performance Information 2014-15. To date, no water tanks have been installed (Pers. Comm).

- EU-funded (EDF 9) procurement of guttering, with the actual installation being supported by funding from the Italian Government through the PACC project.

The selection process for households to receive roof catchment repairs in the original proposal was based on an engineering review of 317 households. The survey sought to:

- assess the roof conditions;
- identify households with a working water tank and appurtenances;
- identify the most vulnerable households and people; and
- maximise the number of beneficiaries.

Overall, the original proposal to repair roof catchments to increase household rainwater storage and use aligns with national priorities. However, there are significant environmental health and behavioural practices that hinder the uptake of household rainwater storage. The prevalence of asbestos roofs in Nauru was identified in the Roofing Assessment Final Report (2013). The cost of removing old roofs meant that there was a small reduction on the number of households benefiting from the project (The Concept Note planned for 250 households and the Project Design Document budgeted for 226 households).

The provision of desalinated water to households (delivered by tanker) is heavily subsidised, and there is therefore little financial incentive to reduce water use, or invest in household rainwater collection and maintenance of rainwater tanks. This results in a poor level of household maintenance of water tanks and associated infrastructure (e.g. roofs and guttering) as noted in the Water and Sanitation Master Plan. It can be argued, as noted by an interviewee, that selecting a project focusing on increasing national water storage from the outset would have met the more immediate needs of improving supply of water to households.

It is interesting to note that the proposed USAID-funded C-CAP project in Nauru was to build a new 4 million litre national water storage tank¹⁰⁵. However, the higher than expected cost led to a revision to build a 2 million litre water tank. The GCCA project did have discussions with C-CAP in Quarter 1 of 2015 to discuss possible collaboration between the two projects but this was not successful due to procurement constraints from C-CAP's perspective.

The re-scope of the GCCA project in August 2014, from rooftop catchment to water storage, seemingly disagrees with the original concept note (June 2012) that indicated that the government needed to move away from desalinated water due to cost issues¹⁰⁶. However, the 20-year Master Plan notes that desalinated water will remain an important water source for the foreseeable future¹⁰⁷, which supports the need for the proposed water storage project.

Effectiveness

Most effective in mainstreaming climate change resilience and water security

The project was effective in its mainstreaming components which will help Nauru plan for water security (W&S Master Plan) and contribute to building community resilience to the impacts of climate

¹⁰⁵ <http://www.pacificdisaster.net/pdnadmin/data/documents/16462.html>

¹⁰⁶ "The use of desalinated water is deemed unsustainable due to the high cost (including fuel costs) of operation and maintenance in the medium and longer terms. Rainwater harvesting is the most economically feasible and culturally accepted potable water used in Nauru." Nauru Concept Note, 2012

¹⁰⁷ "Due to the forecast population growth and future water demand, desalination will form an important part of meeting Nauru's future water supply needs." Nauru Water and Sanitation Master Plan, November 2015

change (RONAdapt). The project title's reference to '*expanding national water storage capacity*' was not achieved as there were significant delays and insufficient funds to rebuild a large storage tank.

The project's achievements against the revised logframe (May 2015) are presented below.

Expected result	Indicator	Indicator achieved
Overall Objective: Contribute to building resilience of communities in Nauru to the impacts of climate change	Climate variability and change incorporated into RONAdapt (Republic of Nauru Joint Climate Change Adaptation and Disaster Risk Management Plan) by 12/2014	Achieved: RONAdapt endorsed by Cabinet (October 2014).
Purpose: Improve planning for water security in Nauru	20-year Water and Sanitation Master Plan prepared by 12/15	Achieved: The Master Plan was finalised in November 2015 and three proposals have been prepared to approach donors for assistance with priority projects.
Key Result Area 1: Improvements to Nauru's national water storage designed with participation of all key stakeholders	Assessment of Nauru's water storage capacity completed by 12/14	Achieved: Feasibility and pre-design studies for the national water storage were completed in October 2014.
	Key stakeholders, including Cabinet and technical experts, involved in design process by 09/14	Achieved: Consultation with Government and the Water Technical Group, resulting in PDD being signed off by Cabinet in October 2014.
	Lessons learnt shared via video with other countries by 09/2015	Achieved: Video completed and screened in final steering committee meeting in Yap.
Key Result Area 2: Existing derelict water tank effectively and efficiently demolished	Old tank demolished and material disposed of appropriately by 12/15	Partial: Demolition has been delayed due to heavy rainfall and high winds in Jan-Feb 2016; contract with local contractor terminated in March. Demolition about 50% completed. New letter of agreement signed in March with Government of Nauru's state owned enterprise to complete demolition by 31 May 2016.
Key Result Area 3: Community awareness and capacity built to improve water conservation	At least two awareness and education activities relating to water security and climate change conducted by 12/2015	Achieved: WASH training in April 2015 for Government, NGOs and National Youth Council. However, roll-out of the WASH training to the community did not take place due to delays and staff changeover. Attachment of CIE Officer to Environment Health Unit in

Expected result	Indicator	Indicator achieved
		Kiribati undertaken in 2 phases (December 2015 and February 2016). The report indicates the attachment provided valuable knowledge and skills in water quality monitoring in the field, and using laboratory equipment. The attachment also provided an insight into the use of SODIS in the field.

Overall, the project was most effective in its mainstreaming component, with the development of the W&S Master Plan. The demonstration project was less effective, as the project did not increase water storage due to a shortage of time and insufficient funds to build a new water storage tank. The detailed feasibility and design documents as well as the request for proposals are all available for when Nauru approaches another donor to complete the work. Similarly the engineering survey of the 317 households is available for when Nauru approaches another donor.

However, against the revised logframe, the indicator for the demolition of the old tank is still likely to be achieved, though beyond the planned timeframe. This will lay the groundwork for another project to construct the new storage tank. The increased community awareness through delivering WASH workshops to the community has not occurred, though community trainers have been trained. The attachment of a CIE Officer to Kiribati has resulted in the transfer of knowledge on the management of the Kiribati water quality monitoring programme to the CIE Unit.

Additional Activities beyond the Focus of the Water Sector

Mainstreaming activities included the finalisation of RONAdapt (Framework for Climate Change Adaptation and Disaster Risk Reduction). This had been a work in progress since 2010 and involved several different partners. Support from the GCCA: PSIS project provided for preparation of a final version, community consultations and endorsement. RONAdapt contains a list of prioritised actions for 12 sectors.

Additionally, a review of climate change mainstreaming into national plans and policies in Nauru was conducted in 2013. A subsequent assessment report of budget support readiness indicated that the likelihood that Nauru would qualify for direct budget support for climate change is medium-low given its capacity constraints.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 20 people (10 men, 10 women) in January 2014. The post-training evaluation indicated that the training was successful in building capacity and motivation of Nauru government staff and community based groups to use the LFA approach to design projects and inform the preparation of proposals. This is demonstrated by the following comment from a Nauru participant.

"Being NGO (CBO) - all learnt on this course was most useful. I have never been involved in writing up a project proposal not having the basic knowledge of how to go about it. However doing this course has certainly equipped me and empowered me to achieve more for my community. The learner guide - a great tool!"

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

Impact greatest through mainstreaming activities

The project's impact will be greatest at the mainstreaming level, with RONAdapt and the Water and Sanitation Master Plan guiding future actions. Nauru Utilities Corporation (NUC) is looking at obtaining funds for three priority projects in the Master Plan¹⁰⁸. The GCCA: PSIS project has funded the development of three draft funding proposals for the priority projects.

Though the original demonstration project (roof restoration) was not endorsed by Cabinet (despite their having been informed throughout the planning phase), a stakeholder noted that the Government of Nauru is implementing a Household Maintenance Upgrade project that builds on the original PDD. It is understood that the maintenance project will seek to replace or restore roofs, making them safe for rainwater capture and storage.

The demolition of the old large water storage tank paves the way for the building of a new tank in the future. As noted previously, USAID, through its C-CAP programme, was looking to build a new 4 million litre water storage tank adjacent to the B10 site. However, cost over-runs have led to a further revision in the scope and a household water tank project is now planned.

Efficiency

Time

The Nauru project demonstrated limited efficiency in terms of adhering to timeframes, working within budgets, and the extent of outputs for the funds expended on the demonstration project (i.e. there has been no augmentation of water supply in Nauru, and the demolition project has experienced delays). This is not due to the in-country project team's efforts, nor SPC's efforts, but rather reflects the issues of working in small remote islands countries, and in particular, the lack of expertise and availability of resources (human and material) in Nauru. This issue is common across other development projects in Nauru, from the Australian Aid household water tank project, to the proposed USAID C-CAP project (and previous projects, such as the GEF-funded PACC project).

However the original PDD for household roof catchments did not receive sign off from the Cabinet. This meant that two years' worth of project planning and design was not utilised, although the engineering assessment will be of benefit in the future.

¹⁰⁸ Water Supply Works for 2025, Water Supply Command Ridge Priority Project, Water Supply Topside Priority Project

Cost

Nauru was allocated Euro 500,000 which was reduced to Euro 110,563 following the re-allocation of Euro 389,437 to three other countries. Nauru had acquitted 50% of its remaining € 146,500.00 allocation for the on-ground project by March 2016 and all remaining funds are committed which will result in 100% expenditure by the end of the project. €27,500 was allocated for national coordination and 100% of these funds were acquitted.

The proposed project to replace the decommissioned water storage tank (revised PDD endorsed October 2014) was not achieved due to two factors (i) delays caused by the Government of Nauru firmly insisting that local contractors only be utilised for the work¹⁰⁹ and (2) the quotes received for the entire job (demolition and new tank) exceeded the funds available¹¹⁰. This occurred despite feasibility and preliminary design reports considering the financial and time constraints in their selection of options¹¹¹. This led the Nauru Government to express a disappointment for “*CROP agencies, including SPC, for not fully taking into account Nauru’s limitations and challenges in regards to its resources, biophysical make up and remoteness when planning, designing and budgeting development projects, including climate change adaptation projects*” (Trip Report April 2015). This sentiment was again expressed at the final Steering Committee Meeting (2015 Steering Committee Report). Interestingly, the proposed C-CAP project to build a 4 million litre water storage experienced the same issue of underestimation of the cost during the preliminary budgeting stage.

Accessing project funds on time from Nauru’s Treasury Department was a major hurdle to project implementation. There were delays in the transfer of funds to CIE. Lack of capacity in Treasury has impacted on financial acquittals and tracking of project funds. This has impacted on SPC’s ability to release further tranches. As of March 2016 this has been fully resolved.

Local contractor capacity and capability

There is limited capacity and capability in Nauru, as noted by four stakeholders interviewed and in the Preliminary Design Report prepared by CAT (September 2014)¹¹². Stakeholders consulted indicated that local companies that have the capability to deliver have very limited spare capacity at the moment. International contractors already operating in Nauru also have limited capacity as they are undertaking other work for the Australian Government, and where there is capacity, their cost is high due to their understanding and experience of obtaining required materials, and service costs for skilled staff. There was also a directive by the Secretary of CIE at the time to use a local contractor.

The CAT (2014) report identified three local contractors that could undertake the demolition and construction work. The lack of available skilled and experienced local contractors is reflected in the tendering process for the water storage demolition¹¹³. Only one local tender was received, from a company that was not identified in the CAT report. This company’s original tender response did not

¹⁰⁹ The resulted in several months delay when the Request for proposals for local contractors only for the demolition aspect was advertised and reviewed

¹¹⁰ The preferred tender response for RFP15/20 for demolition and construction required an extra AUD240,000.

¹¹¹ “*The two key constraints to this project are: for construction to be completed by 30 June 2015; and to be completed within the allocated budget of €400,000.*” Final design report for SPC RFP14/41, October 2014.

¹¹² The Preliminary Design Report (September 2014, p14) identifies local capacity and capability as key project constraints.

¹¹³ SPC put out two tenders- one for local contractors to demolish only (RFP14/94) and one international tender for demolition and construction (RFP15/20).

fully satisfy the requirements of the quote¹¹⁴. Further engagement between SPC and the company led to a resolution and awarding of the tender. Despite early indications that the demolition work would progress efficiently, delays occurred due to difficulty in accessing a crane¹¹⁵, though assurances were provided by the contractor as to the availability of equipment (e.g. Trip Reports April & July 2015). Subsequent trip reports indicated slow progress, and the November 2015 trip report indicated that the contracted demolition company had only had limited access to a crane and less than 5% of the demolition had been completed to date. Heavy rainfall in early 2016 led to further delays. The contract was terminated in early 2016 with the work approximately 50% complete, as the company was not able to access the required crane. A new contract has been awarded to a state owned enterprise, which has a crane, for completion.

Stakeholders suggested that large infrastructure projects are best undertaken by international contractors¹¹⁶. However, the cost associated with international contractors is generally beyond project budgets, as experienced by the GCCA: PSIS and C-CAP projects in Nauru. The Nauru Government requested at the time of the tendering process a preference to use local contractors, to which SPC agreed¹¹⁷. Requests to use local contractors need to include extremely stringent consideration of the capacity and capability of suitable companies.

The tender selection for the tank demolition was undertaken by four SPC staff¹¹⁸. Though the selection panel scrutinised the contractor's experience prior to awarding the contract, the panel may have benefited from local experience. The selection process did not involve NUC though its assets were the subject of the tender¹¹⁹. SPC's procurement policy allows national representatives to be voting members the procurement committee. The lack of national representation, specifically NUC, was an oversight. Though it may not have made a difference in the selection of the tenderer, it would be good practice for future projects to have such representation to provide local knowledge to SPC. Whilst NUC was not involved in the procurement process, it oversaw and signed off on the implementation of the demolition contract.

SPC undertook 15 field trips to Nauru between May 2012 and November 2015 to assist Nauru in project design and implementation, seven of which were in 2015 alone. A review of the field trip reports indicates slow progress in resolving matters at the national level. Despite demonstrating a high level of flexibility in working with Nauru to come up with an alternative project design, a lack of funds and time to implement the demolition and building of a new water storage tank meant that the project scope was reduced to simply demolition of the old storage tank. A proposal by SPC to reallocate Nauru's unspent funds (June 2015) was agreed to by the other eight countries, and

¹¹⁴ "The review of the AMWAMO BWIO CC proposal identified a number of items that did not satisfy the RFQ14/94 requirements". Bid Review Report Demolition RFP 14/94.

¹¹⁵ Only one suitable crane is available in Nauru, and belongs to RONPHOS, a government corporation that did not tender for the work due to capacity constraints.

¹¹⁶ One interviewee noted the difference in quality of infrastructure at the Regional Processing Centre, which involves international contractors, compared to Nauruan infrastructure. The international contractors present in Nauru often have limited capacity to undertake extra work.

¹¹⁷ A letter from SPC to Nauru Government 2 December 2014 notes that "We are happy to comply with your request to use local contractors. Having consulted with our Procurement Unit, we will need at least two and preferably three quotations from competent local contractors."

¹¹⁸ Noting that only one tender was received.

¹¹⁹ The Preliminary Design Report (CAT, 2014) notes that (p17): "NUC will inherit any national water storage asset that is provided by this project. Hence, they are a key stakeholder for design input and should be consulted for new assets' on-going O&M needs."

demonstrates a wise use of funds, as it would not have been possible to expend the project funds in Nauru in the short period of time remaining.

Staffing

The in-country project team consisted of a National Coordinator within CIE. The role of the coordinator, according to the original PDD, was to provide secretariat services to the TWG for the project, mainly be in the form of providing updates on progress and for discussing unforeseen issues that may arise during the project and which require guidance.

The national coordinator was constrained by difficulties obtaining the required acquittal information from Treasury, which impacted on funding project activities, as well as the coordinator getting paid on time.

Sustainability

RONAdapt and the W&S Master Plan have a high level of government ownership. RONAdapt has raised awareness and support for climate change adaptation across government. RONAdapt provides a blueprint and action plan for mainstreaming climate change adaptation and disaster risk management across all sectors of government in Nauru. Based on extensive consultation and support from several different regional organisations, it provides a framework for Nauru's strategic and national planning for at least the next few years.

The W&S Master Plan is guiding priority projects and investment in the next 10 and 20-year timeframes. Three funding proposals to action priority areas in the W&S Master Plan have been prepared. Nauru is now in a better position to seek funding for major infrastructure improvement of the water sector and to move away from the existing high risk situation with water supply.

CIE is now sitting under the President's Office which has increased the department's profile and support across government. This will help ensure that the benefits of the mainstreaming component are built upon in the immediate future.

The demolition of the old B10 tank provides space for the construction of a future national water storage should sufficient funding become available. The existing concrete pad may be able to be re-used, potentially reducing the cost of a future tank. The feasibility and final design studies for the construction of a new storage tank have been provided to Nauru, thereby potentially informing a new tendering process.

The WASH training and the south-south exchange with the Kiribati Environmental Health Unit have built capacity in CIE in water quality monitoring and management. Delivery of WASH training to the community will improve community-level capacity in water, sanitation and hygiene.

Cross-Cutting

Gender

The original project clearly considered gender, and vulnerability, in its project design. The original rooftop catchment project sought to prioritise vulnerable households that had a working water tank¹²⁰. Appropriate selection criteria (working water tank, vulnerable households and people, maximising number of beneficiaries) were used to identify priority households for the original

¹²⁰ Vulnerability was defined as meeting one or more of the following criteria: Water access, Age, Disability, and Household gender ration. See PDD v1.

household water tank project. This would lead to an estimated 226 households benefiting from the project.

Men and women were equally represented in the LFA training, whereas there were more men (14) than women (7) in the WASH training. Men and women were equally represented (10:10) in the LFA training.

Environment

The environmental impact of the roof replacement was considered, particularly relating to asbestos disposal. Extensive discussions were held with other regional organisations (SPREP, WHO) as Nauru is not part of a regional disposal strategy, nor does it have a clear national policy. It was ascertained that some contractors had been trained in the safe removal of asbestos in Australia and it was planned to use these skills in the roof refurbishment. A temporary solution to safe disposal to keep the asbestos in locked containers in Nauru's waste disposal site was devised.

The re-scoped project did not require an EIA or EMP and the request for quotation did not specify obligations for recycling materials. Rather, it noted that all scrap material was the contractor's responsibility and needed to be deposited at Nauru's waste site¹²¹.

Visibility

There was appropriate EU visibility on communications materials and reports, given the limited amount of on-ground work. Communication materials produced included news articles (Cook Island News), radio (Radio New Zealand), fact sheet, and newsletters (SPREP-Climate Change Matters). A video on 'Securing Safe drinking water in Nauru' is one of nine country-specific videos in the series 'Climate Change Adaptation – the Pacific Way' that was shown extensively at regional meetings, available on YouTube, and shown on television throughout the Pacific on the Pacific Way. These featured the GCCA and EU logos.

Appropriate acknowledgement to the funding body was provided in project reports (e.g. WASH Training Guide, Engineering reports).

A national lessons learnt workshop (November 2015) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

¹²¹ "Remove and transport scrap material and deliver to the Nauru Rehabilitation Corporation (NRC) waste site on "topside" approximately 1.5km on sealed road. Provide minimum 24 hours' notice to Nauru Rehabilitation Corporation". Request for Quotation, SPC.

Best Practices & Recommendations

Best practices

1. The mainstreaming components (RONAdapt and W&S Master Plan) have a high level of national ownership as a result of extensive consultation. They pave the way for improved climate change adaptation at the national and water sector level.

Recommendations

1. Major changes in project scope should not be entertained beyond the first year of a major project.
2. Stakeholders in small, remote islands such as Nauru should design projects with realistic targets bearing in mind small island constraints (local contractor capacity and capability, and costs of international contractors). Large infrastructure projects should only be considered when there is a suitably large project budget.
3. Use the "rule of thumb" developed by the GCCA: PSIS project to realistically deliver projects in small remote islands: carefully plan schedules and budgets and then multiply by 2.

7.6.6 Niue Evaluation Report

Sector for Climate Change Adaptation Project

Water sector

Project

Augmentation of Rainwater Harvesting in Niue

The GCCA: PSIS project in Niue is an upscale of the GEF-funded Pacific Adaptation to Climate Change (PACC) and Australian Aid-funded PACC+ project to provide 5,000 litres water tanks to Niue households.

The project aimed to secure a reliable supply of potable water especially during extreme events such as tropical cyclones. By the time of the first SPC trip to Niue (September 2012), a cost-benefit analysis (CBA) had been conducted for the rainwater harvesting project as part of PACC project, and the tendering process was in train to get a private company to provide water tanks.

With the addition of the GCCA: PSIS funds, the overall project was up-scaled so as to build a tank manufacturing facility in Niue to manufacture rainwater harvesting tanks as well as tanks for other purposes.

Implementing Entity

The project was implemented by Niue's Department of Environment. The Niue Water Steering Committee (NWSC) provided project oversight¹²².

This structure was effective in that it used an existing committee that was involved in previous projects (Integrated Water Resource Management (IWRM) and PACC).

Relevance & EU Coherence

The project was implemented as a Disaster Risk Management (DRM) initiative to provide an independent water supply during cyclone events, when the reticulated water supply can be cut off.

The relevance of the household rainwater tank project, as designed and implemented in Niue, is debatable in terms of meeting identified national targets. This assessment is not a criticism of the project design process for the GCCA component of the Niue project, but rather reflects changes in justification between the project design and the project implementation. The project was placed on a certain pathway whereby the 'problem' was unclear, and the alternative interventions were not clearly articulated.

The GCCA: PSIS project in Niue simply built on the already-commenced PACC and PACC+ projects. As such, the GCCA project could be considered relevant in that it built on an existing project, but the overall relevance of the rainwater tank project is debatable.

The justification of the household rainwater project has been through a number of clarifications during the course of the project.

¹²² Consisted of the Department of Environment, Public Works Department, and private sector, Finance and Non-Governmental Organisations (NGOs).

The GCCA: PSIS project provided, at Niue's request, an upscaling of the PACC and PACC+ projects. The justification provided in the GCCA:PSIS Niue Concept note is that the "*National Integrated Strategic Plan (NISP 2009-2013) and the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Reduction (JNAP) for Niue have identified the need to increase the amount of potable water available to households*".

The justification of the rainwater tank project also refers to the benefits in terms of reduced consumption of fossil fuels (to pump water), reduced pressure on the groundwater supply, and the provision of a back-up supply in case of pollution of the groundwater lens¹²³.

The NISP 2009-2013 in fact specifies a target for rainwater tanks to make up 20% of water supply by 2013. The NISP also has a 20% renewable energy target due to the high reliance on fossil fuel to power the water pumps. A 2011 report on water supply options in Niue notes that "*one primary motivation [for rainwater tanks] is allowing Niue a buffer against system failure in the groundwater pumping system. For example, rainwater tanks would be used in the case of temporary cyclone damage to the groundwater pumping system*"¹²⁴. This does support the project, but providing rainwater tanks as an alternative household water supply to meet the NISP target of 20% requires rainwater tanks to be plumbed in to houses, and a water pump at each household to pump water from the tank to the house¹²⁵. In the present implementation scenario, households have to access water directly from the tank, making it less convenient as an alternative to reticulated household supply as per the NISP target¹²⁶. The present implementation scenario does provide households on the upper terrace with a secure source of water during electricity outages. However, the houses on the lower terrace would still receive gravity-fed water during short electricity outages.

Considerable planning, in terms of technical design and economic analysis, was conducted as prior to, and as part of the PACC project. The 2011 Concept Note states that "*A cost benefit analysis carried out recently under the PACC project supports the supply of 5,000 litres of rainwater storage to individual households.*"

Closer reading of the cost-benefit analysis (CBA) prepared in 2012 as part of the PACC project in Niue reveals that "*household rainwater tanks were not identified as a priority measure in the Niue Drinking Water Safety Plan (2009) or in the Integrated Water Resource Management (IWRM) project design document (2007)*" (Buncle, 2012, p15).

The CBA actually notes that there is only a Net Present Value (NPV) for the provision of rainwater tanks to households on the upper terrace of Niue, as these houses are dependent on the electricity supply for the provision of potable water¹²⁷. It should be noted that the assumed costs for the

¹²³ "*At the present time the water supply is sourced primarily from the underground aquifer. The extraction, storage and distribution of underground water supplies to households are highly dependent on the use of fossil fuels. The underground water source is also vulnerable to land based pollution and contamination.*" Niue Concept Note, February 2013, p2.

¹²⁴ Ambroz, A. (2011). Least-Cost Analysis of Water Supply Options in Niue: (Integrated Water Resource Management Technical Report), SOPAC Technical Report 447.

¹²⁵ See Figure 6, page 22, of Ambroz, 2011.

¹²⁶ Chapman, 2012, notes (p17) "*The design layout of tanks to allow for future improvements such as a pressure pump directly linked to the house, a lift pump to an elevated header tank or allow for a hybrid rainwater / public reticulated water supply system*".

¹²⁷ "*NPVs for all tank storage capacity options (i.e. 5KL and 10KL) in lower-terrace areas of Niue were shown to be significantly negative for all of the groundwater contamination scenarios modelled - primarily because public water supply to these areas are pressure-fed and so household rainwater tanks would not generate reduced water supply interruption benefits. Lower-terrace areas of Niue are therefore not assessed to be a worthwhile*

calculations of the rainwater tanks may be underestimated, and therefore the NPV may change in favour of a positive NPV for tanks in the lower terrace as well¹²⁸.

The CBA notes that there are considerable behavioural barriers to using rainwater tanks¹²⁹. The current groundwater supply is clean enough to be supplied untreated and comes at no direct cost to Niue households¹³⁰. The current lack of water pricing for the reticulated water supply acts as a disincentive to using alternative supplies such as rainwater¹³¹.

A relevant document that is not referred to in the Concept Note (2012) or PDD (2013) is the 2011 'Least-Cost Analysis of Water Supply Options in Niue'¹³². This report compares the status quo (fossil-fuelled reticulation) with rainwater providing 20% of household water use (80% reticulated), and a solar/diesel hybrid pumping system, where 16% of the electricity for the reticulation system is solar powered. The rainwater option was determined to only be viable through a donor grant, and that *"there remains considerable work to make this option both technically and socially feasible"* (Ambrose, 2011, p7). A key social barrier to the success of rainwater tanks in reducing the use of reticulated water is maintenance requirements, and ongoing costs, such as pumping water from the rainwater tanks to the house.

The PACC mid-term review noted that the Niue rainwater tank project was originally framed as a drought resilience measure, and subsequently as an adaptation to increased cyclone hazard, whereby rainwater tanks provide a potable water supply when the electricity is cut off, and the reticulated water supply is unavailable¹³³. The mid-term review also notes that the *"project in Niue has been hampered by a weak assessment of country vulnerability and adaptation options and an inadequate project design."* Niue's response to this criticism was that the *"project in Niue was not hampered by a weak assessment of country vulnerability and adaptation option but from poor communications during the consultation phase which influenced the project design, resulting in a drought resilience measure. With poor communications, options would have been limited to what was presented resulting in the adaptation intervention at the start of the project."* (PACC Snapshot evaluation report).

The relevance of the project to the original alignment with the NISP target would have been improved if water tanks were plumbed in to households (e.g. to the kitchen) and had a water pump (as was presented to the community in briefings held in 2013). This would provide an alternative water supply at all times, thereby working towards the 20% target of household supply from rainwater tank

demonstration site(s) for household rainwater tanks under the PACC demonstration project." Buncle, 2011. Also see Chapman, 2012, PACC Rainwater Harvesting Project Technical Report, p18.

¹²⁸ The CBA assumed the cost of a tank at NZD2,500, installation cost of NZD1,299, and other costs, based on the Technical Design document. See CBA Report by Buncle, A (2012), p20.

¹²⁹ *"Community consultations indicate that a lack of information about how to properly maintain rainwater tanks and a lack of confidence in the durability and safety of the plastic tanks."* P5, CBA Report, August 2012.

¹³⁰ *"The water from the Niue groundwater lens is deemed safe and of good quality and is thus pumped directly to consumers without any form of treatment. The costs for maintaining the drinking water supply are currently met by the Niue Government. Consumers are not charged for water use."* P8, Niue GCCA:PSIS PDD, August 2013.

¹³¹ *"A very worthwhile measure/reform to be progressed as part of PACC and/or PACC+ appears to be a water tariff system, including roll-out of household meters. This is consistent with the Niue National Strategic Plan: 2009-2013, which includes introduction of a water tariff system by 2013 as one of its targets."* Buncle, A (2012) CBA Report, p8.

¹³² Ambroz, A. (2011). Least-Cost Analysis of Water Supply Options in Niue: (Integrated Water Resource Management Technical Report), SOPAC Technical Report 447.

¹³³ Future climate change scenario for Niue predicts a decrease in the frequency of cyclones but an increase in the proportion of more intense cyclones. Current and future climate of Niue.

<http://www.pacificclimatechangescience.org/>

(with a tap on the water tank for when there are power cuts). Though this design would have cost more, the implementation could have been targeted at homes in the upper terrace, and those on low-income and is still an option for householders.

The current groundwater supply is safe to drink, so the justification of providing an alternative supply is based on an assumption that households will maintain water tanks (which is questionable unless incentives (financial and behavioural) are put in place. The new EU-funded ACSE project in Niue plans to mould and install septic tanks which will also reduce the likelihood of groundwater pollution, thereby helping maintain a safe groundwater supply.

Overall, whilst the project is relevant to Niue's climate by providing a DRM measure during cyclones, this appears to have been an iteration over the course of the project (predominantly by PACC), which strayed from its initial design to augment rainwater supply as a means to relieve pressure on the groundwater supply.

In terms of EU-coherence, the project builds on the EU-funded IWRM project, which funded the Ambroz report.

Effectiveness

The project was effective in building capacity and capability to produce and install rainwater tanks on a remote island nation, and augmenting rainwater capture and storage in Niue

The project's achievements against the revised logframe (revised January 2015) are presented below. The Niue GCCA: PSIS was effective in achieving its revised indicators. There were some slight delays in the installation of rainwater tanks but these were mostly weather related.

Expected result	Indicator	Indicator achieved
Overall Objective: To contribute to building climate change resilience and reducing vulnerability in the water sector for Niue communities	Infrastructure and skills available in Niue by 06/2015 to mould tanks for storage of water or other purposes, e.g. septic tanks, beyond project life	Achieved: Tank moulding facility built and operational. Agreement to retain tank moulding equipment for 6 months post-project. Funding secured under EU-funded ACSE programme to manufacture septic tanks (2016-17) using the existing infrastructure and moulding machine (though new mould required). 10 men trained in moulding; 7 men trained in tank base construction; 3 men trained in installation/connections.
Purpose: To augment rainwater capture and storage in Niue	At least 60% of households have properly maintained and operational rainwater capture and storage systems by 06/2015	Achieved late: By Jan 2015, 188 tanks (44%) were installed, 96% of the tank bases constructed and 93% of the tanks delivered to the households.

Expected result	Indicator	Indicator achieved
	40% of inhabited households in Niue have made monetary contribution to installation of rainwater capture and storage systems by 12/2014	Achieved: Owners have to have fascia board and guttering installed at own cost before tank is installed. This delayed installation as some households were slow in undertaking their required contribution.
Key Result Area 1: Education, awareness and understanding of rainwater capture and storage on Niue strengthened and enhanced	At least 1 awareness workshop conducted in each community by 03/2014	Achieved: Community meetings held in Q4 2013 about the project, presented by Haden Talagi and Clinton Chapman.
	At least three effective communication tools prepared and disseminated to communities by 07/2014	Achieved: Includes media, TV adverts, music video clip, video, posters and other products, and visits to moulding facility, celebration of World Water Day March 2014
	At least 200 primary aged school children engaged in specific activities relating to water conservation by 07/2014	Achieved: Includes poster competitions on climate change and water themes and visits to the moulding facility
Key Result Area 2: Rainwater capture and storage systems procured, supplied and installed in occupied households in three communities	At least 60% of the households effectively using the rainwater capture and storage systems by 06/2015	Partial: Only 55% of households with water tanks installed by Q2 2015. Indicator reached by December 2015. Delays resulting from households reluctant to commit their own funds to fix fascia and guttering and the unavailability of these supplies in Niue.
	At least 3 local people trained in installation of water capture and storage systems by 12/2014	Achieved: 3 men trained in installation/connections.
Key Result Area 3: Newly installed rainwater storage systems monitored and maintained regularly throughout Niue	1 operation and maintenance training workshop conducted, by 12/2014	Achieved: Operation and maintenance training conducted with contractors in December 2014. Rainwater tank maintenance training delivered by installers to each household following installation.
	Minimum 5 persons from Dept. Environment, Health and Water trained in water quality testing by 12/2014	Achieved: 4 from Health, 2 from Public Works, 4 from Environment trained by Senior Technician from IAS USP Suva.

Expected result	Indicator	Indicator achieved
	30% of households are aware of and using the translated O&M guidelines for rainwater storage and capture by 09/15 (Changed)	Indicator changed: Replaced by one-on-one training which was given to the householders by the contractors as they installed the systems (Achieved)

Overall, the project was effective in building the capacity and capability to mould and install rainwater tanks in Niue. As a result of the project, most residents now have new rainwater tanks installed, thereby providing them with an alternative water supply in case of disruptions to the main supply during cyclones or maintenance work.

Additional Activities beyond the Focus of the Water Sector

The project funded technical assistance to develop an institutional framework for a Climate Change Division in Niue and three options were prepared. The government's preferred option was for some of the duties of the Climate Change Division to be delivered by the Project Management Unit under the Premier's Office. A Project Management Coordinating Unit (PMCU) was established in December 2014 under the Premier's Office. The PMCU can directly recruit staff and does not have to go through the Public Service Commission. It is reported that the PMCU became operational in 2015.

It is reported that the Director General of MNR has all the necessary documents, including full job descriptions, from the GCCA: PSIS supported consultancy to progress the Climate Change Division. However, this will likely be on hold until procedures with the PMCU become clearer, as well as to the roles and links between the Climate Change Division, PMCU, and DOE.

A review of climate change mainstreaming into national plans and policies in Niue was conducted in 2013. A subsequent assessment report of budget support readiness showed that the likelihood that Niue would qualify for direct budget support for climate change is low given its capacity constraints.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 23 people (12 women, 11 men) in August 2013. The post-training evaluation indicated that the training was successful in building capacity and motivation of Tuvalu government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. A 'Refresher training in the LFA and in Monitoring and Evaluation' was conducted in May 2015, attended by 22 people (12 women, 10 men). The post-training evaluation noted that participants who attended the initial LFA training benefited from the refresher and extended their knowledge with project monitoring and a more detailed look at project timeline and budget. Participants who were new to LFA also benefited and the feedback indicated they can see the value of the LFA and most obtained a degree of confidence to use the LFA in their work. The benefit of the refresher training is demonstrated by the following comment from a Niue participant.

"Thank you for the training. It was good to have refresher as there are new things and templates from the initial training. Need a follow-up as well in 2016"

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

The project's immediate impact is most visible in establishing a moulding facility in Niue

The moulding facility (warehouse and moulding machine) established for the rainwater tank project will be used to mould septic tanks for the EU-funded ACSE project (noting that a new mould is required). The rainwater mould will be kept in Niue over the short term future at least, so that further rainwater tanks can be manufactured if required.

Households have an independent water supply during disruptions to the reticulated supply

The project will provide an alternative water supply during disruptions to the main reticulated supply (e.g. during power disruptions associated with cyclones and which can last for days/weeks, or during routine maintenance of the main system). The project also offers a back-up supply in case of pollution of the groundwater lens.

The concept note made reference to other benefits such as reduced consumption of fossil fuels (to pump water), and reduced pressure on the groundwater supply. However, it is unlikely that rainwater tanks will provide a day-to-day alternative to the reticulated water supply as they are not plumbed into homes. If the tanks were to be plumbed into homes at a future time, and other incentives were introduced (e.g. price signals, metering), a more regular use of the rainwater supply could lead to reduced consumption of fossil fuels and reduced pressure on groundwater supply.

Efficiency

Time

The project start-up was efficient as it built upon the preparatory work of the PACC project. For example, at the time of the stakeholder consultation meeting for the GCCA: PSIS Niue project (March 2013), the tender for construction and installation of rainwater tanks was in the last stages of being contracted to the company to manufacture the water tanks in Niue.

Delays still occurred during implementation due to inclement weather that affected the construction of tank bases, and delays in households installing guttering. However, the project managed to complete the target for installation of tanks in households by December 2015.

The national coordinator worked on both the PACC and GCCA projects. It was noted that this arrangement led to a high work burden placed on one staff member. During implementation, the project team were required to report against two different mechanisms (PACC and GCCA). This led to some inefficiency in the use of limited staff resources. In addition, Niue instituted a four-day work week which meant five days of work needed to be completed in four¹³⁴. Noting the staffing constraints for this multi-donor project, it is likely that Niue would have experienced staffing issues had GCCA: PSIS funded a completely separate project.

Cost

The project used funds from three separate funding sources: GEF (USD400,000), AusAID (AUD500,000) and GCCA:PSIS (EURO582,000). This allowed Niue to scale up the original project from a pilot to a community-wide supply and installation of rainwater tanks.

Niue had acquitted 100% of its €587,000 allocation for the on-ground project by March 2016. €54,000 was allocated for national coordination and 100% of these funds were acquitted.

¹³⁴ It was not effective to work on the fifth day as other government departments (e.g. Treasury) were not staffed.

The tender selection process was thorough and transparent. Tender responses received included manufacturing in Niue and manufacturing in Fiji and shipping to Niue. The manufacturing in Fiji was the cheapest tender (NZD\$706,598.70) compared to the winning tender (NZD\$1,022,910), but was not selected due to *“barge delivery not a very flexible option in terms of delivery and adjustment in number of tanks, very little control on Quality Assurance and no benefit to the local economy”* (Tender Review Report, 2013, p1).

The overall cost per 5,000 litre tank manufactured in Niue is stated to be approximately NZ\$3,000. Though the cost of local manufacture was higher than imported tanks, the guaranteed quality and local capacity and capability built is an added benefit. The future financial efficiency of local manufacturing of tanks is discussed in the sustainability section.

Staffing

The project experienced some significant staffing issues, in terms of staff changeover (from design stage to implementation stage), slow recruitment, and insufficient staff numbers. The PACC Snapshot report noted (p16) that *“the project was designed for a team to implement but this was not the reality in a country where the lack of capacity and technical expertise made activities challenging.”*

There were delays in recruiting the national coordinator, largely due to the Public Service Commission (PSC) being slow on resolving HR issues. SPC noted that it was unsatisfactory for the PACC project coordinator to also act as national coordinator for the GCCA project due to the workload. In addition, Niue moved towards a four-day work week, which further added to the work load of the national coordinator. Issues with the PSC also resulted in the technical advisor position being nearly 12 months in arrears with remuneration.

The Niue Climate Change Profile (2013) notes that a large number of projects, with the associated monitoring and reporting burden, are managed by a small number of departments, making disproportionate demands on Niue’s public service. The project would have benefited with more staff (e.g. finance officer) on the project team but it was reported that recruitment processes were too complicated.

The cost of managing external assistance within public sector resources is unsustainable, and is made worse by the fact that there is no centralised mechanism for aid coordination. An Aid Management Unit was set up in Finance when the GCCA project was established, but it was under-resourced. The new PMCU has been established to coordinate external projects with national governments.

Sustainability

The project is considered sustainable in a number of ways, and at the same time, the sustainability can be questioned for several reasons.

The quality of the water tanks should be assured by the manufacturer required to meet relevant Australian/New Zealand standards, and tanks undergoing a quality test following the moulding process. The operator of the moulding facility also provided a guarantee of 20 years with a 10-year warranty.

The decision to manufacture tanks in Niue has meant that further tanks can be produced relatively quickly, whilst the rainwater tanks mould remains in Niue. Further, the facility built for the mould can be used for future projects, such as the ACSE septic tank moulding project.

There is a need to develop a business plan for the moulding facility to ensure its long term viability as noted at the national lessons learnt meeting. Technical assistance and funding will be required for this, as the government has not allocated funding.

The project has manufactured an extra 100 tanks for sale to the private sector at NZ\$ 1,200 per tank (similar to the price of a 5,000 litre tank in New Zealand), which will raise NZ\$120,000 to help contribute to the maintenance of the moulding facility and purchase of water testing kits. However, the cost to manufacture tanks is approximately NZ\$3,000 per unit. This brings into question the long term financial sustainability of the moulding facility, without external project funding.

Householders have been trained in rainwater tank maintenance, and the Health Unit has a water testing kit. However, there is no government budget allocated to test tank water.

Though households had to contribute some funds towards ensuring their homes were eligible for a rainwater tank, the project subsidised the tank and installation. The Technical Design Report (Chapman, 2012) noted (p44) that "*subsidies can also set an unsatisfactory precedent and may encourage dependency*" whilst "*not using subsidies at all would pose the risk of depriving those in hardship.*" The CBA report (Bunclie, 2012) also noted that the project should be limited to a small scale pilot to avoid any unintended effects on the Niue rainwater tank market.

The level of community ownership of the rainwater tanks is difficult to gauge at this moment. Since the reticulated groundwater supply was installed in 1982-1983, most homes have not maintained their existing tanks. There is currently no water tariff, though metering is being rolled out as a precursor to a cost recovery for mains water supply. As rainwater tanks were planned as a back-up supply during cyclones, there will need to be a sustained change in behaviour for households to maintain tanks on a regular basis to ensure that the water quality is safe.

The introduction of a price signal may act as an incentive for the rainwater tanks to be plumbed into homes, and used more frequently. This would also assist in achieving the NISP target of 20% of water supply coming from rainwater tanks¹³⁵.

The project's technical assistance to provide options and institutional structure for a Climate Change Division in Niue has provided a sound basis for ongoing climate change adaptation planning and

¹³⁵ The Technical Design Report (Chapman, 2012) noted (p46) that it was "*recommended that water meters be installed in some households to ascertain how much of the rainwater system has been used by the householder to determine if the objective of rainwater constituting 20% of the water supply is achieved*". The report also noted (p47) noted that it was "*also critical that a strategy be implemented to encourage the use and turnover of the rainwater tanks so that energy savings can be realised and the objectives of the Adaptation Plan achieved.*"

implementation. A Cabinet paper in December 2015 was prepared to merge the Meteorological Office and the Environmental Division into a new division that would also include climate change.

Cross-Cutting

Gender

Whilst the PACC-Technical Design Report (Chapman, 2012) indicated that the project should focus on homes on the upper terrace and financially vulnerable households, the project did not exclude anyone. The provision of an alternative rainwater supply will benefit all members of households.

Whilst the training in moulding and tank base installation benefited men only (20), the training in water testing included women (3 out of 10).

Only Niuean citizens residing in Niue were eligible to take part in the project. This meant that minority groups from other islands (e.g. Tonga, Samoa, Fiji, Philippines) were not included. It was reported that there was no clear policy on how to handle non-citizens, and those in rental properties.

Environment

No environmental impact assessments were required for the work. The project did not lead to any negative environmental impact.

The site where the manufacturing facility was constructed was mainly covered by invasive species. The site was adequately landscaped and backfilled following the construction of the facility to reduce the reoccurrence of invasive species. Raw materials (aggregate, building chips, makatea) are accessed on the island and are sustainable. Rainwater tanks are manufactured to Australian and New-Zealand safety standards and can be recycled (material) where necessary. This will prevent it from being a waste problem, visual problem or other environmental problem at the end of its useful lifespan. Materials can be recycled at the end of life therefore reducing waste.

The existence of an alternative source allows for the improved management of Niue's groundwater resources (e.g. regular shutdowns can be scheduled so as to provide for maintenance of the pumps).

Technical assistance was provided to help Niue design options for combining their Climate Change Unit, Environmental Division and Meteorological Division under the Ministry of Natural Resources. This will assist Niue in having a more comprehensive approach to environmental management.

Visibility

The project demonstrated collaboration and partnerships with the PACC and IWRM projects in awareness and communications initiatives. The PACC-media person trained by the project left the job and this resulted in a lack of capacity to implement the communications plan. The responsibility fell onto the national coordinator who did not have the required time/media skills to adequately implement the communications plan.

Nonetheless, the project resulted in high visibility of the funding bodies. The opening of the moulding facility resulted in significant media coverage and each water tank has stickers with the logos of the EU and other funding bodies.

There have been a variety of communication and visibility activities including media releases (e.g. SPC media release 2013 on the opening of the tank manufacturing facility), articles (e.g. 2014 SPREP Climate Change Matters: Vital Harbour Launch at SIDS 2014 featuring side event on partnership in Niue), fact sheets, case studies (e.g. 2015 compendium of case studies on climate and disaster

resilient development has a case study on the Niue project: '*Manufacturing water tanks for water security*¹³⁶', video, and presentations at regional and international events (e.g. side event at the UN-SIDS event in Samoa).

Video (e.g. '*Rainwater capture and storage systems - Partnerships to strengthen Niue's water security*') was shown extensively at regional meetings, available on YouTube, and shown on television throughout the Pacific on the Pacific Way, and has been found to be one of the most useful forms of communicating project results and activities.

A national lessons learnt workshop (December 2015) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

Best Practices & Recommendations

Best practices

1. The project brought together a number of donors to fund a community-wide project, enabling efficiencies in procurement and implementation.

Recommendations

1. Use the logical framework approach, in particular the problem analysis step, to clearly identify the core problem. This would assist in ensuring clarity of the project purpose (e.g. reduce pressure on groundwater vs DRM measure).
2. Establish multi-donor projects at the conceptualisation stage, so that all parties are able to contribute to the design, costing and implementation (including shared reporting arrangements).
3. Ensure there are sufficient staff in-country to implement projects.
4. Use behavioural change campaigns to shift behaviours and attitudes (e.g. maintenance of water tanks, reducing groundwater consumption).
5. Ensure regular water quality testing of rainwater harvesting systems.

¹³⁶ http://www.pacificdisaster.net/dox/case_studies_pacific.pdf

7.6.7 Palau Evaluation Report

Sector for Climate Change Adaptation Project

Water sector

Project

Addressing water sector climate change vulnerabilities in the outlying states of Palau

The GGCA: PSIS project in Palau implemented on-ground projects in five outlying states:

- Angaur: development of a concrete water storage tank and solar pump at the Koska well; addition of rainwater storage at the community centre; replacement of pumps at the main well for water distribution, and leak testing and repairs.
- Peleliu: leak testing and repairs at the household level.
- Kayangel: installation of new pumps and three water storage tanks at the community centre.
- Hatohobei (Tobi): installation of 13 stand-alone rain catchments and storage tanks.
- Sonsorol: installation of six stand-alone rain catchments and storage tanks, and refurbishment of one community cistern.

The project funded the development of a training programme for water technicians/operators and the development of standard operating procedures.

An extensive education and awareness campaign was also conducted. Terms of reference were prepared for assessing groundwater in three outlying islands.

The project partnered with the National Development Bank of Palau (NDPB) to pilot the Palau Water Conservation Initiative (PWCI). The initiative provided subsidised loans to eligible households to obtain rainwater storage systems. The project provided funding to purchase 20 household rainwater storage tanks.

Implementing Entity

The implementing entity for the on-ground project was the Palau Public Utilities Corporation (PPUC), a public corporation. This arrangement worked well, with PPUC having the water sector knowledge and experience.

The Office of Environmental Response and Coordination (OERC) provided cross-government coordination for all GGCA: PSIS project activities in Palau.

Relevance & EU Coherence

The water sector project in Palau is relevant to national needs and demonstrates EU coherence.

The project aligns with Palau's National Master Development Plan – Palau 2020, and specifically with the high priority project 'Water system conservation, upgrading and cost recovery' identified in the Palau 'Medium-term Development Strategy: 2009-2014'¹³⁷.

The project also aligns with Palau's needs and priorities in the EU-funded 2012 Water Policy¹³⁸, which aims to protect and conserve Palau's water resources, ensure Palauans have access to safe,

¹³⁷ www.adb.org/sites/default/files/linked.../cobp-pal-2014-2016-sd.pdf

¹³⁸ European Union-funded Integrated Water Resources Management (EU IWRM) administered by SPC

affordable, sustainable water supply and wastewater services, and that these services are managed and operated sustainably and effectively. The Koska well project in Angaur built on a previous Slovakian-funded project that installed a pump and water reticulation line at the Koska well.

The need to provide reliable and quality water was evident during the evaluation field visit in February 2016, with Palau being impacted by drought conditions linked to the El-Niño cycle, with water-rationing in place in Peleliu and Angaur. The need for improved water supply in the outlying atolls of Tobi and Sonsorol was urgent, as Palau's Environmental Quality Protection Board (EQPB) had advised the islands' residents that the existing fibreglass tanks were no longer safe to use for drinking water due to flaking of fibreglass.

Whilst the project's relevance to Palau is not disputed, the feasibility of implementing activities in five geographically-distant outlying states is worth questioning.

The project's Concept Note (developed September 2012, approved October 2012) originally outlined a holistic project focused on Angaur¹³⁹. Angaur was selected as its population of approximately 200 residents were dependent on groundwater that was insufficient in volume and of poor quality¹⁴⁰. The concept note indicated that the Angaur model could be replicated to Palau's 15 other outlying states.

However, several events occurred which made the Government of Palau expand the scope of the project. The European Union in their comments on the Concept Note on 27.10.12 asked for justification for using a €0.5 million grant for 43 households. In December 2012 Typhoon Bopha, a category 4 storm, passed just south of Angaur, a rare occurrence for Palau which is south of the main typhoon zone. This was a wake-up call for the country and emphasising as it did the vulnerability of the outlying island states. Finally in January 2013 there was a change of government. The combination of these events and changes resulted in the Government of Palau, in February – March 2013, advising SPC that the scope of the project had expanded to include the other four outlying states. A second version of the concept note, which included all five outlying states was prepared and was the basis of the consultation meeting in May 2013.

A consultation meeting (May 2013) discussed relevant activities in the five outlying states recognising that significant investments in the water sector were already planned for Kayangel (proposed solar water pumping and gravity feed tank funded by SIDSDOCK/PIGGAREP+¹⁴¹) and Peleliu (USD4 million reverse osmosis treatment plant funded by Japan as part of the Pacific Environment Community Fund).

A re-scoping of activities was required due to a budget shortfall¹⁴², with the final revised PDD (October 2014) reducing the groundwater assessment component to simply developing the terms of

¹³⁹ The proposed project in Angaur consisted of eight activities forming a holistic package, from assessment of groundwater to support policy and actions, to enhancing water storage, training staff, household water efficiency measures, and public awareness. The focus on Angaur is also evident in an email confirming the selection of the water sector¹³⁹ (4/8/2012) and in the formal letter confirming the sector choice (13/12/2012)

¹⁴⁰ The concept note states (p4): "This groundwater supply has been declared by the National Government (Environmental Quality Protection Board) unsafe for human consumption and food preparation. Intermittently tested household and community tanks have also been found to have unsafe levels of e-coli contamination".

¹⁴¹ <http://prdrse4all.spc.int/production/node/4/content/piggarep-project-north-pacific-sustaining-renewable-energy-and-energy-efficiency>

¹⁴² The revised PDD (October 2014) states: "Engineering designs and costs of the planned water infrastructure activities in five outlying island states were completed in July 2014. These costs showed a significant increase over those estimated in the original Project Design Document. This budget shortfall was largely due to under-estimation of the cost of local transport as well as changes in the priorities identified by the island states in 2013."

reference for a groundwater assessment (to be funded in the future). Interestingly, in the consultation report (May 2013), Angaur representatives prioritised the need to assess the quantity of groundwater as the primary activity. The reduction in scope of works in Angaur could have led to a reputational risk to SPC/EU due to the community expectations arising from the consultation and original PDD. However, this was averted by the United Arab Emirates (UAE) grant to construct a water treatment plant.

Effectiveness

The project was most effective in providing rainwater harvesting in two outer island States, and in developing a Climate Change Policy

The project's achievements against the revised logframe (revised October 2014) are presented below. The Palau GCCA: PSIS was effective in achieving most of its revised indicators by February 2016, with some activities running behind schedule but on track to finish by end-March 2016.

Expected result	Indicator	Indicators achieved
Overall Objective: To increase the resilience of the water sector to climate change impacts in Palau	Climate variability and change incorporated into PPUC long term planning and operations by 06/2015	Achieved: PPUC has provided input into the Climate Change Policy, specifically Intervention G.5 to 'Undertake a comprehensive water resource inventory and develop an integrated water resource management plan'. PPUC also in process of preparing strategic plan which includes using core budget for conducting hydrological assessments (based on KRA 3 output).
Purpose: To help ensure water quality and supply meets the needs of the people in the outlying island states of Palau	More than 20% of the population of two of the outlying states of Palau have improved water storage capacity by 06/2015.	Achieved: All of the population of Tobi and Sonsorol now have access to improved water storage. 13 stand-alone systems with two 750 gallon tanks installed in Tobi; six community water harvesting systems installed, 1200 gallons each, and refurbishment of one existing cistern.
	Community water catchments area increased by 10% in one outlying island state by 06/2015	Achieved: Upgrade of roof catchment (two new storage tanks and roof improvements) at Angaur community centre; three 750 gallon tanks installed at community buildings in Kayangel; and provision of plastic roofing for one large community tank at Tobi.

Expected result	Indicator	Indicators achieved
	10% of population adopt a long term water conservation measure by 09/2015	Achieved: Though difficult to determine actual 'adoption of water conservation measures': Household water audits in all 150 homes in Peleliu connected to water reticulation system. 60 homes had external leaks fixed. Water rationing in Peleliu and Angaur due to low water level in wells. Water conservation strategies already in place on Tobi and Sonsorol due to reliance on rainwater storage. Household leak detection planned for Kayangel was cancelled after Typhoon Haiyan damaged most homes, and a Taiwanese funded project provided new kit homes with stainless steel water tanks.
Key Result Area 1: Enhanced capacity of key stakeholders in Palau to monitor and maintain water systems in the outlying states	Four water technicians successfully complete water operations certification course by 09/2015	Exceeded: In 2015 water technicians (36 male) from 19 different water systems in Palau were trained in the certification programme and 68% passed. PPUC plan to use the certification programme as a standard for all water operators.
	Water operations maintenance schedule prepared for the outlying island states for Jan-Dec 2016 by 09/2015	Achieved: Part of Standard Operating Procedures Manual training manual developed by Hawaii Rural Water Association (HWRA). Schedules worked on as part of water operators' training.
Key Result Area 2: Appropriate improvements made in water sector infrastructure in the outlying states	1 new community water catchment demonstration site operational in Angaur by 12/2015	Delayed, on track for achievement. Raised concrete storage tank built at Koska Well, with solar powered pump. Area fenced and provision for public water supply (tap) to be added by end-March 2016.
	1 new community water distillation demonstration site operational in Kayangel by 09/2015	Replaced and partially achieved: Due to procurement issue with the company (insolvent), activity replaced with installation of two new

Expected result	Indicator	Indicators achieved
	<p>Rainwater catchment capacity increased by at least 20% in Sonsorol and Hatohobei by 09/2015</p>	<p>pumps at the existing wells and leak detection and repair, and installation of three tanks at community centres.</p> <p>Achieved: Refurbishment of one cistern and purchase, transport and installation of six stand-alone water catchment systems in Sonsorol, and thirteen stand-alone systems (12 on Tobi and one on Helen's Reef), as well as provision of plastic roofing for one large community tank, contributing to reliable and safe rainwater catchment systems for 100% of the population. The project nearly doubles the amount of drinking water available for Tobi households (from 800 gallons to 1500 gallons), and provides a further 800 gallons (fibreglass tanks) for cleaning and washing purposes.</p>
<p>Key Result Area 3: Outline scoping for an assessment of the availability and quality of water resources in the outlying island states prepared</p>	<p>Scope and terms of reference for a hydrogeological assessment of water availability in the outlying island states prepared by 09.2015</p>	<p>Achieved: SPC Water & Sanitation Program reviewed information provided by PPUC to develop a draft terms of reference for a hydrogeological study into the sustainability of the water lens and the quality of ground water in the outlying island states of Angaur, Kayangel and Peleliu.</p>
<p>Key Result Area 4: Level of awareness about water conservation raised and appropriate measures implemented by Palauan residents</p>	<p>Awareness raising plan by 03/2015</p> <p>At least 2 water conservation awareness activities implemented and evaluated by 06/2015</p>	<p>Achieved: Roll'em Productions prepared a Water Conservation / Climate Change Awareness Actin Plan in February 2015.</p> <p>Achieved: Wonders of Water (WOW) fairs delivered in Peleliu, Angaur, Tobi and Sonsorol. WOW fair also held in Bethlehem Park (Koror). These were interactive events with a number of booths, including demonstration of First Flush Diverters and activities for children.</p>

Expected result	Indicator	Indicators achieved
		'Faucetina' created as a mascot for the campaign. Wider Palau population reached through TV show and radio spots.

Whilst each of these five states demonstrated the need for further investment in their water supply infrastructure, there is an argument that the project's spread over five states has diluted the overall effectiveness and benefit.

In terms of overall need, both Tobi and Sonsorol had the most urgent need, as both these outlying states are reliant on rain, and the existing fibreglass tanks were no longer fit to supply potable water. The installation of new High-Density Polyethylene (HDPE) potable water storage in Tobi allows the community to use the water from the existing fibreglass tanks for cleaning and washing, and the new tanks for drinking and cooking¹⁴³. Overall, the effectiveness of the on-ground activities in ensuring a reliable and safe water supply was most pronounced in Tobi and Sonsorol.

Peleliu's reverse osmosis treatment plant produces potable water, but the benefit to the community was negated by leaks in the reticulation system (mains and household level), untreated groundwater was being pumped into the main water reticulation system to boost the water pressure, so that householders at the end of the line were able to receive water¹⁴⁴. The household leak detection testing in Peleliu covered all 150 homes connected to the main water reticulation system. Leaks outside homes were detected and fixed in 60 residences. It was reported that most households did not allow the PPUC audit team to enter homes. Based on the few homes that were inspected inside, it is likely that considerable leakage remains from internal fixtures. PPUC staff asked householders to check for leaks, and also offered residents help to fix leaks for free if residents purchased the materials. PPUC staff indicated that only a few households had taken up the offer at the time of the evaluation field visit (February 2016). PPUC staff also indicated that most households thought that leaks at the household level (i.e. branching off the main line) were still the responsibility of PPUC. A resident interviewed indicated that people did not care about fixing leaks as there was a flat rate for water consumption (i.e. no metered tariff). The planned installation of water meters and a move to a tiered tariff planned for 2016 should encourage the uptake of water conservation measures. The household water audits did not include any printed material. Such material would have been beneficial to act as a reminder and guide for households to check and fix internal leaks.

Angaur already benefited from the installation of a mobile solar-powered reverse osmosis system (Progetti Plant) installed in 2012 (and refurbished in 2015)¹⁴⁵. The installation of a new water storage tank at the Koska Well in Angaur will be effective in securing an alternative source of water. The Lieutenant Governor indicated that the Koska Well provided the cleanest, best tasting water as it was filtered through limestone, and that it will likely be used by Angaur's northern population, as it is a closer water source than the community centre (Progetti Plant). The rainwater catchment being added to the community centre will provide a back-up water supply in the event of a breakdown of

¹⁴³ The community originally wanted stainless steel tanks that were locally available in Palau but these were found to have issues with rusting.

¹⁴⁴ Peleliu presents a good example of the importance of identifying all the causes to a problem before investing large funds to install a reverse osmosis plant, when the likely benefit is negated by other foreseeable and fixable factors.

¹⁴⁵ The Progetti reportedly led to a reduction in the number of people, particularly elderly and young, getting sick from dysentery.

the Progetti Plant. Feedback from stakeholders interviewed indicated that the Progetti Plant was now functioning well since its last refurbishment and was a valued clean water source for most of the Angaur community.

The activities in Kayangel focused on providing two new pumps for the main well, and installing three 750 gallon tanks at community buildings in the wake of Typhoon Haiyan. There is still a need to establish gravity flow to improve water pressure to households. The SIDS DOCK project aims to work on this. The GCCA project tried to work with SIDS DOCK to contribute funds towards a combined initiative but timing and cost prevented this from materialising. SIDS DOCK seeks to install a solar pump, and the GCCA pumps will act as a back-up once the solar pumps are operational.

The GCCA: PSIS project in Palau partnered with the National Development Bank of Palau (NDBP) to deliver the Palau Water Conservation Initiative (PWCI). This programme provided loans to households to purchase and install a rainwater tank plumbed into the house. The GCCA project provided funding to purchase 20 food-grade plastic rainwater storage systems to reduce the cost to householders for the pilot programme. The system specifications were designed by the SPC GCCA: PSIS Water Advisor, and included first flush diverter and pressure pump. The system is plumbed into homes via a line after the water meter. This allows households to close the mains off and just use tank water. When there are water outages, households can use the system and still have water.

At the time of the evaluation (February 2016), seven households had taken on loans and had rainwater systems installed. The slower than expected uptake is due to several factors, including changes in management at the NDBP, numerous and unexpectedly long permit processes for households to obtain from state governments, the overall cost of the system, and the eligibility criteria to qualify for a loan. A further eight households were in the process of obtaining the required permits. The PWCI builds on energy efficiency and renewable energy loan programmes for new homes and renovations run by the NDBP, so there is scope to integrate the water component with energy component in the future.

The training of water operators provided participants with new knowledge on how to maintain water systems and groundwater wells. It was reported that the training provided participants more confidence in undertaking their duties. The pass rate (68%) was reportedly better than expected, considering the language barrier, and most operators having only high school education complemented with work experience.

Additional activities beyond the focus of the water sector

The project co-funded (with USAID and GIZ-CCCPIR) the development of the 'Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development', which includes a prioritised and costed action plan covering ten sectors

A core coordinating group involving OERC, Palau Energy Office, NEMO, Palau National Weather Service provided oversight of the development of the Climate Change Policy. Oversight was also provided by the National Environmental Protection Council (NEPC), through an ad-hoc committee.

Stakeholders interviewed indicated that the development of this policy was very important, with the process bringing stakeholders across government together for the first time to plan for addressing the impacts of climate change.

There was some differing viewpoints from stakeholders as to the effectiveness of the process to develop the policy (a separate case study has been developed to discuss the development process, effectiveness and likely impact of the policy). One issue in particular was the cohesiveness of the

different consultants working on the separate tenders, as well as the cohesiveness of the team of international and national consultants developing the framework. The quality of one deliverable in particular was also a concern for some of the stakeholders.

A review of climate change mainstreaming into national plans and policies in Palau was conducted in 2013. A subsequent assessment report of budget support readiness showed that the likelihood that Palau would qualify for direct budget support for climate change is low given its capacity constraints and limited sectoral and national strategic plans incorporating climate change endorsed or enacted at the time. The Grants Coordinator advised that Palau has made progress in climate change financing, and was working towards the Ministry of Finance getting accredited for the Green Climate Fund.

The project and Koror State funded a 'south-south' exchange involving national government and Koror State government staff visiting Tonga's coastal protection project. This exchange was effective in highlighting new methods for coastal protection that can be applied in parts of Palau. The exchange also highlighted the different land use and land management practices between the two countries.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 27 people (15 women, 12 men) in May 2013. The post-training evaluation indicated that the training was successful in building capacity and motivation of Palau government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. A 'Refresher training in the LFA and in Monitoring and Evaluation' was conducted in April 2015, attended by 18 people (14 women, 4 men). The post-training evaluation noted that participants who attended the initial LFA training benefited from the refresher and extended their knowledge with project monitoring and a more detailed look at project timeline and budget. Participants who were new to LFA also benefited and the feedback indicated they can see the value of the LFA and most obtained a degree of confidence to use the LFA in their work. The benefits from the two rounds are demonstrated by the following two comments from participants from the first and second round respectively.

"Overall the training was awesome and I recommend it to anyone who wants to learn about grant writing".

"All the content that I learned from this workshop will be very useful at work".

The Palau Grants Coordinator is developing a 'Manual for Grant Management' that incorporates elements of the LFA training, which indicates that the content was deemed valuable.

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

The biggest impact in terms of long term climate change adaptation is likely to result from the 'Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development' if actions are implemented by relevant sectors

The Climate Change Policy brought 10 sectors together for the first time to work towards a common goal of climate change adaptation, disaster risk reduction and low carbon emission development. The sector consultation process raised a lot of awareness on climate change with sector representatives. The policy was endorsed by both houses of government on 24th November 2015 and

forms the basis of Palau's Intended Nationally Determined Contribution (INDC) submitted to the UNFCCC in November 2015.¹⁴⁶

The action plan contained in the policy is already being advanced. The food security sector has already integrated climate change into their plan through the PACC project. Public Health has developed a climate change and health action plan but not a sector-wide policy. Other sectors are being encouraged to take the top three actions from the Climate Change Policy and turn these into grant proposals. The new Climate Change Office will be critical in the policy implementation process, as will the NEPC to ensure that sectors are involved in developing sector-specific climate change adaptation policies and plans.

An issue raised by four stakeholders during interviews was that there was a risk that the Climate Change Policy is losing momentum. Suggested actions included a formal launch of the policy, or reconvening the sector stakeholders.

The GCCA project provided an opportunity to re-establish relationships and improve the OERC's institutional set-up. The project has also led the national government to fund the establishment of a Climate Change Office.

The project introduced first flush diverters to Palau, ensuring better quality water being captured and stored

First Flush Diverters (FFD) were installed in all the project's rainwater capture and storage systems (Tobi, Sonsorol, Angaur, Kayangel, PWCI). This device has received very positive feedback from PPUC as well as other stakeholders. Whilst rainwater capture and storage systems often had leaf screens, FFD divert a specified volume of water that includes debris, as well as other finer or soluble contaminants. This means that the water that is captured and stored is cleaner, and of better quality. A future project could see the roll out of FFDs to all states.

The project also used HDPE tanks, rather than the more commonly available stainless steel tanks. There were numerous reports of stainless steel tanks rusting. There was also one report from a resident of the welds in stainless steel tanks leaching lead into the water.

The impacts from the on-ground projects are greatest in Tobi and Sonsorol, with residents in these two states having increased their total water supply, and having secured a potable water supply

The project provided homes in Tobi with two 750 gallon tanks (with roof catchments and first flush diverters) to provide potable water. These tanks replace 800 gallon fibreglass tanks declared unsuitable for drinking water. The project nearly doubles the amount of drinking water available for households (from 800 gallons to 1500 gallons), and provides a further 800 gallons (fibreglass tanks) for cleaning and washing purposes. An agreement exists between the state and households for water to be shared with others in the community if it is needed.

The community water tanks in Sonsorol have also provided the community with potable water. The new water tanks in Sonsorol were full at the time of the evaluation visit¹⁴⁷.

The project added 31,350 gallons in extra rainwater storage across five states

¹⁴⁶

http://www4.unfccc.int/submissions/INDC/Published%20Documents/Palau/1/Palau_INDC.Final%20Copy.pdf

¹⁴⁷ The Governor of Sonsorol received a phone call during the evaluation interview letting him know that recent rains had filled all the tanks.

The project has added considerable 32,500 gallons (approximately 125 KL) of rainwater storage (Table 1) plus 20,000 gallons of groundwater storage at the Koska well.

Table 1. Rainwater storage capacity added by the GCCA project in Palau*

Project Site and water capacity	Gallons added
Tobi (13 systems, 2x750 gallons each)	19,500
Sonsorol (6x1200 gallons)	7200
Angaur (community centre, 2 x 1200 gallons)	2400
Kayangel (2x750 gallons, 1 x 1200 gallons)	2700
NDBP demonstration tank (1 x 750 gallons)	750
Total (gallons)**	32,550

* Excluding PWCI household loan programme.

** 32,550 gallons is equivalent to 123,215 litres.

The Governor of Kayangel noted that the GCCA: PSIS project came at a very opportune time, straight after Typhoon Haiyan, and helped improve the existing water system. Kayangel residents are used to obtaining potable water from community building storage tanks, so the addition of the three tanks, with first flush diverters, will be effective in increasing potable water supply.

The Koska Well provides a closer source of potable water for Angaur's northern community

The impact of the Angaur project is likely to be high over the shorter term, as the northern community has a closer source of clean water. Over the long term, the impact is likely to be less once the UAE-funded water treatment plant comes on line.

Leak testing has increased water pressure in Peleliu but more needs to be done

The impact from the leak testing and repair in Peleliu is limited as there are still leaks inside homes, and untreated groundwater is still added to boost the pressure of the main water reticulation system in times outside water rationing. The water leak testing and repairs has increased water pressure, from around 10-15 PSI at end of line in 2014, to around 24 PSI at end of line following the water audits. PPUC are aiming for 30 PSI, and despite the household testing, groundwater is still being pumped into the system, leading to a sulphide-like smell emanating from the water. PPUC indicated that they have not detected any leaks in the main line. At the time of the evaluation (February 2016), a resident interviewed indicated that because of water rationing (limited hours of water supply), there was less smell in the water. PPUC indicated that this was because there was no need to boost the main line with groundwater.

The introduction of the metered water tariff should help drive behaviour change at the household level. It would be beneficial to time future community engagement activities targeting water conservation with the introduction of the water meters and tariff. PPUC should also undertake further investigations into ways to ensure there is sufficient pressure to ensure that the treated water from the reverse osmosis plant is delivered to households without resorting to adding groundwater.

The PWCI provides households with a reliable independent water supply when mains water is not available

The impact from the PWCI is limited in terms of numbers, but for those households that took out a loan, the benefits are immediate, especially during cuts to the mains water supply. One Koror resident interviewed indicated that there could be water cuts of up to three days when pipes were broken, but since the water tank installation (plumbed into the house), the household had a reliable

water supply. The resident indicated that they “*felt safe even when there is no water (from the mains)*” as the tank provided up to one week’s supply. It was also reported that the system design provided better quality water and better water pressure.

There was differing views as to the suitability of the ‘design’ of the rainwater capture and storage system used in the PWCI. Some stakeholders considered the system too complicated (in terms of being plumbed into the home, and using HDPE tanks) and too costly. It was suggested that those most in need of rainwater storage (poorer households not connected to mains water) would not be eligible for the loans. Another viewpoint is that the system is right for Palau, as people want the convenience of running water in their homes, and they would less likely use the system if it was not plumbed in and pressurised. The PWCI may consider offering different system designs (not plumbed, and plumbed in) to cater to different budgets.

The water operator’s training programme will raise the overall skill level of PPUC field staff

The impact of the water operators’ training will be felt over time as all water operators are trained to a basic level. Each state will have standard operating procedures for their water systems developed as a result of training.

Efficiency

Time

The on-ground activities experienced considerable delays due to transport logistics, and sourcing material. For example, the rainwater tanks were sourced through a local hardware but needed to come from New Zealand, as these were the only ones in Palau that were deemed safe to use for potable water supply (i.e. food grade plastic). The transport to outer islands was delayed due to the limited options and high cost of chartered shipping.

This has resulted in some project activities still being completed at the time of the evaluation field trip, such as the Koska Well and rainwater storage in Angaur, and the rainwater storage in Kayangel. These projects are expected to be finished by end-March 2016.

The project experienced delays at the start following national elections in Palau. There were significant staff changes in OERC, as well as the amalgamation of the Palau Water and Sewerage Corporation (PWSC) into the new PPUC.

In relation to the process to develop the Palau Climate Change Policy, some stakeholders consulted indicated that it would have been beneficial to spend more time on sector consultation. Only three months was available¹⁴⁸, but it was suggested that a year would have yielded better quality consultation. However, the timeframe was constrained by the schedule originally set by the national government (for policy to be completed prior to COP21), and that the sector consultation was an additional component to the original process¹⁴⁹. Several stakeholders questioned the usefulness of the outputs from the first two steps (community engagement and gaps analysis), suggesting that they could have been done together, and as part of an overall team contracted for the development of the overall policy.

¹⁴⁸ Sector consultation tender released in October 2014, whereas community engagement and gaps and needs tenders released January 2013, and policy framework tender released March 2014.

¹⁴⁹ Fourth step was originally “*Preparation of a climate change plan of action*” but changed to “*Sector analysis and preparation of an action plan for the Palau climate change policy framework*” by the time of the tender for sector consultation (October 2014).

Cost

Palau had acquitted 83% of its €600,000 allocation for the on-ground project by March 2016 and all remaining funds are committed which will result in 100% expenditure by the end of the project. €95,290 was allocated for national coordination and 95% of these funds were acquitted with the remaining funding committed.

The project budget was varied between the Key Result Areas (KRA) as a result of cost-differences between the PDD stage and the implementation stage. Costing of the hydrogeological assessment (KRA 3) was underestimated, due to the high cost of drilling¹⁵⁰.

The cost of transport to outer islands was noted to be very high. For example, the cost of hiring the barge to transport water tanks and equipment to Tobi and Sonsorol was budgeted at US\$64,000 and the actual cost was US\$77,000. State Governors reportedly offered to help with this cost of transport at the planning stage but the offer was later withdrawn due to their own budget constraints. It is important for outer island projects to budget a relatively large contingency for transport costs.

Staffing

The project funded four staff; two staff in OERC- national coordinator, office manager, as well as a finance assistant and project officer in PPUC.

The post-2012 election changes at OERC meant that there was no institutional knowledge of the project. The funding for two staff within OERC helped re-establish the office after the 2012 elections. The OERC also benefited from a staff member funded by USAID to assist with the Climate Change Policy work. There was some duplication in roles between the national coordinator's role in the policy development process and the USAID-funded staff and this was resolved.

PPUC had one engineer who was able to provide assistance. It was reported during stakeholder consultation that PPUC have limited capacity to undertake large on-ground projects. However, it was noted that training of local staff is still required to ensure the sustainability of such projects.

The project received considerable assistance from SPC-GCCA's technical advisor for water, who assisted with the design and procurement for the water projects. SPC-GCCA's Climate Change Advisor based in the North Pacific Regional Office also provided valuable support to the policy development process. The support provided by the SPC team was noted to be valuable in overcoming issues through pragmatic and flexible solutions, as well as for supporting the project's momentum by undertaking frequent visits.

Staff built their skills through a number of informal training activities:

- SPC project manager, climate change adviser, and finance officer provided on the job training in project financial management and in procurement to Palau counterparts in PPUC, OERC and Finance.
- The national coordinator and office manager funded through the project were both supported to attend the GIZ CCCPIR training in the Coastal Change Module of the Climate Change Toolkit, as well as several SPC Disaster Risk Management workshops.
- National coordinator was supported to attend negotiations training through participation in the United Nations Conference of Parties on Climate Change.

¹⁵⁰ KRA 3 was modified to preparing the scope of services to undertake a hydrogeological assessment (to be funded by a separate future project). The funds saved from KRA 3 were re-allocated to KRA2.

Sustainability

There is a high level of community ownership of the water tanks installed in Tobi and Sonsorol. Tobi residents are reportedly very satisfied with the project. Some Sonsorol people residing in Koror took annual leave to go to the island and help build water catchments. Householders have been trained in maintenance of FFDs and state workers will help households maintain water tanks.

The use of HDPE tanks will ensure their longevity over their design life, compared to stainless steel tanks which have been prone to rust.

In Puloana, one of the islands of Sonsorol, the community modified the rainwater tanks set-up to reduce the likelihood of significant water loss from any damage to the tank faucet. The community have added two 200 gallon stainless steel tanks that are filled from the GCCA water tanks using 12 volt pumps. The stainless steel tanks are used to obtain water, thereby limiting any water loss from damaged faucets to 200 gallons at the most. This demonstrates that the community have a high level of ownership of initiative and has learnt from past issues with tank faucets.

The sustainability of water systems in the other three states with reticulated water systems will be improved with the introduction of a water tariff that provides PPUC with cost recovery for the provision of the services¹⁵¹. A number of stakeholders noted that whilst the education and awareness component of the project was great, there is no motivation to save water as there is no metering and tariff. The training of water operators and the development of standard operating procedures for each state's water system will also support the sustainability of the water systems. The development of the terms of reference for the hydrological assessments will also support the sustainability of groundwater extraction if the assessments are implemented and recommendations applied.

The endorsement of the Climate Change Policy should assist Palau's sustainable development. The prioritised and costed action plan represents a blueprint for moving forward over the next decade. Furthermore the policy is fully owned by Palau and is not seen as a donor-driven initiative. The development of the policy provided a catalyst for the establishment of a Climate Change Office.

The skills gained by the staff funded by the project will be retained in government, with all staff now being absorbed into permanent roles. This will be important particularly to support the implementation of priority actions from the Climate Change Policy. The establishment of the PMU will also support the implementation of priority actions. The development of a 'Manual for Grant Management' that is based on the LFA will support clear project proposals.

Cross-Cutting

Gender

There were few opportunities to introduce a gender focus into project activities. The water projects were designed to benefit the whole community. The project planning workshop had a good representation of women (12, from a total of 27 present). Other training activities involved both men and women, although often it was difficult to achieve proportional representation e.g. LFA training involved almost all female and the PPUC operator training was all male.

The international consultants developing the Climate Change Policy had a gender specialist to ensure gender considerations were included, but this was not reflected in detail in the overarching policy document.

¹⁵¹ Noting Kayangel already has a tariff, but set at a lower rate than the capital.

Land inheritance in Palau is matrilineal and women have significant roles in decision making, including two states having female governors over the course of the project. Both men and women were involved in most aspects of the water project implementation in communities. However, there were challenges in achieving proportional gender representation in training. For example the operator training only extended to PPUC staff, all male, and the LFA training participants were almost all female despite the invitations being more widely distributed.

One of the criticisms pointed towards the PWCI is that it excludes poorer households that are often in outlying parts of the main island, and that are not connected to the main water system. The financial eligibility requirements to access the NDBP loans for the rainwater storage systems prevents the most vulnerable from benefiting from the initiative. A more affordable rainwater storage system (HDPE tank and FFD not plumbed into homes) could be developed for households with less collateral to put against the loan, whilst the most vulnerable households should be the target of donor-funded rainwater harvesting systems.

Environment

The project worked closely with the Environmental Quality Protection Board (EQPB) to ensure that water infrastructure improvements complied with regulations (e.g. for excavation for improvements to the groundwater well in Angaur State). All households applying for rainwater tanks through the PWCI also had to obtain a number of permits from EQPB and State agencies.

Whilst there were no environmental risks identified in the risk management section of the PDD, the barge delivering water tanks to Tobi got stuck on the reef at low tide. Fortunately no environmental damage was reported, but future projects should consider the transport-related risk to outer islands without port or berthing facilities.

In Peleliu, household water wastage was reduced through the implementation of a leak detection and repair activity. An extensive awareness programme was conducted in 2014 and 2015 across the wider Palauan community focusing on water conservation.

Palau Public Utilities Corporation (PPUC) water operators went through a tailored certification training course developed with Hawaii Rural Water Association that included standard operating procedures designed to minimise impact on water sources, as well as monitoring of climate impacts.

The Climate Change Policy covers the environment sectors and should lead to environmental benefits in the longer term.

Visibility

The project benefited from having an awareness plan developed by the local television production company (Roll'em Productions, Oceania Television Network).

There have been extensive awareness activities done within Palau, including the Palau Wonder of Water (WOW) campaign, World Water Day, and Climate Change and Disaster Resilient Development Summit. All of these events had extensive coverage in the local media.

Rainwater tanks already installed have clearly visible stickers highlighting the EU. Signage at the Koska Well and water tanks in Angaur is still to be added.

The household water audits in Peleliu did not include any printed material, which is a missed opportunity in terms of providing residents reminders of water saving actions, as well as a means to provide visibility for the EU.

The project had a high level of national and regional media exposure through media releases (e.g. March 2015 SPC Media Release: *SPC and EU support south- south cooperation between Palau and Tonga*), articles in regional newsletters (e.g. SPREP 2015 Climate Change Matters: *Contractors in Palau trained in the installation of rainwater harvesting systems*), and presentations at regional and international events.

Video has been found to be one of the most useful forms of communicating project results and activities. The Palau video '*From coconuts to fresh water*' is one of nine country-specific videos in the series 'Climate Change Adaptation – the Pacific Way' and was shown extensively at regional meetings and on television throughout the Pacific on the Pacific Way. It is also available on YouTube.

A half day national lessons learnt meeting focusing on the water security adaptation activities including the NDBP program was held December 2015. A national lessons learnt workshop (February 2015) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

Best practices & Recommendations

Best practices

1. HDPE tanks and first flush diverters represent best practice for rainwater harvesting systems.
2. The PWCI component provides a financially self-sustaining model to provide rainwater tanks, though its reach may be limited due to loan criteria.
3. National government sectors were appropriately consulted for the development of the Climate Change Policy, leading to a high level of ownership of the policy.
4. The use of experienced local consultants for components of the policy development process ensured that the local context and language was reflected in the final Climate Change Policy.

Recommendations

1. Projects should use the logical framework approach, in particular the problem analysis step, to clearly identify the core problem and purpose of the project.
2. Use the “rule of thumb” developed by the GCCA: PSIS project to realistically deliver projects in outer islands: carefully plan schedules and budgets and then multiply by 2.
3. Implement projects in one State at a time, or in adjacent States, and set realistic targets rather than being overambitious at the design stage.
4. Use behavioural change campaigns to shift behaviours and attitudes (e.g. fixing household leaks to reduce groundwater consumption).

7.6.8 Tonga Evaluation Report

Sector for Climate Change Adaptation Project

Coastal protection

Project

Trialling Coastal Protection Measures in eastern Tongatapu

Three coastal villages in the eastern side of Tongatapu were selected for piloting both soft and hard coastal protection measures. Measures piloted include groynes (concrete sedi-tunnels with varying degrees of permeability and groyne spacing) and detached breakwaters each combined with sand recharge. This is the first time these coastal protection measures have been implemented in Tonga and it is the first time permeable sedi-tunnels have been used in the GCCA: PSIS. Both measures were complemented with the planting of coastal plants and mangroves. The approach selected is categorised as 'managed coastline advance' which accepts that measures implemented will only delay (not prevent) coastal erosion and loss of land.

Monitoring activities at the pilot sites are ongoing to determine the degree of effectiveness of the coastal protection measures. Initial monitoring results indicate the measures have had a positive impact in the short term.

Implementing Entity

The Implementing Entity was the Ministry of Lands, Environment, Climate Change, and Natural Resources (MLECCNR) in partnership with the Ministry of Infrastructure. The JNAP Technical Working Group (TWG) provided project oversight.

The secondment of an experienced senior engineer from the Ministry of Infrastructure to the Project Management Unit (PMU) based within the Climate Change Division of MLECCNR bridged a capability gap in the PMU to oversee the infrastructure based components of the project. This implementation arrangement was effective and can be recommended in the future to provide the coastal engineering knowledge and skills to the PMU.

Relevance & EU Coherence

The Tonga project is highly relevant to national priorities as documented in the Tonga's Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management (2010) (Goals 3 - vulnerability assessment and Goal 4 - increased climate change resilience). The project demonstrates coherence with other EU programmes that aim to increase resilience of PSIS to climate change vulnerability. The project also aligns with SPC's Climate Engagement Strategy.

The project is highly relevant to the communities at the pilot sites. Much of the socio-economic activities and critical infrastructure (including the coastal road) exist in low lying coastal areas which are highly vulnerable to negative impacts of climate variability. Communities in eastern Tongatapu have been exposed to flooding and land loss due to coastal erosion which is exacerbated by storm surges. Existing hard infrastructure coastal protection at the pilot sites was in disrepair and ineffective.

Some other relevant climate change projects were being implemented or planned in Tonga during the planning and implementation stages of the GCCA project. These projects include:

- Pacific Adaptation to Climate Change (PACC) – Focused on mainstreaming climate change in national and sector policies and implementing measures to increase water security and pilot coastal protection measures.
- University of the South Pacific-European Union Global Climate Change Alliance project (USP-EU GCCA) – Focus area is food security (Tongatapu) and water security (Vava’u and Ha’apai).
- Strategic Programme for Climate Resilience (SPCR) 2014 – 2019 – One of the many focus areas includes coastal protection.
- Coping with Climate Change in the Pacific Island Region – Programme (CCPIR) 2009- 2015 (GIZ)

There was no duplication of work between the projects.

Effectiveness

Most effective in implementing two coastal protections measures in eastern Tongatapu that were informed through best practice feasibility studies, research and design phases

Overall the project was found to be highly effective with the project purpose being achieved and all components of key results areas delivered and the four targets exceeded. The project’s achievements against the revised logframe (April 2015) are presented below.

Expected result	Indicator	Indicator achieved
Overall Objective: Increase resilience to climate change impacts in Tonga	Minimum 2 new modes of delivery available for climate change adaptation and coastal management by 06/2015	Achieved: Groynes and detached breakwaters complemented with sand recharge and coastal planting
	Climate change adaptation / disaster risk reduction measures incorporated into a diagnostic study that informs an integrated coastal management plan by 06/2015	Achieved: Diagnostic study completed (August 2014) and ready to inform ICM plan.
Purpose: Trial coastal protection measures in eastern Tongatapu	Lessons learnt from these coastal protection interventions shared with other Pacific island nations and stakeholders in Tonga by 12/2015	Achieved: National Lessons Learnt Workshop held in Tonga (October 2015). Lessons shared with future projects GIZ ACSE and ADB SPCR. Lessons shared at regional Lessons Learnt Workshop in Yap (August 2015). Two videos produced to share lessons. Palau delegation visit occurred (February 2015) to learn about Tonga’s coastal protection measures.

Expected result	Indicator	Indicator achieved
	At least 50 stakeholders from national government, local government and communities provide input (written or verbal) to the diagnostic study to inform an integrated coastal management plan by 03/2015	Exceeded: Over 58 stakeholders from Government and the community informed the diagnostic study via three workshops held May – July 2014. 18% of the 43 community members contributing were women.
Key Result Area 1: Education and awareness on coastal management in the context of climate change enhanced in Tonga	Communications schedule of education and awareness activities prepared by 06/2014	Achieved: A very basic communications activity schedule completed. ¹⁵²
	At least four education and awareness activities conducted by 09/2015	Exceeded: Six activities conducted. Two primary school beach monitoring field trips, one University of South Pacific class excursion, launch event, speech competition, community meetings and television interview.
Key Results Area 2: Coastal adaptation measure involving hard and soft protection elements identified, designed and constructed for a vulnerable coastal community in eastern Tongatapu	Coastal protection measures selected, designed and costed by 09/2013	Achieved: As evidenced by Feasibility Study and Costing report; Historical Erosion report; Final design; Environmental Impact Assessment completed by August 2013.
	One coastal protection measure completed and in place by 06/2015	Exceeded: Two coastal protection measures (20 groyne sedi-tunnels and 10 detached breakwaters supported by sand recharge and coastal replanting) implemented in Talafo'ou, Makaunga and near Manuka Village in Eastern Tongatapu. 14,01 meters of coastline protected.
Key Result Area 3: Effectiveness of the coastal protection measures	Staff in MLECC & NR regularly engaged in beach monitoring by 12/2014	Achieved: Quarterly monitoring (beach profiles)

¹⁵² Activity schedule listed only 6 activities with no dates, responsibilities, purpose or key messages. National Coordinator had a communications background and several more communications activities were carried out that were not documented in the plan.

Expected result	Indicator	Indicator achieved
monitored, in collaboration with other related projects		started in March 2014 by the Geology Division.
	At least two schools involved in coastal monitoring by 09/2015	Partial: Manuka/Navutoka GPS and Makaunga/Talafo'ou GPS engaged in coastal monitoring field trip. These were one-off field trips. No ongoing coastal monitoring is occurring at schools.
Key Result Area 4: Capacity of key stakeholders in Tonga enhanced to plan for coastal change in the context of climate variability and change	Diagnostic study for a coastal management plan prepared by 03/2015	Achieved: Diagnostic study completed (August 2014) and available to inform ICM plan.

The logframe was modified during the course of implementation to reflect revisions to the project design. Notable changes include scaling back the original development of the Integrated coastal management plan to only focus on the diagnostic study (completed August 2014) to inform the plan that will be developed post-project. This decision was made due to the lengthy time required to complete all the consultations that would be integral to the preparation of an integrated coastal management plan. Original "Activity 3.3 Hold training workshops in the monitoring and maintenance ..." was replaced by an activity to construct three playground areas (parks) for communities located at the coastal area sites where protective measures took place. This change was made due to the fact that specific skills and specialist equipment was needed to collect the required monitoring data and carry out the maintenance. Communities expressed an interest in parks for their children to play in. Three parks were created.

Whilst it will take several years to determine the true effectiveness of the coastal protection measures, initial monitoring data and observations can provide an indication of likely success. Beach profiling data captured between March 2014 and January 2016 indicates that the groynes have been effective in retaining the sand that was recharged to the area and additionally accumulating new sand to extend the depth of the beach further seaward. A summary statement in August 2015 noted that the 'this indicates that this design is working in terms of coastal protection'. Positive results were also seen for the detached breakwaters, however, the incorrect representation of the data in some charts does not allow for the accurate interpretation of the data. Observations at the site show small rock sedimentation deposits occurring behind the breakwater and close to the foreshore. It is anticipated that this process of sediment accumulation will continue with time.

Mangroves and coastal plants were planted on the foreshore area at the breakwater site, however, most had died. Plant die off is likely due to the mangroves being planted directly after the site works were completed instead of holding off for 12 months as outlined in the design. This oversight was acknowledged by the project team.

In February 2015, MLECCNR hosted a visit by six representatives from the Palau National Government and the Koror State Government (one of the states of Palau) to share experiences about

Tonga's coastal protection project and the procedures used in its implementation. This exchange was extremely successful for both Palauan and Tongan stakeholders.

Additional Activities beyond the focus of the Coastal Protection Sector

Access to climate change finance via new modalities was progressed through revision of the existing Tonga Climate Change Trust Fund Bill and a supporting manual to guide the administration of the Fund. Policy work was undertaken by local and international consultants with input from the JNAP TWG and a Parliamentary Standing Committee. The ADB was also influential in providing input into the Trust Fund structure. However, their input created some confusion within the Ministry of Finance regarding the Trust Fund structure. There were some differences of opinion as to whether the Trust Fund should be housed within the Ministry of Finance or Parliament. The Bill is currently awaiting endorsement by Cabinet. This is the first Climate Change Trust Fund to be established in the Pacific region. It may provide a model for other countries to take as a starting point for replication, pending an assessment of its effectiveness in the short to medium term.

A key mainstreaming measure completed by the project included the revision of the outdated Tonga Climate Change Policy 2006. The new Climate Change Policy 2015 – 2020 was completed in September 2015 and endorsed by Cabinet in February 2016. It provides clear objectives and links to the Tonga Climate Change Trust Fund.

Additionally, a review of climate change mainstreaming into national plans and policies in Tonga was conducted in 2013. A subsequent assessment report of budget support readiness indicated that the likelihood that Tonga would qualify for direct budget support for climate change is high given previous positive assessment¹⁵³ and noted strong Public Financial Management (PFM).

Training in 'Proposal preparation using the Logical Framework Approach (LFA)' was delivered to 58 people (29 women, 29 men) over two training sessions in February 2014 and June 2015. The post-training evaluation indicated that the training was successful in building capacity and motivation of Tongan government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. Follow-up impact surveys revealed that seven proposals had been developed since the training and all were informed by components of the LFA. The survey also revealed that participants were using the LFA to inform both proposal writing and general work duties. Weaknesses identified during the first workshop (budgeting and project monitoring) were addressed in the second workshop. Overall, the training was highly valued and participants reported having a high degree of confidence to undertake most steps of the LFA.

Impact

Resilience of coastal communities to the impacts of storm surges and sea level rise increased

The coastal protection measures will require long term monitoring to determine what sustained impact they have on communities. To date, three strong storm events have demonstrated that the protected areas did not suffer from debris and waves overtopping the coastal road, compared to unprotected areas close by where debris was deposited onto the road by strong waves. As a result of the intervention, community members (based on the small numbers interviewed) feel more protected from storms and sea level rise.

¹⁵³ Assessment of National Systems (ANS) undertaken by AusAID

Playgrounds provide increased recreation for the broader community and economic development opportunities for women

Playgrounds are being used by children from pilot communities and neighbouring villages. Children are now playing on the beaches that were previously void of sand and in a marsh-like state. Parents no longer need to drive their children to Nuku'alofa to play at beach parks. Local village women occasionally set up stalls to sell peanuts and snacks which provide a new economic development opportunity for women (a positive unintended consequence). The replenished beaches may in the future attract more locals and tourists. On the flip side, toilets are required at the playgrounds to accommodate sanitation needs of visitors. Additionally, safety measures are required to increase the safety of children crossing the road to get to the playground. There has already been one reported incident of a child being hit by a car crossing the road. This is an unintended negative consequence of the playgrounds being established. Warning cones have been positioned to act as a temporary crossing whilst MLECCNR wait for proper signage and road painting to occur.

Fish species and numbers have reportedly increased

Whilst not yet proven by a marine survey, some local residents have reported that since the site works, more fish are in the area and species of fish that had disappeared in recent years have returned. Such evidence is anecdotal and the impact may be short-term as a result of disturbances to other habitat or the increased nutrients released into the area by the coastal works. This is another positive unintended consequence from the project.

Efficiency

Time

All planned project activities (based on revised logframe) were completed within the allotted project timeframe. However, several activities (notably the coastal protection measures) were delayed and not completed as per the timeline in the PDD. The main delay experienced was due to the halting of construction works when police ordered the construction contractor to stop taking sand from the designated extraction points. Despite consultation with Town Officers who were involved in the PDD design process, some local community members were not happy about the sand being taken from the proposed sites (which were changed twice during the project). Rumours about the project spread for political reasons appear to have inflamed community sentiment¹⁵⁴. Sand extraction (this time from the lagoon) and beach recharge continued after further community consultation.

Cost

Tonga had acquitted 100% of its €565,850 allocation by March 2016. €65,850 was allocated for national coordination and the remainder for the climate change adaptation project.

A review of project finances early in 2015 indicated that the project contingency had not been required to complete planned works (allocated). These funds were utilised to construct eleven extra groynes representing an efficient use of all project funds.

Estimated costs of different coastal engineering approaches were developed by CTL Consult and this information was considered in the final selection of coastal measures implemented and the scope (number of sites) that could be targeted.

¹⁵⁴ It was rumoured that the project was benefiting financially by taking sand from beach areas without compensation being paid when the project had budgeted to pay for sand. This rumour was untrue.

Staffing

The core Project Management Unit (PMU) consisted of a national coordinator and senior infrastructure engineer (on secondment from the Ministry of Infrastructure) in the first year. This secondment was a key to filling a capability gap in the infrastructure component of the project. A finance officer was recruited in Year 2 to help the coordinator focus on implementation. The bulk of project implementation was contracted out to a local construction company and the services of an international coastal engineering company were procured for the feasibility and design study, as well as limited monitoring and oversight during implementation. The PMU took the lead in the implementation of education and awareness activities.

Evidenced by PMU feedback and the fact that the project was completed within the timeframe, the evaluation finds that human resources allocated were sufficient (both in terms of capacity and capability) to deliver the project.

Overall the evaluation finds the project was delivered with a high degree of efficiency in terms of time, financial investment and staffing.

Sustainability

The detailed design for the coastal protection measures outlined that it may be necessary to recharge the pilot sites with more sand in between two to five years – this is standard practice with sand recharge. The lifespan of the groynes is estimated to be approximately 5-10 years after which maintenance or replacement may be needed.

There is no core budget allocation being set aside for sand recharge or repair of the groynes. Infrastructure maintenance is reliant on either external financial support either through new projects or an allocation from the Tonga Climate Change Trust Fund (if it is endorsed and funded). This maintenance and future project replication work is one of the main intended uses for the Fund resources.

There are currently no plans in place to continue either the community or schools education programme; however it is possible the consultation process for the ADB SPCR project may fill part of this role in the short to medium term. The SPCR project has the same target area (Eastern Tongatapu) as this project and it is anticipated the project will replicate and complete works scoped in the original design documentation that informed the GCCA project.

Project monitoring of pilot sites is reliant on the Geology Division situated within the Ministry of Lands, Survey & Natural Resources. The Division is committed to conducting quarterly monitoring as part of its mandate (core funding). It is highly likely the SPCR project will make a point of ensuring this monitoring occurs up until 2019. Whilst the Geology Division conducted project monitoring without receiving any direct GCCA funds, the Division did receive some equipment (total station for surveying) funded by the GCCA project to conduct detailed beach profiling. The Division recommended that future projects allocate some funding to monitoring activities to cover both new equipment and the overtime claims for staff wages. Beach monitoring can only be conducted at low tide and thus staff often need to work outside of standard business hours.

Overall, the benefits of the project are highly likely to continue in the short to medium term (1 to 5 years). Longer term sustainability is dependent on endorsement of the Tonga Climate Change Trust Fund Bill and funding from external donors will be required for the ongoing benefits of the project.

Cross-Cutting

Gender

Women were represented (38%) in capacity building activities and community consultations, including the project design workshop. Women also raised the issue of children's safety during the construction period and this was addressed through frequent radio announcements about the works' schedule and the blocking off of sedi-tunnels entrances where children may get trapped. Whilst these are positive indicators of inclusiveness, women, youth and the elderly (vulnerable groups) only had one token mention in the concept note and PDD. Whilst it is acknowledged that the project beneficiaries are the entire target coastal villages who are all vulnerable to the impacts of sea level rise, a greater focus on the specific needs of vulnerable groups in the project design process could help identify opportunities for them to benefit to a greater extent.

Environment

The PDD risk management matrix did not identify any specific environmental risks outside of the impacts of natural disasters. An Environmental Impact Assessment (EIA) was conducted prior to this project to consider environmental risks and management responses.

With the exception of community concerns around the mining of sand (for sand re-charge), there were no reported negative environmental impacts from the project.

Unintended positive environment benefits that have occurred include the (anecdotally reported) increase in fish varieties and fish numbers at the pilot coastal sites.

The CTL Consult Feasibility Studies report noted that one cause of coastal erosion was sand mining conducted ten or more years ago. The project EIA (2012) community survey involving 244 households (74% of the target population) found that 9.8% of interviewees still mined sand from the local beaches for funerals and small domestic activities. Future projects could seek to raise awareness about the impacts of local sand mining. The scale of sand mining could be quantified to estimate the extent that this mining is contributing to coastal erosion.

Visibility

The project developed only a very basic community engagement plan that by itself would have been insufficient to ensure adequate external communications and visibility. Fortunately the national coordinator had a communications background and thus many other communications activities occurred (media releases, banners, TV and radio segments) that were not in the basic engagement plan. It is recommended that all future projects develop a detailed communications plan at the project design stage which can be refined as implementation progresses. This ensures that adequate staff resources, time and funds can be allocated to implement the plan. All activities in the basic engagement plan were implemented.

The evaluation found evidence of communications tools and knowledge management products that created awareness about the project, visibility of the implementation agency (SPC) and donor (EU). Visibility was created by the insertion of text acknowledgements and logos into all official reports and publications.

Examples of communications and visibility products include media releases, newspaper articles, fact sheets, newsletters (Climate Change Matters), billboards and banners. Videos were also produced ('Buying time with better coastal management in Tonga' and 'Looking above and beyond climate

change in Tonga: A success story of the GCCA project'). Video has been found to be one of the most useful forms of communicating project results and activities.

There have been a variety of communication and visibility activities including a climate change speech and poster competition for school children, field trips to the project site for primary school and USP students, a 30-minute interview on TV discussing climate change and the GCCA project, presence at Environment Week (2014) and a launch event (2015). Presentations were also given at regional and international events (e.g. 2015 Pacific Climate Change Roundtable).

A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons. A national lessons learnt workshop (October 2015) was held to enable the project team and local partners to identify and document lessons learnt.

Overall, there was sufficient visibility about the project, SPC and funding from the EU.

Best Practices and Recommendations

Best Practices

1. The model to review historical coastal changes, undertake feasibility, design and costing studies, to inform the selection of the most appropriate coastal protection measure is essential.
2. PMU composition had the right mix of skills and expertise, including project management, finance, technical (coastal) and communication skills.

Recommendations

1. Engage communities early and consistently during implementation to ensure their buy-in.
2. Significant effort needs to be invested in community consultation about alternative coastal protection measures.

7.6.9 Tuvalu Evaluation Report

Sector for Climate Change Adaptation Project

Agriculture sector

Project

Improving agroforestry systems to enhance food security and build resilience to climate change in Tuvalu

The Tuvalu project developed three agroforestry trial sites, two on Funafuti and one on Nukufetau. A nursery was established on Funafuti to grow seedlings for the two Funafuti sites. The project funded the re-equipment of the agricultural research station on Vaitupu.

The project also funded the development of the Tuvalu Agriculture Strategic Marketing Plan 2015-2025, which aims to revive domestic and international trade of locally-produced agricultural products through domestic activities and trade arrangements.

Implementing Entity

The Department of Agriculture (DoA) was selected as the implementing entity for the climate change adaptation project due to its management of the selected sector and its having the required expertise to implement the on-ground project. The Department of Environment (DoE) was the overall coordinator for the GCCA: PSIS project in Tuvalu. This structure worked well as it leveraged off the expertise and resources of the department overseeing the selected sector. The partnerships approach built strong relationships based on working towards a common goal, whereas in the past projects had poor coordination.

Relevance & EU Coherence

Tuvalu's GCCA: PSIS project is highly relevant and demonstrates coherence with EU programmes. Discussions from stakeholder consultations noted that six of the seven prioritised adaptation needs had been covered under NAPA I and NAPA II. The seventh priority area, 'health' had not been covered by any of the projects being implemented in Tuvalu. In the end, the agriculture sector was selected, with a focus on improving food security through an agroforestry demonstration project.

Traditional farming resembled agroforestry practices but projects over the past three decades encouraged mono-cropping of cash crops (e.g. coconut), thus decreasing productivity and variety and depleting the soil.

The agroforestry project was consistent with the Tuvalu Joint National Action Plan on Climate Change and Disaster Risk Reduction (JNAP), as well as Tuvalu's NAPA document, which highlights food security and agriculture as a key area for adaptation activities, and the Tuvalu Agriculture Tuvalu Agriculture Strategic Plan (2014-2023). The Te Kakeega II: National Strategy for Sustainable Development also prioritises subsistence agriculture production and mitigating climate change related agricultural impacts.

Two trial sites were on Funafuti as the Tuvalu Government wanted the project to focus on the capital as 60% of the population reside there.

The project complemented Taiwan's Horticulture Crop Development Project on Funafuti, which focuses on vegetable gardening, as well as a UNDP-funded project focused on implementing Tuvalu's

NAPAs through home gardening. An Australian Aid funded project implemented by SPC's LRD division, which focused on developing and testing climate-ready plant varieties in two outer islands, and an SPC-GIZ CCCPIR climate change coordination project are also complementary.

SPC and the country project team consulted with representatives of other food security projects (e.g. FAO, Taiwan) to learn lessons and minimise duplication (Trip Report, November 2013).

Effectiveness

The project was most effective in establishing three agroforestry sites and providing the foundations for enhanced food security in Tuvalu

The project's achievements against the revised logframe (revised February 2015) are presented below. The Tuvalu GCCA: PSIS project was effective in achieving its purpose and key result areas.

Expected result	Indicator	Indicator achieved
Overall Objective: Increase resilience to climate change impacts in Tuvalu	Lessons learnt from food security initiatives compiled, analysed and shared with other atoll countries by 12/2015	Achieved: Lessons learnt video on 'Promoting Local Food Production in Tuvalu' ¹⁵⁵ completed and shared. National lessons learnt workshop held at end of project (November 2015) with all project partners including the farmers and representatives from other projects. Crop database established to evaluate effectiveness on an ongoing basis and shared with different projects.
Purpose: Enhance food security in Tuvalu	At least two demonstration sites operational in 2 different islands by 12/2015	Achieved: Two sites on Funafuti completed, and one in Nukufetau (on Funaota islet).
	Operation and maintenance of demonstration sites are incorporated into the 2015/2016 work plan for the Department of Agriculture by 12/2015	Achieved: Funds for maintenance of the demonstration sites and for the wages of two of the projects' temporary workers allocated in the Department of Agriculture's 2016 budget.
Key Result Area 1: Enhanced understanding of agro-forestry among community members, land owners and Kaupule through awareness raising, capacity building and training	At least 10 farmers effectively applying agro-forestry practices by 09/2015	Achieved: Four trainings held; two delivered by SPC LRD staff on Funafuti (Oct 2014 and Oct 2015), one by DoA on Funafuti, and one by DoA and National Coordinator on Nukufetau. Funafuti farmer survey indicates 16 farmers indicated they had applied agroforestry

¹⁵⁵ <https://www.youtube.com/watch?v=TFdFHC68n8o>

Expected result	Indicator	Indicator achieved
		design. Nukufetau farmer survey pending.
	At least 6 education/awareness activities implemented by 12/2015	Achieved: (1) At least 9 radio shows by the DoA and DoE (2) Participation at two annual Environment Week events (2014 & 2015); (3) Pamphlets on steps for agroforestry and composting in both English and Tuvaluan; (4) Four billboards at 3 project sites and DoA nursery; (5) Home gardening workshop run by TNCW on 23-24 October 2014; (6) Video in Tuvaluan with English subtitles 'A Guide to Developing Agroforestry in Tuvalu' developed for Tuvalu farmers to explain steps required to develop their own agroforestry sites. (7) Go Local Campaign in November 2015 to promote local produce.
Key Result Area 2: Improved agro-forestry system implemented in demonstration sites in Funafuti and one outer island	4 sites for demonstration selected in 2 islands in a participatory manner by 12/2014	Achieved: MoUs with landowners for two sites on Funafuti, and MoUs for two sites on Nukufetau. Nukufetau Kaupule (council) preferred to have project on only one site for ease of ongoing maintenance.
	10 farmers across 2 islands have access to equipment needed for agro-forestry by 12/2015	Exceeded: Between 30 and 50 farmers on Funafuti, and members of the Funaota farming association on Nukufetau, have access to chipper, tractor, excavator and small equipment. Tractor operator/maintenance training in May 2015. Excavator operator training 19-20 May 2015 on Funafuti.
	2 nurseries established or enhanced in 2 islands to supply planting material to farmers by 12/2015	Achieved: Nurseries on Funafuti and Nukufetau, and Agricultural Research Station in Vaitupu re-equipped.

Expected result	Indicator	Indicator achieved
Key Result Area 3: Marketing potential and access evaluated	Agricultural production marketing plan for Tuvalu prepared by 06/2015	Achieved: Tuvalu Agriculture Strategic Marketing Plan (TASMP) 2015-2025 endorsed by Cabinet February 2016.
Key Result Area 4: Enhanced coordination and capacity of the Department of Agriculture	Department of Agriculture Nursery equipped to supply planting material for two new crops/ crop varieties to farmers by 06/2015	Achieved: Nine varieties of crops supplied by SPC CePaCT to DoA nursery in Tuvalu. Crops were also collected nationally from outer islands of Tuvalu. DoA maintains database of plants supplied to project sites in Funafuti.
	Minimum 2 government employees trained in propagating climate ready crops by 12/2014	Achieved: 105-day attachment for Tuvalu Agricultural Extension officer at CePaCT. Research paper completed titled " <i>In vitro and in vivo screening of sweet potato (Ipomoea batatas) varieties for tolerance to salt, using two methods.</i> " The extension officer is now looking after all material propagation in the Agricultural Research Station. Tuvalu Biosecurity Officer had an 8-week attachment to SPC Land Resource Division, Suva, Fiji. Biosecurity training has helped with progressing the potential of breadfruit for exportation; and with monitoring agricultural pests. 4-week attachment to CePaCT and SPC for Tuvalu GCCA: PSIS Capacity Building and Communications Officer.

The agroforestry project in Tuvalu demonstrated an effective use of regional resources, through the partnership with the SPC Centre for Pacific Crops and Trees (CePaCT). The partnership worked well as CePaCT was approached at the project design stage, and the project provided CePaCT with the required funding to effectively assist Tuvalu in providing plant cultures, as well as training through attachments. CePaCT had previous experience with Tuvalu's DoA, and built on this knowledge to deliver effective assistance (e.g. supplying cultures in small batches, knowing that the DoA is not able to look after larger batches).

The GCCA: PSIS project in Tuvalu also delivered a parallel food security project targeting women, as most of the farmers involved in the demonstration project were men. Home gardens were set up on every island of Tuvalu through the Tuvalu National Council of Women (TNCW) as demonstrations to further strengthen backyard food gardening by women in rural outer islands. Initially a training was held covering home garden design, plant grafting techniques, and how to best plant fruits, vegetables

and root crops (48 women trained from all islands of Tuvalu). Equipment was then provided for the women's group on each island to implement their own home garden. A competition was run to further encourage women to develop home gardens¹⁵⁶. Gardens were evaluated by judges from the Department of Agriculture, and prizes were given to the best gardens. The TNCW have indicated that they will continue the gardening competition in 2016.

Additional Activities beyond the focus of the Agriculture Sector

A 'Review of mainstreaming of climate change into national plans and policies: Tuvalu' (November 2013) was undertaken as part of the project's technical assistance component. The report notes that climate change adaptation is clearly articulated in national plans and strategies and these are starting to be included in sector master plans as they are developed. Importantly, there needs to be improvements in linking budget expenditures and estimates to plans, strategies, and there needs to be better monitoring and reporting processes. The report notes that lack of capacity within the Department of Environment may be a barrier to responding and reporting of climate change adaptation.

A review and assessment of national and sector policies in relation to budget support modalities in the Pacific Smaller Island States (2013) indicates Tuvalu's likelihood to qualify for direct budget support for climate change activities is rated as medium.

The project co-funded the delivery of Environmental Impact Assessment (EIA) training in Tuvalu (23 February to 5 March 2015), and conducted a review of Tuvalu's National Environmental Management Strategy (NEMS) 2015 – 2020. Additionally, one government staff was funded to attend procurement training in Fiji.

Training in 'Proposal Preparation using the Logical Framework Approach (LFA)' was delivered to 29 people (16 women, 13 men) in November 2013. The post-training evaluation indicated that the training was successful in building capacity and motivation of Tuvalu government staff and community based groups to use the LFA to design projects and inform the preparation of proposals. A 'Refresher training in the LFA and in Monitoring and Evaluation' was conducted in March 2015, attended by 19 people (12 men, 7 women). The post-training evaluation noted that participants who attended the initial LFA training benefited from the refresher and extended their knowledge with project monitoring and a more detailed look at project timeline and budget. Participants who were new to LFA also benefited and the feedback indicated they can see the value of the LFA and most obtained a degree of confidence to use the LFA in their work. The benefit from the training is demonstrated by the following quote from a participant from the first LFA workshop.

"This is a very good training, I have learnt a lot and so fortunate to have this great opportunity to be part of this training! I feel confident that I could be able to write successful project proposals."

Impact

Whilst some project impacts will not be known or proven until one or more years into the future, some noted short term impacts have been observed.

The first agroforestry site has had its first harvest

The first harvest of kumala, banana, yam and coconut, was reaped at the first agroforestry site on Funafuti by December 2015. The crops were showcased at the Go Local Campaign Fair. The crops

¹⁵⁶ The competition was delayed as many home gardens in outer islands were damaged during Cyclone Pam (Trip Report, July 2014).

belong to the landholders, and any excess is encouraged to be sold to the community. Annual food crops, mainly root crops such as sweet potatoes, xanthosoma and cassava, are in their second cropping stage.

The agroforestry project's impact for perennial food crops will be in a better position to be assessed in two years or more once more plants become established and bear fruit. Interestingly, mature coconut palms that were left behind during the thinning out process at the demonstration sites are reported to be in full production, and providing the landowners with a consistent supply of more than 100 coconuts per week. Such production levels are reported to be much greater than before the land was converted to agroforestry.

Data on crops and crop yield will continue to be collected and compiled by the Department of Agriculture, and shared nationally and with other Pacific island nations. The demonstration project is likely to contribute to food security through a more resilient food supply¹⁵⁷.

Farmers on Funafuti have taken up agroforestry practices

The training of farmers was important as it provided hands-on demonstration of new farming methods. Results from the farmer survey indicate that farmers have increased knowledge on agroforestry and have implemented measures on their farms¹⁵⁸.

At present, most of the farmers do not sell the produce they grow, so the likelihood that the food security benefits are spread to non-farming households will depend on an increase in farmers selling produce over time, though sharing of produce through the informal economy will also lead to increased food security for a greater number of people. The implementation of the TASMP 2015-2025 will help promote the marketing of locally produced food. The TASMP will also build on the 'Go Local' campaign that was supported by the GCCA: PSIS project. The TASMP will also help in the planned export of breadfruit and banana to New Zealand.

The project's PDD notes that the project will benefit Funafuti's population (over 6,000 people). This may occur if more unused land on Funafuti is put into agroforestry production.

Skills learnt through attachments are being put to use.

The three attachments have built the skills of Tuvalu government staff, particularly in tissue culture and biosecurity which will have positive impacts on food security and resilience. The staff members from two attachments are back working in Tuvalu.

¹⁵⁷ More varieties of crops means that it is more likely some crops will survive, or grow back, after extreme weather events, or adapt to climactic changes.

¹⁵⁸ 18 of 22 respondents indicate agroforestry is a good system for all crops, 16 respondents have used agroforestry design, 15 have used nursery techniques, 14 have used budding/grafting, and 14 composting. Farmer Survey.

Efficiency

Time

Though it took some time for Tuvalu to select its sector focus¹⁵⁹, the project was efficient in terms of delivering all its activities within the project timeframe and budget¹⁶⁰. Farmers participating in the project noted the short timeframe for the project, and that the plants would have fruited more if there was a longer timeframe (Lessons learnt report, November 2015).

There were some issues with landowners signing the MOU on Funafuti due to land disputes (Trip Report, May 2014) but these were resolved. The demonstration sites on Funafuti were completed ahead of the outer island site on Nukufetau, which required more time due to transport logistics¹⁶¹.

Cost

Tuvalu had acquitted 100% of its €560,000 allocation for the on-ground project by March 2016. €54,000 was allocated for national coordination and 100% of these funds were acquitted.

The project was undertaken in a cost efficient manner, with all outputs delivered on budget. The project made use of local labour which was cost-effective to undertake the required work in a short period of time.

The large machinery purchased proved to be value for money. (It should be noted that the SPC, while not a formal member of the bid committee, recommended that the tender be awarded to another bidder). The Tuvalu Government selected their preferred bidder based on lowest cost and preferred supplier.

Staffing

The establishment of a country project team of five staff contributed to the ability to deliver on all the project activities though staff indicated that they had to work longer hours to get the project implemented on time¹⁶². There were some staff changes during the course of the project, but suitable replacements were quickly found meaning that there was no interruption in the project's delivery.

The project team at SPC-Suva also hosted Mr Kilifi O'Brien, Assistant Secretary, Ministry of Home Affairs, Tuvalu, in an attachment to the GCCA: PSIS project¹⁶³. During this period he worked with the project team and participated in the Steering Committee Meeting, the Climate Finance Meeting,

¹⁵⁹ Letter of Agreement signed in November 2012, agriculture selected as sector in February 2013 (February Trip Report) and Concept Note completed August 2013.

¹⁶⁰ A number of stakeholders (e.g. FAO consultants and representative from Taiwan ICDF) indicated concern that the project's time frame was too short (Trip Report, November 2013). A one year extension to the GCCA:PSIS project allowed the demonstration sites to be completed. Considering the MoUs with farmers were signed in mid-2014, the demonstration sites were completed in less than 18 months on Funafuti, and less than a year in Nukufetau.

¹⁶¹ Discussions on procuring and transporting necessary equipment and material for the outer island project are noted in February and April 2015 trip reports. By April 2015 the first project site on Funafuti site was 95% complete in April 2015. By July 2015, the first project site was complete and second Funafuti site 75% complete.

¹⁶² National Coordinator, Finance Officer, Agroforestry Technical Officer, Capacity Building and Communications Officer, and Vehicle Operator.

¹⁶³ He was funded from 1 July – 20 December 2013 as a Greg Urwin award recipient under the Pacific Leadership program. The GCCA: PSIS provided oversight for the technical aspects of the attachment.

proposal training in Kiribati as well as undertaking specific activities relating to climate change in Tuvalu.

Sustainability

The agroforestry project is likely to be sustained in the near future, with the MoUs with landholders of the two Funafuti sites allowing for a five-year monitoring period (until mid-2019)¹⁶⁴. The Tuvalu national budget for 2016 includes provisions (AUD 30,000) for the Department of Agriculture to work with the landowners and farmers to maintain the agroforestry project sites and equipment. The provision for ongoing budget support was discussed as early as October 2014 (Trip Report, October 2014; 2016 Budget Support Submission).

Farmers and government staff have been trained in the maintenance of the agricultural equipment provided to implement the demonstration sites. Ownership of the heavy equipment on Funafuti will be transferred to the Department of Agriculture, and equipment on Nukufetau will be transferred to the Kaupule. The PDD notes that a maintenance and financial plan between the Department of Agriculture and the Kaupule will be developed at the close of the project. Chippers were purchased under the NAPA procurement to ensure consistency of brand/dealer, meaning that there is commonality for spare parts and technical skills (Email communication, February 2014).

The machinery to facilitate development of agroforestry will be available for hire to farmers (from the Department of Agriculture on Funafuti, and Kaupule on Nukufetau).

Farmers and other stakeholders have been trained in agroforestry (total of 4 training workshops) including agroforestry design and methods, compost making, plant grafting and breeding techniques, and in planting new crops such as sandalwood. The October 2014 training report indicated a high likelihood of replication of agroforestry should funding be available¹⁶⁵.

Other projects are looking to build on the agroforestry project, specifically:

- USD439,534 FAO-funded Technical Cooperation Project (TCP) '*Strengthened capacity to adapt and extend resilient integrated coconut based agro-forestry and livestock farming systems*' expected to start June 2016 and extend to Niutao and Vaitupu islands (taking lessons from GCCA: PSIS project).
- GEF-funded 'Implementing a 'Ridge to Reef' approach to protect biodiversity and ecosystem functions in Tuvalu (R2R Tuvalu)¹⁶⁶', planned to commence June 2015 (but not started implementation yet) to December 2020.

The home gardening project is likely to be sustained through the involvement of the TNCW, who have indicated that they will continue with the home gardening competition in 2016.

The government has endorsed the TASMP (February 2016), and this should assist in promoting local produce, along with the 'Go Local' Campaign.

¹⁶⁴ Privately held land was selected for the demonstration sites as government land was considered to be less sustainable due to lack of government capacity to maintain the projects (Trip Report, November 2013).

¹⁶⁵ "All groups presented their activity before lunch and from their design, it was evident that they all understood the concept of agroforestry and there was possibility to turn their design into a project should some funding be made available." Agricultural Training Report, October 2014

¹⁶⁶ Component 2.1.3: Agroforestry Integration Production implemented, including coconut rehabilitation and underutilized local crop species with involvement of Kaupule, NGOs and womens' organizations in about 3 islands towards improving livelihoods and securing food production. GEF Project Document

Cross-Cutting

Gender

The Tuvalu project demonstrated good consideration of gender (see Table 1). SPC advised the TNCW that since demonstration project would not focus on women there was an opportunity for a separate project focussing on women as part of the GCCA project. This led to the home gardening project (catering to 48 women) although it took some considerable time for TNCW to develop the project concept.

Overall, women and men were closely represented in the training numbers. Whilst there was little female representation in the tractor and excavator maintenance training, it was positive to see women making up approximately 30% of the combined agroforestry training.

Table 1. Male and female representation in country training activities

Date	Training	Male	Female	Total
July 2012	CC & Media Training	6	6	12
Nov 2013	Proposal Preparation Training	13	16	29
Oct 2014	Women's Home Gardening Workshop	0	48	48
Oct 2014	Agroforestry Training I- participants from all islands	47	13	60
Jan 2015	Agroforestry Training II	27	17	44
Feb 2015	Environmental Impact Assessment (with SPREP)	12	6	18
Mar 2015	Proposal Preparation Training (Part II)	12	7	19
May 2015	Tractor Maintenance and Repair training	12	2	14
May 2015	Excavator Maintenance and Repair training	11	0	11
Oct 2015	Agroforestry training III including sandalwood	25	11	36
Jan-Mar 2014	Attachment to Kiribati Live and Learn Farm & SPC CePaCT	1	0	1
Aug-Dec 2014	Attachment to SPC CePaCT on crop propagation	0	1	1
May-July 2015	Attachment to SPC LRD in Biosecurity	1	0	1
Total		167	127	294

Environment

The areas cleared for the agroforestry sites were primarily old coconut groves. The agroforestry project will improve the local environment through practices such as composting that will help improve the soil. Environmentally-friendly farming methods including agroforestry and intercropping will also help increase biodiversity.

Tuvalu was able to test the effectiveness of climate-ready crops provided by SPC's CePaCT, as well as locally available crops. A database was set up to monitor the climate-ready crops and other crops in Tuvalu to evaluate their effectiveness.

The project also supported activities such as home gardening, EIA training, and two Environment Week events, all of which have a positive impact on the environment.

Visibility

Tuvalu did not develop a national communications plan. However, there was highly relevant EU visibility on communications materials (newspapers, radio, videos, media releases) and reports. Media training was provided in July 2012, and the Tuvalu project included a Capacity Building and Communications Officer.

There were over nine radio shows nationally, and the project was also featured on the Australian 'Dateline' television programme. Billboards at the demonstration sites have the EU and GCCA logos prominently displayed. The GCCA project booth at Environment Week (Trip Report, May 2014) also provided visibility for the project.

An informational pamphlet on steps to develop agroforestry (in English and Tuvaluan) had clear logos of the EU, SPC and GCCA.

A national lessons learnt workshop (November 2015) was held to enable the project team and local partners to identify and document lessons learnt. A regional workshop (September 2015) involving all SPC GGCA: PSIS project teams and other development partners provided a forum to share national and regional lessons.

A lessons learnt video was also produced to promote the project. This video is available on YouTube and has been screened both nationally and regionally on Pacific Way. Additionally, an agroforestry training video was produced in the local language and was supported by a pamphlet printed in both English and Tuvaluan. SPC's involvement and the EU's funding contribution were highlighted in all of these products.

Best Practices & Recommendations

Best practices from the project in Tuvalu

1. The project team had the right mix of skills and sufficient capacity (agroforestry technical officer, national coordinator, finance officer, communications and capacity building officer) to deliver the project.
2. The implementing entity (Department of Agriculture) had the technical expertise to deliver the project.
3. The project built the capacity of the key stakeholders through comprehensive training to support project sustainability.
4. The project engaged the government to fund project maintenance early in the project implementation.

Recommendations

1. SPC and EU should consider funding a small impact evaluation (3-years post-project) to assess the productivity of the three pilot sites and ongoing farmer engagement and replication of the project. Results and lessons would be beneficial to inform similar food security initiatives, particularly in atolls and islands with poor soil conditions.

7.7 Annex 7. Case studies

7.7.1 Kiribati SODIS CAMPAIGN - What it takes to change behaviour

The effectiveness of the SODIS community behaviour change communications campaign in Kawan Bairiki stood out as a key achievement in the SPC GCCA: PSIS Kiribati project. This case study reviews the factors that made the SODIS campaign successful.

Solar Water Disinfection System (SODIS)

SODIS is an effective, environmentally sustainable, low-cost solution for drinking water treatment at a household level.

The process of SODIS uses solar energy to destroy pathogenic micro-organisms that cause waterborne diseases. Untreated water is poured into clean PET plastic bottles and exposed to the sun's UV rays for a prescribed period of time.

Many development projects seek to change the behaviour of a target group. Their plans often include an 'information and awareness campaign' that is thought to be enough to drive behaviour change. Such campaigns may help increase awareness and knowledge about an issue, but they are rarely effective in changing behaviours. This case study demonstrates a more effective approach based on behavioural change.

Background

The SODIS community behaviour change communications campaign (SODIS campaign) was one component of the broader SPC GCCA: PSIS Kiribati project that aimed to contribute to the prevention and control of climate sensitive diseases through improving environmental health surveillance and response. The campaign was designed by a technical expert from SPC who was experienced in behaviour change and aware of the need to allow sufficient time and cost to do behaviour change properly. The campaign started in November 2014 and it was facilitated by the Environmental Health Unit (EHU) of the Ministry of Health and Medical Services (MHMS).

The SODIS campaign was designed and implemented in the Kawan Bairiki community in South Tarawa during 2014/2015. The campaign encouraged community members to use SODIS to treat water for potable use. The campaign also encouraged the use of tippy-taps with soap to improve hygiene standards. Prior to SODIS, the community would boil water sourced from the main water reticulation system and underground wells or drink untreated rainwater. The desired outcome from using SODIS was a reduction in the incidence of water-related diseases and associated deaths in children with specific focus on reducing the prevalence of diarrhoea.

Results Summary

The campaign was highly effective and a summary of results is presented below:

- 76% of households in Kawan Bairiki were using SODIS four months after the campaign started, and 85% after seven months. In some selective areas the uptake was as high as 90%.
- Preliminary health clinic data indicates a reduction in reported cases of diarrhoea (235 cases per month baseline, reduced to 163 cases per month with intervention¹⁶⁷).

¹⁶⁷ Figures represent number of cases per month averaged out over the periods January- September 2014 and January- September 2015

Other secondary benefits from using SODIS include:

- increased school attendance as a result of reduced sickness in school-aged children;
- increased household savings as a result of reduced expenditure on kerosene used for boiling water;
- reduced time women need to manage the boiling of water; and
- increased eye health of women and reduced skin rashes and respiratory disease (coughing) in the absence of kerosene/firewood smoke.

The adoption of SODIS should continue to grow with it being promoted by key government departments, other aid projects and through its inclusion in the Year 5 school curriculum. Community groups and kava bars are also being used as venues to promote SODIS.

Why was the SODIS campaign effective?

The SODIS campaign was effective because it followed best practice behaviour change theories and frameworks in its design and implementation. Theories and frameworks that the campaign drew from include the Stages of Change model¹⁶⁸; Theory of Planned Behaviour model¹⁶⁹; and Community Based Social Marketing framework¹⁷⁰.

Best practices demonstrated by the SODIS campaign are documented in the table below.

Best practices	SODIS campaign
High degree of community engagement in project design and implementation.	Five workshops held to build capacity in behaviour change and to develop the actual campaign.
Clearly identify the behaviour the project wishes to encourage or discourage.	Community identified the use of SODIS and tippy-taps as the desired behaviours to achieve a decrease in water-related disease. SODIS was selected after exploring and trialling alternative solutions.
Identify target audience.	Mothers and fathers of children (under five years) aged between 20 – 35 years.
Identify and reduce barriers for the uptake of the new behaviour ¹⁷¹ .	Audience research was conducted. Knowledge of and trust in SODIS were identified as key barriers.
Increase and promote the benefits from undertaking the desired behaviour.	Multiple health benefits of using SODIS were promoted. Time and cost savings benefits were also communicated.
Develop, test and refine communications messages and tools to encourage the new behaviour.	Culturally appropriate communications tools in i-Kiribati language to embed the communications messages were created. Posters were created that act as prompts to perform SODIS and remind people of the steps to follow. Fact sheet provide more detailed information to demonstrate SODIS is effective and safe. Videos help communicate the information in an engaging (visual and oral) medium. T-shirts and bags help create visibility. A card game helps make learning about SODIS fun. All products

¹⁶⁸ <http://www.prochange.com/transtheoretical-model-of-behavior-change>

¹⁶⁹ <http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/SB721-Models/SB721-Models3.html>

¹⁷⁰ <http://www.cbsm.com/>

¹⁷¹ Barriers can also be increased for behaviours a project wishes to discourage.

	featured the SODIS logo and tagline. Tools were tested with the target community and improved.
Create an enabling environment to make it possible, easy and convenient to undertake the new behaviour.	SODIS starter kits were handed out to some households. A free supply of PET bottles for SODIS was made available.
Build self-belief (efficacy) that target group can do the behaviour.	Training events in the community help to demonstrate SODIS and have the community practice SODIS. Water champions (discussed in detail below) assisted community members practice SODIS to build their confidence and help enshrine the behaviour into a daily routine ¹⁷² .
Make the desired behaviour appear to be the 'normal' thing that everyone does. This reinforces the acceptability of doing the behaviour and encourages new people to try it.	Water champions practised SODIS in full view of the community on specially designed and labelled SODIS tables at least three days a week. SODIS is a very publicly visible behaviour and this helps make it appear to be a new normal behaviour that everyone is adopting.
Monitoring and evaluation to identify what works and continually improve.	The effectiveness of the campaign was monitored on a fortnightly basis through water champion reports and reflection meetings. A base-line and post-campaign Knowledge Attitude Practices (KAP) survey helped to quantify the results and obtain lessons. Disease incidence data from the local health clinic was obtained to provide an indication of project impact.

Water Champions

A key element of the behaviour change campaign was the use of six water champions. The water champions were publicly visible with their signed SODIS tables and daily demonstrations. They were present at the SODIS tables for contracted times during the week and explained SODIS to people passing by and helped people start SODIS in their household. Champions also visited near-by homes to persistently promote SODIS. They were able to share success stories from other local community members that the target person knew. Champions were able to answer questions from the community and explain why SODIS worked. Water champions were effective because they were known and trusted members of the community (not outsiders). They were persistently present and visible over a four-month period.

Challenges and responses

The project experienced a number of challenges in its attempt to encourage SODIS.

¹⁷² Generally speaking, new behaviours need to be practiced and repeated over a 66 day period before they start to become adopted and the likelihood of continuation is increased. Source: <http://www.spring.org.uk/2009/09/how-long-to-form-a-habit.php>

Trust

SODIS is endorsed by the WHO and been used around the world for decades. This was the first time SODIS has been used in Kiribati or the South Pacific region. There was initial mistrust about the effectiveness of SODIS both at the government and community level.

An overseas expert that could be trusted by the government and community was brought in to conduct scientific research in Kiribati to prove SODIS was effective and safe. The expert also helped to communicate the results and explain why SODIS worked. This helped the government gain enough trust in SODIS to endorse it. SODIS videos (local and international) also helped convince community members that SODIS was safe and effective.

Common initial government and community perceptions about SODIS:

- How can this work? It is too simple.
- If it works, then why have we not been told about it in the past?
- Promoting SODIS could make health issues worse if it doesn't work. It is a risk for us.

Existing behaviours and beliefs

Over many years the community have been told by the government and external experts to boil water to make it safe. Entrenched practices like this are hard to change. The SODIS campaign did not discourage boiling water, but instead encouraged households to try SODIS to see if it worked. During days when there is constant heavy rain and clouds, using SODIS is not effective so other methods (boiling water) for treatment are required and recommended.

Lack of water

Kawan Bairiki, like most communities in South Tarawa, has limited access to water from the Public Utilities Board (PUB) with water available for two hours every second day, but often no water until the third day. This limited access to water remains a barrier for communities to use SODIS or other methods of water disinfection.

Conclusion

An effective behaviour change campaign needs to be carefully planned following best practice behaviour change processes, models frameworks and tools. Projects need to be prepared for the additional time required to research, design and implement effective behaviour change campaigns.

The Kiribati SODIS campaign demonstrates the power of going beyond 'information and awareness' to change behaviours with assistance from:

- behaviour change professionals (or practitioners) to help set up the programme;
- grass-roots community involvement in selecting the preferred intervention and designing the behaviour change campaign;
- water champions to demonstrate and encourage the new behaviour;
- interventions to create an enabling environment and reduce the barriers to performing SODIS through starter kits and PET bottle supply; and
- making the behaviour visible to the community to establish and communicate that SODIS is a normal behaviour that other people are practicing.

These considerations combined with a carefully designed and effective information and awareness campaign are the ingredients of a successful behaviour change campaign.

7.7.2 Palau's Climate Change Policy – The importance of teamwork

Palau's *Climate Change Policy for Climate and Disaster Resilient Low Emissions Development, 2015*, was noted as a key achievement by local stakeholders, and it "stands out because it came at the right time".

This case study reviews the policy development process, and in particular the importance of establishing a cohesive team approach within consultant teams, between different consultancies, and between stakeholders. The case study also looks at the sustainability of the policy, in terms of its implementation.

Background

Based on the House Joint Resolution No. 8-68-13 (June 2012) to create a Ministerial Climate Change Committee to establish a clear policy and framework of action regarding climate change issues, SPC, with agreement of Palau's Office for Environmental Response and Coordination (OERC), the Environmental Consortium and the Pacific Adaptation to Climate Change (PACC) Core Group Members, outlined a four-step participatory process in July 2012 to develop the policy:

1. Community engagement strategy
2. Gaps and needs analysis
3. Development of a climate change framework
4. Preparation of a climate change plan of action (reframed as 'Sector analysis and preparation of an action plan for the Palau climate change policy framework' in 2014)¹⁷³

Following discussion, SPC received a formal request from the President of Palau on 24 December 2012 to commence with a project to develop the policy, in partnership with GIZ and USAID.

All consultancies were internationally tendered by SPC with full inclusion including voting rights of Palau Government representatives on the Bid Review Committee. The contracts were awarded as follows:

1. Community engagement strategy – Palauan NGO
2. Gaps and needs analysis – Palauan consultancy company
3. Development of a climate change framework – Consultancy team involving international and Palauan consultants
4. Sector analysis and preparation of an action plan for the Palau climate change policy framework – Palauan consultancy company

Steps 3 and 4 were run in parallel.

Policy development process

There were different viewpoints as to the effectiveness of the policy development process but there was general agreement that the final product was valuable and had a high level of ownership by key national stakeholders.

A key issue raised during the evaluation was the cohesiveness within and between consultancies and stakeholders, which affected the perceived usefulness and quality of some deliverables.

Different consultants for different steps

¹⁷³ Sector action plans were brought forward, in part since the risk assessment approach proposed by the consultants developing the framework was understood to give the required outputs for the action plan.

The four steps outlined to develop the policy were awarded to four different consultancy providers, three local and one a mix of international and local. The use of local consultancies has benefits as it builds on local knowledge and experience, however, an outside perspective and the international experience that comes with international consultants can also help bring in fresh ideas or best practices approaches. Palau is fortunate in that there are a few consultants (private) and NGOs that have the capacity and capability to deliver on projects.

The community engagement tender (RFP_{13/01}) and gaps and needs analysis tender (RFP_{13/02}) were advertised in January 2013. The tender to develop the climate change policy framework (RFP_{14/13}) was advertised in March 2014, and the tender to conduct the sector analysis and preparation of an action plan for the policy framework (RFP_{14/73}) was advertised in October 2014.

This sequential process allowed the first two steps (community engagement and gaps and needs analysis) to inform the development of the policy framework. The last step was originally planned to be undertaken following the development of the policy framework, but was brought forward to run in parallel so that the ten national sectors were able to have input into the policy framework, thereby building greater ownership of the overall policy.

There were differing viewpoints as to the usefulness and quality of some of the steps (e.g. whether the community engagement step was required, and the quality of the gaps and needs analysis). The differing viewpoints may be due to the sequential nature of the consultancies, and the lack of cohesiveness between the different consultancy providers undertaking the different steps.

There is no easy remedy for this, apart from maximising the clarity of the Terms of Reference for each step, and ensuring several feedback rounds are incorporated into contracts so that client and contractor can work collectively towards a useful and good quality deliverable.

Different people brought together in a team

The third step, to develop the policy framework, was tendered to a consultancy of international and Palauan consultants that included two climate change policy specialists and one project manager/environmental specialist. A criticism raised of the consultant team was that they did not appear to have worked as a team prior to this contract. The consultants were reported to be mostly subcontractors brought together for this project, with limited cohesiveness. Contracts awarded to a team of consultants should demonstrate previous experience of working as a team.

Getting national stakeholders on board

A highlight of the policy development process was the consultations with different sectors¹⁷⁴. The sector consultation was brought forward to run in parallel with the policy development framework. The sector consultation was undertaken by a Palauan consultancy, using tools provided by the policy development consultancy. The sector consultation process was reported to have raised the level of knowledge and awareness of climate change in the different sectors, which led the sectors to consider how climate change impacted them. Overall, the sector consultation led to a high level of support and ownership of the Climate Change Policy. Having a local consultancy undertaking this step is likely to have facilitated the positive outcome, due to the understanding of the national context and language.

¹⁷⁴ Agriculture and fisheries; health, biodiversity conservation and natural resources; society and culture; tourism; critical infrastructure; utilities; finance, commerce, and economic development; education

If there was a major gap in consultation, it is that the States were not consulted separately. This is likely due to budget and time constraints. Whilst not all States need to be consulted, States with large populations (e.g. Koror) and some smaller States could have been engaged as States have considerable control over what happens on the ground in federated countries. A longer period for engaging sectors and developing the action plan (4th step) could have been provided had there not been the objective of the Government of Palau to complete the Policy before COP21.

Delivering on the Policy

The final policy is widely accepted as a valuable product that reflects the national context, and has a high level of ownership. It is important that sectors remain engaged to deliver on the prioritised actions. Some stakeholders noted that the action plan was more aspirational than something concrete for agencies to work on. To implement the plan, sector agencies need to develop grants to raise necessary funding. To date, only the food security sector has mainstreamed climate change into sector plans (through PACC funding).

Getting the institutional framework to deliver the Policy

One indirect benefit of the policy development process was that it was recognised that the OERC was not effective when situated in the President's Office as it did not effectively reach out across government. The climate change responsibilities of the OERC have been moved to the new Climate Change Office, which sits within the Ministry of Finance¹⁷⁵. Situating the Climate Change Office within the Ministry of Finance helps engage Finance on climate change initiatives¹⁷⁶. The Ministry of Finance is in the best position at a national level to demonstrate the required fiduciary standards to be eligible to receive climate change financing under the Adaptation Fund and Green Climate Fund. The new Climate Change Office has an important role to play in supporting sectors to implement their actions in the Palau Climate Change Policy. The National Environment Protection Council (NEPC) will have an important oversight role, making sure different sectors fulfil their responsibilities. The proposed Project Management Unit (PMU), within Ministry of Finance, does not yet have a budget allocated. However, it will have an important role to play in supporting sectors develop funding proposals that contribute to meeting prioritised actions, as well as reporting against targets.

Maintaining the momentum

There is a risk, as noted by several stakeholders, that national and sector interest in the climate change policy loses momentum. Whilst the policy was endorsed by Congress in November 2015, and there have been several media releases as well as promotions at regional and international events, there has not been an official launch in-country. Some stakeholders indicated that it was important to re-engage the sectors in the near future to build on their interest during the sector consultation step. The Climate Change Office is likely to play a key role in raising the Policy's profile and maintaining momentum. This could start by an official launch of the Climate Change Policy.

¹⁷⁵ The OERC no longer exists, with other functions of the OERC moved to the Office of the Palau Automated Land and Resources Information System (PALARIS)

¹⁷⁶ A December 2014 report by the Overseas Development Institute states (p17): "*Working arrangements that create space for ministries with responsibility for economic and financial decision-making to partner with Ministries with requisite expertise and mandate to address climate change and environmental issues are needed*" Nakhoda, S & Jha, V, 2014. Getting it together: Institutional arrangements for coordination and stakeholder engagement in climate finance. <http://www.odi.org/publications/8765-getting-together-institutional-arrangements-coordination-stakeholder-engagement-climate-finance>

Conclusion

The funding support provided by the EU-SPC GCCA: PSIS project, jointly with GIZ CCCPIR, and USAID, and the technical support provided by the SPC team, were critical in helping Palau develop a climate change policy. Stakeholders consulted provided positive feedback about SPC's role, including the flexibility they showed in re-defining steps (sector consultation) and the ability for open communication and feedback that led to what was widely agreed to be a great product.

The policy was effective in engaging different sectors to think about climate change and identify priority actions relevant to their sector. The policy development process also contributed to the restructuring of the OERC and the establishment of the Climate Change Office.

A key lesson from the policy development process is the importance of teamwork within consultant teams, between different consultancies, and between stakeholders. This lesson is relevant for future policy development supported by SPC and for Palau.

Best practices and recommendations

Best practices

1. Good level of sector consultation and engagement undertaken in parallel to the framework development led to a high level of ownership for the final policy.
2. Institutional restructuring leading to the establishment of a Climate Change Office will support the implementation of the framework.

Recommendations

1. (SPC) Ensure that a consultancy 'team' has had experience in working as a team.
2. (Government) Maintain engagement with stakeholders following the endorsement of the policy so that momentum is not lost.
3. (Government) Ensure that the institutional framework is in place to deliver on policy actions.

7.7.3 Best practice coastal protection in Tonga

The SPC GCCA: PSIS project in Tongatapu successfully implemented two new coastal protection measures. Whilst the long term impact of these measures is still unknown, the processes the project followed to design, implement and monitor the project can be considered best practices that should be replicated in future coastal protection projects.

Results Summary

Coastal protection design and implementation was informed by historical coastal change studies, feasibility studies, detailed design and costing, Environmental Impact Assessment (EIA) and monitoring plan. The following “hard engineering” coastal protection measures were implemented:

- 20 groynes using concrete sedi-tunnels¹⁷⁷
- 10 detached breakwaters

Groynes were complemented with sand recharge to speed up the natural sand recharge process. Detached breakwaters were complemented with sand recharge and coastal replanting of mangroves and other plants. The approaches chosen are categorised as ‘accommodation approaches’ that incorporate aspects of a ‘managed advance’ that accepts that the measures will only provide short-medium term protection from coastal erosion and rising sea levels. Three parks (playgrounds) were also constructed on the foreshore for communities.

Best practice design

Site selection

The selection of potential sites for the Tonga coastal protection measures was informed by the 2010 – 2015 JNAP and by a pre-existing coastal engineering study¹⁷⁸ undertaken by CTL Consult that considered:

- the extent of existing and predicted future coastal erosion if no action was taken;
- the number and importance of assets (homes, businesses, essential services) vulnerable to the impacts of coastal erosion. The number of vulnerable people at risk was also assessed
- the root causes of erosion; and
- numerous physical¹⁷⁹, biological¹⁸⁰ and human related parameters¹⁸¹.

¹⁷⁷ 1 meter cubed concrete block with horizontal hole through middle to allow flow of water and sand.

¹⁷⁸ ‘Report of Coastal Feasibility Studies – Coastal Feasibility Studies, Coastal Design and Costing, for six (6) communities on the Eastern Site of Tongatapu’, March 2012

¹⁷⁹ Physical parameter - geology, wind, waves, cyclone, tide levels, sea level rise and climate change, sedimentology, groundwater, coastal change

¹⁸⁰ Biological parameter - sea and air temperature, coastal and marine habitats, landscape, environmental status

¹⁸¹ Human related parameters - land use, community stakeholder issues, planning and legislative policy parameters, statutory laws

Selection of coastal protection measures

Coastal protection measures are sometimes selected based on economic constraints and the preferences of the government, land owners and community. This can limit options. Whilst it is good to consult and work closely with communities, coastal erosion processes and coastal protection are complex topics that require expert design. For example, sea walls are often a preferred choice for coastal protection measures. However, sea walls are not always effective and can in cases increase coastal erosion and inland flooding. They are also very expensive to construct (per meter of coastline protected) relative to some other hard and soft engineering options.

The Tonga coastal feasibility study was followed up by a Coastal Design and Costings Report (2012) that assessed in more detail the appropriateness of various hard and soft coastal protection measures for each unique segment of coastline. Recommendations for coastal protection measures were justified at the conclusion of the report.

Why is coastal erosion occurring in Eastern Tongatapu?

Historical sanding mining, removal of mangroves, damage to coastal reef flats, and high wave events during storms and cyclones are among the causes of coastal erosion. Sea level rise and heightened storm surge events attributed to climate change were projected to increase both coastal erosion and its negative impacts.

Detailed design

Following recommendations in the Coastal Design and Costings Report, in 2013 the Tonga project sought the services of a coastal engineer to review the recommended solutions in light of more current data before detailed engineering drawings were produced. The 2013 design work also included a review of historical data (aerial photographs) and recent studies (including the CTL reports) pertaining to erosion of Eastern Tongatapu. A final detailed design document was produced in mid-2013 that included technical engineering drawings for the selected coastal protection measures¹⁸². The detailed design also included estimated long term maintenance works and costs that may be required. Consultations were held with community leaders and members to inform them about the preferred design and to hear their views.

Best practice implementation

Project management unit

The Project Management Unit (PMU) was effective in its role. Factors contributing to the PMU's effectiveness include a capable project manager with excellent communication skills, a capable finance assistant and an experienced engineer on secondment from the Ministry of Infrastructure to oversee the coastal works. This oversight ensured works were undertaken according to the detailed design and that recommendations raised by the EIA were followed.

Project oversight

In addition to on-ground oversight of the civil works, the project also had effective oversight at a higher level from the Tonga JNAP Technical Working Group (TWG). The TWG met monthly, was briefed regularly about the project status, reviewed reports, provided input and guidance, and raised questions to challenge assumptions. The design coastal engineer also visited three times during implementation to provide general oversight and advice, consult with the PMU and make any adjustments if necessary.

¹⁸² 'Final Design of Two Coastal Erosion Options for Eastern Tongatapu, Tonga', e-Coast, 2013.

Environmental impact assessment and monitoring plan

An Environmental Impact Assessment (EIA) was undertaken in 2013 following CTL's Coastal Feasibility Study. As final coastal protection measures had not yet been selected, the EIA reviewed the impact of the shortlisted approaches at the target sites. A comprehensive 130-page EIA report was produced and used to guide environmental considerations in the final design and a monitoring plan that was also developed by the coastal engineer.

Best practice monitoring

Tonga's Geology Division situated within the Ministry of Lands, Survey & Natural Resources committed to undertaking quarterly monitoring (focused on beach profiles) during and beyond the end of the project completion date to determine the effectiveness of the coastal protection measures over time. A monitoring plan created as part of the detailed design process was used to guide what and how to monitor. This work started with baseline monitoring before the civil works started. One site monitoring assessment has been undertaken since the coastal works have been completed. Initial results look promising in terms of demonstrating the effectiveness of the measures. However long-term monitoring is required to determine the impact of the coastal protection project.

Conclusion

The Tonga coastal protection project demonstrated best practices during design, implementation, and monitoring. These best practices should be replicated and followed in future projects. Key elements of these best practises are summarised below.

Design

Select target sites and coastal protection measures based on:

- historical analysis of sites;
- coastal process and feasibility studies;
- detailed design and costing studies undertaken by an experienced costal engineer; and
- detailed designs to include a monitoring plan and long-term maintenance tasks and costs.

Implementation

Ensure PMU has a competent project manager with good communication skills and an experienced engineer to oversee civil works.

Use an oversight committee that meets regularly with required expertise to advise the project and question assumptions.

Comply with government requirements such as to undertake an EIA before works begin to assess and minimise environmental risks and monitor compliance with the recommendations of the EIA.

Monitoring

Plan and obtain commitment for long-term monitoring of coastal sites to assess the effectiveness of coastal protection measures over time.

Whilst the Tonga GCCA: PSIS project has demonstrated many best practices, one area where improvements could be made are to put in place measures to ensure government funds are available for the maintenance of the new coastal protection assets. The establishment of the Tonga Climate Change Trust Funds may be one source of future funding to support asset maintenance.

7.8 Annex 8. Project alignment

Table 11 below documents the alignment of each country project to national policies, strategies and priority areas.

Table 11: Alignment of project with national climate change and strategic development priorities

Country	National alignment
Cook Islands	Strategic area 4 of the Joint National Action Plan (JNAP) for Disaster Risk Management and Climate Change Adaptation 2011-2015; Priority Area 5, Strategy 4 of the National Strategic Development Plan (NSDP) for 2011–2015
FSM	Environmental 5-year Plan and strategic goals, Outcome 2.8 for Yap State; Climate Change Policy 2009; as well as State Plans which prioritise water resources
Kiribati	Strategy 4 (water and food security) and strategy 5 (strengthening health-service delivery to address climate change impacts) of the Kiribati Joint Implementation Plan (KJIP) for Climate Change Adaptation and Disaster Risk Management 2013-2018; Strategic areas 1-3 (water safety and water-borne diseases; food safety and food-borne diseases; vector-borne diseases) of the National Climate Change and Health Action Plan (NCCHAP)
RMI	Goal 2 (Adaptation and Reducing Risks for a Climate Resilient Future) of the RMI National Climate Change Policy Framework 2011; RMI's Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management
Nauru	National Sustainable Development Strategy 2005-2025 (NSDS, last revised in 2009) identifies priority needs for the water sector including refurbishment of national water storage tanks, installation of new household water tanks (a target of 100 per year), and expansion of water storage capacity by 2015
Niue	National Integrated Strategic Plan (NISP 2009-2013) and the Joint National Action Plan on Climate Change Adaptation and Disaster Risk Reduction (JNAP) identified the need to increase the amount of potable water available to households
Palau	Palau's National Master Development Plan – Palau 2020, and specifically with the high priority project 'Water system conservation, upgrading and cost recovery' identified in the Palau 'Medium-term Development Strategy: 2009-2014
Tonga	Goals 3 - vulnerability assessment and Goal 4 - increased climate change resilience, of Tonga's Joint National Action Plan (JNAP) for Climate Change Adaptation and Disaster Risk Management (2010)
Tuvalu	Tuvalu Joint National Action Plan on Climate Change and Disaster Risk Reduction (JNAP); Tuvalu's NAPA document, which highlights

	<p>food security and agriculture as a key area for adaptation activities; and the Tuvalu Agriculture Tuvalu Agriculture Strategic Plan (2014-2023). The Te Kakeega II: National Strategy for Sustainable Development also prioritises subsistence agriculture production and mitigating climate change related agricultural impacts.</p>
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7.9 Annex 9. Logframe Matrix

7.9.1 Annex 9.1. Original Logframe Matrix

Description	Verifiable Indicators	Verification Sources	Assumptions
<p>Overall Objective</p> <p>To support the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change</p>	<ul style="list-style-type: none"> Ten new activities that address country requests for climate change adaptation undertaken in an effective and sustainable manner. Capacity of a minimum of 40 national sector specialists for integrating climate change adaptation into at least three sectors built from minimal level to moderate level. 	<ul style="list-style-type: none"> Government documents, project and workshop reports, media reports. Baseline questionnaires. Workshop/conference reports and evaluations; presentations and media interviews given by national specialists; changes in national job descriptions. 	
<p>Purpose</p> <p>To promote a long term/strategic approach to adaptation planning and budgets and to pave the way towards more effective and coordinated aid delivery modalities at national and at regional level.</p>	<ul style="list-style-type: none"> At least one new formal mechanism in SPC to coordinate four different donors/partners engaged in delivery of climate change resilience. National climate change policy that integrates disaster risk management and includes a budgeted action plan prepared in a minimum of two countries. 	<ul style="list-style-type: none"> Meeting minutes, documented evidence of actions being implemented. Climate change adaptation and DRM plans and policy documents; government documents, mission reports 	<ul style="list-style-type: none"> SPC continues to integrate climate change throughout the organisation. Beneficiary governments are committed to integrating CCA and DRM policies, plans and actions.
<p>Key Result Area 1</p> <p>Climate change mainstreamed into national and/or sector response strategies.</p>	<ul style="list-style-type: none"> New/revised sector plans incorporating climate change resilience in at least four countries by 12/ 2014. National climate change policy in at least one country by 12/ 2014. 	<ul style="list-style-type: none"> Government sector documents Annual reports from government sectors Reports for short term technical assistance activities 	<ul style="list-style-type: none"> Beneficiary governments, especially the line ministries selected as focal areas for this project are willing to formulate national and sector specific climate change plans/strategies
<p>Key Results Area 2</p> <p>KRA 2: Countries better equipped to access climate change funds through different financing modalities.</p>	<ul style="list-style-type: none"> Review conducted in at least 4 countries of the extent to which climate change is mainstreamed in national and sector policies so as to inform the delivery of funds via 	<ul style="list-style-type: none"> Letters of Agreement SPC and country, job descriptions for coordinators. Policies and strategies from 2012 and 2014. 	<ul style="list-style-type: none"> Ministries of Finance and line ministries are willing to provide information to contribute to the review of the extent to which climate change is mainstreamed in national and sector

Description	Verifiable Indicators	Verification Sources	Assumptions
	modalities such as budget support by 06/2014. <ul style="list-style-type: none"> Capacity to apply the Logical Framework Approach to project design built in at least six countries by 12/2014. 	<ul style="list-style-type: none"> Reports for short term technical assistance activities. Questionnaires. Design documents for climate change adaptation projects using the logical framework. 	policies so as to inform the delivery of funds via modalities such as budget support.
Key Result Area 3 National climate change adaptation projects implemented.	<ul style="list-style-type: none"> Climate change adaptation activities implemented in three different sectors by 12/2014. Lessons learnt about (on-the-ground) climate change adaptation activities compiled, analysed and shared by 12/2014. 	<ul style="list-style-type: none"> Project concept notes, design documents and progress reports. Minutes of regional and Steering Committee meetings; implementation of climate change communications strategy. 	<ul style="list-style-type: none"> Governments willing to proceed with project implementation and sufficient local resources and skills available to implement and maintain the projects. Natural and man-made hazards do not adversely affect project implementation.
Key Result Area 4 Streamlined technical assistance that supports national adaptation responses delivered by regional organizations in a collaborative manner	<ul style="list-style-type: none"> Two new regional coordination tools available, by 12/2012. Minimum of ten national representatives representing a minimum of three countries regularly contributing to the Climate Change Portal by 12/2014 At least ten regional/sub-regional climate change resilience building activities implemented collaboratively by regional organisations by 12/2014. 	<ul style="list-style-type: none"> Matrix of regional and national climate change activities. Reports from Climate Change Portal training workshops and web statistics. Reports and evaluations from regional/sub-regional workshops. 	<ul style="list-style-type: none"> Beneficiary countries, development partners and other entities are willing to set aside sufficient time to collaborate in joint activities.

7.9.2 Annex 9.2. Revised Regional Logframe Matrix

The logframe matrix presented below was last revised and approved on 12/02/2014. Minor adjustments to indicators were made on 31/12/2014. The evaluation used this logframe to assess the extent to which the project has achieved its overall objective, purpose, KRAs and indicator targets.

Description	Verifiable Indicators	Verification Sources	Assumptions
<p>Overall Objective</p> <p>To support the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change</p>	<ul style="list-style-type: none"> Ten new activities that address country requests for climate change adaptation undertaken in an effective and sustainable manner. Capacity of a minimum of 40 national sector specialists for integrating climate change adaptation into at least three sectors built from minimal level to moderate level. 	<ul style="list-style-type: none"> Government documents, project and workshop reports, media reports. Baseline questionnaires. Workshop/conference reports and evaluations; presentations and media interviews given by national specialists; changes in national job descriptions. 	
<p>Purpose</p> <p>To promote a long term/strategic approach to adaptation planning and budgets and to pave the way towards more effective and coordinated aid delivery modalities at national and at regional level.</p>	<ul style="list-style-type: none"> At least one new formal mechanism in SPC to coordinate four different donors/partners engaged in delivery of climate change resilience by 09/2015. National climate change policy that integrates disaster risk management and includes a budgeted action plan prepared in a minimum of two countries by 12/2015 	<ul style="list-style-type: none"> Meeting minutes, documented evidence of actions being implemented. Climate change adaptation and DRM plans and policy documents; government documents, mission reports 	<ul style="list-style-type: none"> SPC continues to integrate climate change throughout the organisation. Beneficiary governments are committed to integrating CCA and DRM policies, plans and actions.
<p>Key Result Area 1</p> <p>Climate change mainstreamed into national and/or sector response strategies.</p>	<ul style="list-style-type: none"> New/revised sector plans incorporating climate change resilience in at least four countries by 12/ 2015. National climate change policy in at least one country by 09/ 2015. 	<ul style="list-style-type: none"> Government sector documents Annual reports from government sectors Reports for short term technical assistance activities 	<ul style="list-style-type: none"> Beneficiary governments, especially the line ministries selected as focal areas for this project are willing to formulate national and sector specific climate change plans/strategies
<p>Key Results Area 2</p>	<ul style="list-style-type: none"> Review conducted in at least 4 countries of the extent to which climate change is mainstreamed in national and sector policies so as to 	<ul style="list-style-type: none"> Letters of Agreement SPC and country, job descriptions for coordinators. Policies and strategies from 2012 and 2014. 	<ul style="list-style-type: none"> Ministries of Finance and line ministries are willing to provide information to contribute to the review of the extent to which climate change is mainstreamed in national and sector

Description	Verifiable Indicators	Verification Sources	Assumptions
KRA 2: Countries better equipped to access climate change funds through different financing modalities.	inform the delivery of funds via modalities such as budget support by 06/2014. <ul style="list-style-type: none"> Capacity to apply the Logical Framework Approach to project design built in at least six countries by 12/2014. 	<ul style="list-style-type: none"> Reports for short term technical assistance activities. Questionnaires. Design documents for climate change adaptation projects using the logical framework. 	policies so as to inform the delivery of funds via modalities such as budget support.
Key Result Area 3 National climate change adaptation projects implemented.	<ul style="list-style-type: none"> Climate change adaptation activities implemented in three different sectors by 12/2015. Lessons learnt about (on-the-ground) climate change adaptation activities compiled, analysed and shared by 12/2015. 	<ul style="list-style-type: none"> Project concept notes, design documents and progress reports. Minutes of regional and Steering Committee meetings; implementation of climate change communications strategy. 	<ul style="list-style-type: none"> Governments willing to proceed with project implementation and sufficient local resources and skills available to implement and maintain the projects. Natural and man-made hazards do not adversely affect project implementation.
Key Result Area 4 Streamlined technical assistance that supports national adaptation responses delivered by regional organizations in a collaborative manner	<ul style="list-style-type: none"> Two new regional coordination tools available, by 12/2012. Minimum of three national representatives representing a minimum of three countries regularly contributing to the Climate Change Portal by 12/2015 At least ten regional/sub-regional climate change resilience building activities implemented collaboratively by regional organisations by 12/2014. 	<ul style="list-style-type: none"> Matrix of regional and national climate change activities. Reports from Climate Change Portal training workshops and web statistics. Reports and evaluations from regional/sub-regional workshops. 	<ul style="list-style-type: none"> Beneficiary countries, development partners and other entities are willing to set aside sufficient time to collaborate in joint activities.

Activities	Means	Indicative budget	
<p>1.1 Prepare national climate change profiles that identify how climate change is addressed in each country and revise annually.</p> <p>1.2 Prepare and/or advance detailed national and/or sector specific climate change response strategies and plans in at least four countries.</p> <p>1.3 Develop and implement a climate change communications plan for SPC.</p> <p>1.4 Develop and implement national climate change communications plans for at least four countries.</p> <p>2.1 Enhance national climate change coordination in at least five countries</p> <p>2.2 Review budget support readiness in at least seven countries and share findings regionally.</p> <p>2.3 Prepare national and/or sectoral policies and plans that incorporate climate change and better comply with budget support criterion 1 in at least two countries.</p> <p>2.4 Provide regional training in project proposal preparation and national level training in at least four countries.</p> <p>3.1 Prepare selection criteria and assist with identification of needs and prioritisation of a specific sector for climate change adaptation activities in nine countries.</p>	<ul style="list-style-type: none"> • Technical assistance • Missions to countries • Training workshops • Meetings and conferences • Media involvement • Equipment purchase • Recruitment of national coordinators • Letters of Agreement SPC/countries • National climate change profiles • Reporting and evaluation 	<p>See main project budget</p> <p>Indicative budget</p> <p>1. € 700,000 TA, travel, training, visibility products.</p> <p>2. € 1.22 million: national coordinators, training, TA, travel</p> <p>3. €4,640,000 TA, travel, national staff, small scale infrastructure, equipment, supplies, evaluation missions, regional workshops.</p> <p>4. €940,000 Workshops, TA, training, meetings, grant to SPREP</p>	

Activities	Means	Indicative budget	
<p>3.2 Assist at least seven countries design adaptation projects in a participatory manner and using the logical framework approach.</p> <p>3.3 Oversee and guide at least seven countries in the implementation and evaluation of their adaptation projects.</p> <p>3.4 Compile and analyse lessons learnt from the national adaptation activities and disseminate widely at the national and regional level.</p> <p>4.1 Develop a matrix of regional climate change activities and assist with the uptake and development of the Pacific Climate Change Portal to assist countries to identify and formulate appropriate adaptation responses.</p> <p>4.2 Strengthen regional coordination through undertaking country activities jointly with other organisations, utilising cross sectoral framework such as JNAP and contributing to regional planning frameworks such as the PCCR and CROP CEOs Climate Change Subcommittee (WACC).</p> <p>4.3 Enhance coordination especially between SPC and SPREP in the planning and delivery of climate change activities in countries.</p>			

7.9.3 Annex 9.3. Regional Logframe Matrix with results

Table 12 below presents a cut down version of the regional project logframe. The final column presents the assessment made by the evaluation team as to whether the indicator targets set have been achieved. Evidence to support the judgement is also provided.

Table 12: Regional logframe matrix with results and assessment

Expected result	Indicator	Result achieved
<p>Overall Objective</p> <p>To support the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change</p>	<p>Ten new activities that address country requests for climate change adaptation undertaken in an effective and sustainable manner.</p>	<p>Achieved:</p> <p>Training in proposal preparation using the logical framework approach delivered to all nine countries (Round 1) and five countries (Round 2).</p> <p>Cook Islands received technical assistance in its bid to become an NIE under the Adaptation Fund.</p> <p>FSM received technical assistance for its national lessons learnt workshop.</p> <p>Nauru received technical assistance to develop RONadapt (endorsed by government), the 20 year Water and Sanitation (W&S) Master Plan, and three draft funding proposals for priority actions under the W&S Master Plan.</p> <p>Niue received technical assistance to review its institutional framework for climate change and environmental management</p> <p>Palau received technical assistance to develop its Climate Change Policy (endorsed by Government).</p> <p>Tuvalu received technical assistance to develop the Agriculture Strategic Marketing Plan 2015-2025, which has been endorsed by government.</p> <p>Tonga received technical assistance to revise its Climate Change Policy (endorsed by government), to develop legislation and a manual to guide the administration of the Climate Change Fund, and for the feasibility and design study of the coastal protection works.</p> <p>In Kiribati, SPC Public Health Division (PHD) provided technical assistance to design the SODIS behaviour change campaign. New Zealand National Institute of Water and Atmospheric Research (NIWA) and Fiji National University's (FNU) Environmental Health Programme provided training on</p>

Expected result	Indicator	Result achieved
		<p>use of laboratory equipment. FNU also provided training on food quality monitoring. Fiji’s Ministry of Health and the Pasteur Institute in New Caledonia facilitated attachments for EHU staff to learn about vector borne disease control and surveillance. SPC-GSD facilitated attachment for three EHU staff and developed GIS health database. External technical assistance provided to develop new regulations for the Kiribati Public Health Ordinance (1977).</p> <p>On-ground climate change adaptation projects completed in eight of the nine countries, with some countries having multiple activities (e.g. Palau). See country reports for more detailed results of country activities. The projects have on the most part assisted countries to tackle the effects of climate change. For example, coastal communities in eastern Tongatapu (Tonga) are more protected from coastal erosion. Outer island communities in Fais (FSM) and Tobi and Sonsorol (Palau) have increased availability of potable rainwater. Farmers in Tuvalu have new knowledge and skills to implement agroforestry practices. They also have access to new crop varieties that have been trialled for their tolerance to climate change conditions.</p> <p>SPC contributed to the technical assistance provided to RMI to develop the Pacific Climate Change Finance Assessment report for RMI and the feasibility and design study for the Ailinglaplap coastal protection measures.</p>

Expected result	Indicator	Result achieved
	<p>Capacity of a minimum of 40 national sector specialists for integrating climate change adaptation into at least three sectors built from minimal level to moderate level.</p>	<p>Exceeded:</p> <p>21 people (14 male, 7 female) attended North Pacific Climate Change and Media training in FSM (Oct 2012). 60 people (55 male, 5 female) attended South Pacific Climate Change and Media training in Fiji (Nov 2012).</p> <p>47 people (22 male, 25 female) attended Pacific Climate Change and Finance Workshop. Feedback from participants (end-workshop survey) indicated that the workshop met or exceeded most people's expectations (28 of 31 respondents).</p> <p>34 people (20 male, 14 female) attended Adaptation Fund training in September 2014.</p> <p>291 people from 9 countries (13 workshops) attended the first round of LFA training, and 105 people attended the second round of training from five workshops.</p> <p>The project also funded individual attachments, such as three Tuvalu government staff attached to SPC units. SPC also provided country project management units with informal training and mentoring which has increased the capability of staff. A number of staff from country project management units have been absorbed into departments, which indicates that their skill level is valued (e.g. national coordinator from Palau now in the new Climate Change Office, and project officer at Palau Public Utilities has now has an ongoing position).</p> <p>Complementing these results, there were an additional 992 people trained on various subjects (Food security, water security, vector borne disease, agroforestry and home vegetable gardening, tractor maintenance, media, epidemiology, WASH, GIS, food safety, behaviour change etc.) In Kiribati, 1,407 community members trained in the use of SODIS.</p>

Expected result	Indicator	Result achieved
<p>Purpose</p> <p>To promote a long term/strategic approach to adaptation planning and budgets and to pave the way towards more effective and coordinated aid delivery modalities at national and at regional level.</p>	<p>At least one new formal mechanism in SPC to coordinate four different donors/partners engaged in delivery of climate change resilience by 09/2015.</p>	<p>Achieved:</p> <p>Regular meetings amongst donors and partners to strengthen coordination through among regional partners through the Development Partners for Climate Change (DPCC), and through the CROP-CEO Working Arm on Climate and Disaster Resilient Development (WARD).</p> <p>Coordination is resulting in joint activities being undertaken involving different partners, e.g. inter-agency collaboration to (i) finalise and endorse the Strategy for Climate and Disaster Resilient Development in the Pacific (SRDP) and lay the groundwork for its implementation; (ii) roll out the Regional Technical Support Mechanism; and (iii) holding the 2015 Pacific Climate Change Roundtable (PCCR) 12-14 May 2015.</p> <p>The arrangement to have a GCCA: PSIS climate change coordination officer based in SPREP advanced several areas of specific collaboration between SPC and SPREP, e.g. the Pacific Climate Change Portal and the SRDP</p>
	<p>National climate change policy that integrates disaster risk management and includes a budgeted action plan prepared in a minimum of two countries by 12/2015</p>	<p>Achieved:</p> <p>Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development (incorporates JNAP) prepared and endorsed; co-funded by GIZ and USAID. The cost to implement priority interventions during the first 5 year Action Plan is US\$500 million.</p> <p>Nauru Framework for Climate Change Adaptation and Disaster Risk Reduction (RONAdapt) prepared and endorsed. There is an action plan, yet to be costed.</p> <p>Tonga revised and endorsed its national Climate Change Policy (2020). Priorities from the revised policy are to be incorporated into Tonga’s Joint National Action Plan for Climate Change and Disaster Risk Management II 2016-2020 (JNAP II).</p> <p>The climate change policies should assist Palau, Nauru and Tonga to access climate change finance as they can demonstrate whole-of-government planning and prioritising of actions.</p>

Expected result	Indicator	Result achieved
Key Result Area 1 Climate change mainstreamed into national and/or sector response strategies.	New/revised sector plans incorporating climate change resilience in at least four countries by 12/ 2015.	Achieved: Nauru - 20 year Water and Sanitation (W&S) Master Plan Kiribati- A National Environmental Health Action Plan 2015-2019, new regulations for the Public Health Ordinance (1977), and Climate Change and Climate Risk Communications Strategy 2014-2018 Tuvalu- Agriculture Strategic Marketing Plan 2015-2025 FSM- hydrological assessment completed for four outlying islands of Yap State (Ifalik, Eurpik, Satawaal, and Ulithi) to inform future water management projects.
	National climate change policy in at least one country by 09/ 2015.	Achieved: Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development endorsed 11/2015 RONAdapt published 01/2015
Key Results Area 2 KRA 2: Well-articulated sectoral adaptation strategies that address budget support criteria.	Review conducted in at least 4 countries of the extent to which climate change is mainstreamed in national and sector policies so as to inform the delivery of funds via modalities such as budget support by 06/2014.	Achieved: Climate change profiles completed by SPC GCCA team for all nine countries. Review of mainstreaming of climate change into national plans and policies completed (Nov 2013) and discussed at regional climate change finance meeting (Sept 2013) for all nine countries. Followed up with a 'Review and assessment of national and sector policies in relation to budget support modalities in the Pacific Smaller Island States' completed for nine countries. Tonga (rated high) and Tuvalu (rated medium) assessed as most likely to receive direct budget support for climate change activities. Two countries (Cook Islands, Tonga) assisted with accessing/developing new climate finance modalities. Pacific Climate Change Finance Assessment report for RMI completed August 2014 (multi-donors)

Expected result	Indicator	Result achieved
	Capacity to apply the Logical Framework Approach to project design built in at least six countries by 12/2014.	<p>Achieved:</p> <p>Training (12 workshops) delivered in all nine countries (including all FSM States). 291 people attended. Post-workshop results indicate an increased capacity in attendees to undertake the LFA steps. Impact evaluations reveal that participants have used the LFA to both develop project proposals and assist in their everyday work duties.</p>
<p>Key Result Area 3</p> <p>National climate change adaptation projects implemented.</p>	Climate change adaptation activities implemented in three different sectors by 12/2015.	<p>Achieved:</p> <p>Four countries (FSM, Nauru, Niue, Palau) completed water sector projects.</p> <p>Two countries (RMI and Tonga) completed coastal sector projects.</p> <p>One country (Tuvalu) completed an agriculture sector project</p> <p>One country (Kiribati) completed a health sector project</p> <p>One country (Cook Islands) completed a marine sector project.</p> <p>All but one project was implemented successfully (see country reports). The Nauru project was not able to construct a new national water storage tank, so the project did not provide additional water to the country.</p>
	Lessons learnt about (on-the-ground) climate change adaptation activities compiled, analysed and shared by 12/2015.	<p>Achieved:</p> <p>Each country undertook a national lessons learnt workshop (FSM national workshop included representatives of all four FSM States), and a regional lessons learnt workshop was held in Yap (FSM). The regional workshop included development partners. SPC conducted a lessons learnt roadshow including presentations to SPREP in Samoa, and other development partners in Fiji (e.g. UNDP, GIZ, EU) and in FSM</p>

Expected result	Indicator	Result achieved
		<p>A lessons learnt video was created for each country. A regional lessons learnt video was also created. These are available online¹⁸³ and have been shown extensively on national television. A lessons learnt fact sheet was also created.</p>
<p>Key Result Area 4</p> <p>Streamlined technical assistance that supports national adaptation responses delivered by regional organisations in a collaborative manner</p>	<p>Two new regional coordination tools available, by 12/2012.</p>	<p>Achieved:</p> <p>The Pacific Climate Change Portal (PCCP) provides an online resource that has updated and archival climate change information to support knowledge sharing across projects and countries. The PCCP was developed in response to Pacific countries' request for a knowledge hub. The Climate Change Coordination Adviser based at SPREP provides support for the portal. Approximately 200 SPC GCCA project documents uploaded to the PCCP attracting 37,900 views by February 2016</p> <p>SPC prepared a matrix (updated in 2013) of the organisation's climate change activities across the Pacific as part of SPC's Climate Change Engagement Strategy.</p>
	<p>Minimum of three national representatives representing a minimum of three countries regularly contributing to the Climate Change Portal by 12/2015</p>	<p>Partially achieved:</p> <p>Palau national coordinator has uploaded climate change and food security policies.</p> <p>FSM- people other than national coordinator (who missed the training) in Office of Environmental Management upload documents</p> <p>Tuvalu- a person in the Marine Department is the only person authorised to upload.</p> <p>The project funded two training workshops on the portal, with a total of 49 attendees (25 female, 24 male).</p> <p>Country stakeholders consulted indicated a mixed response in terms of their use of the portal (either uploading or accessing resources). Some indicated that they used it to access climate change information (e.g. Tonga), others noted that specific people within government were tasked to upload</p>

¹⁸³ YouTube, <https://www.youtube.com/playlist?list=PLCq-WnF3Hdri67k5l3c-ew7AyfhQcWIXq>

Expected result	Indicator	Result achieved
		<p>information (e.g. in Tuvalu one officer in the Marine Department, funded by a GIZ project, is the only authorised person to upload) and others indicated limited use to date.</p> <p>Overall there remains barriers to country staff updating the portal. Limited bandwidth is an issue in many Pacific countries (e.g. Kiribati, Nauru, Niue, Palau, Tuvalu). Permission must be sought to upload documents and the lack of a dedicated or nominated person(s) in-country to fulfil this task are also barriers. Some countries (e.g. Cook Islands, Niue and Tonga) sent documents to the Climate Change Coordination Adviser for uploading to the PCCP.</p>
	<p>At least ten regional/sub-regional climate change resilience building activities implemented collaboratively by regional organisations by 12/2014.</p>	<p>Achieved:</p> <p>Stakeholders interviewed indicated that SPC demonstrated a good level of collaboration with other regional organisations. Collaboration with regional partners is important in terms of efficient use of funds, as well as the efficient use of country staff, who are often out-of-country and away from their regular roles. Examples of collaboration include:</p> <ol style="list-style-type: none"> 1. Regional training in Climate Finance October 2012 2. Pacific Climate Change Roundtable Meeting 2013 3. Joint Meeting of the Pacific Platform for Disaster Risk Management and the Pacific Climate Change Roundtable 2013 4. Training on the Adaptation Fund (SPREP, Asia Pacific Network, SPC-GCCA; PSIS project) 5. The Pacific Climate Change Roundtable (PCCR) 2015 6. The Roadmap and Strategy for Climate Change and Resilient Development in the Pacific (SRDP) 2013 – 2015 7. Pacific Compendium of Case Studies on Climate and Disaster Resilient Development in the Pacific 2015 8. United Nations Conference on Small Island Developing States (SRDP Side Event) 2014 9. Side Event - Building Resilience to Disasters and Climate Change for Sustainable Development in the Pacific - Third UN World Conference on Disaster Risk Reduction, 16 March 2015 - Sendai City, Japan, 2015 10. Collaboration through the CROP CEOs WARD Subcommittee



Expected result	Indicator	Result achieved
		11. Concept Note for GCCA+ prepared by SPC, SPREP, USP and PIFS, 2014

7.10 Annex 10. Cascading logframes

Cascading logframes help show the linkages between a high level (regional) logframe and one or more lower level (country) logframes. Cascading logframes can help provide more clarity to a project design. They can also assist with the identification of common indicators to be reported at the country level and aggregated at the regional level. This in turn aids agencies to provide concise summary programme report data to highlight project impacts across a portfolio of projects.

The first table (13) presents components from the existing GCCA: PSIS logframe. The third and fourth columns document suggestions for the project description and indicator columns of country level logframes to demonstrate how a cascading logframe could be implemented.

Table 13: Cascading logframe example based on existing GCCA: PSIS logframe

	Existing regional logframe	Proposed country logframe	Example indicators
Overall Objective	To support the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change	To support COUNTRY in their efforts to tackle the adverse effects of climate change	TA country requests made and funded
Purpose	To promote a long term/strategic approach to adaptation planning and budgets and to pave the way towards more effective and coordinated aid delivery modalities at national and at regional level.	To promote a long term/strategic approach to adaptation planning and budgets	Policy/plan finalised and awaiting endorsement at national level
KRA 1	Climate change mainstreamed into national and/or sector response strategies	Climate change mainstreamed into national and/or sector response strategies	Policy/plan created or revised
KRA 2	Well-articulated sectoral adaptation strategies that address budget support criteria	Sectoral adaptation strategies that address budget support criteria	Climate finance assessment completed; Number of men and women trained in the use of the LFA training
KRA 3	National climate change adaptation projects implemented	National climate change adaptation project implemented in SECTOR	Water harvesting capacity % of community with access to potable water as per WHO

	Existing regional logframe	Proposed country logframe	Example indicators
			standards (water consumption volume and water quantity) Metres of coastal protected and/or population protected Agricultural climate sensitive crop diversity Crop yield % of population covered by (water/food/vector) disease surveillance. Incidence of water/food/vector-borne disease
KRA 4	Streamlined technical assistance that supports national adaptation responses delivered by regional organisations in a collaborative manner	Not applicable	

The evaluation team has sought to improve the regional logframe and provide another example of how the cascading logframe approach could be applied. This example (table 14) presents a clearer results chain.

Table 14: Cascading logframe example based a revised regional loframe

	An alternative regional logframe	Proposed country logframe	Example indicators
Overall Objective	To contribute to the Governments of Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Tonga and Tuvalu, in their efforts to tackle the adverse effects of climate change	To contribute to COUNTRY's efforts to tackle the adverse effects of climate change	Changes in organisational structures to improve climate change coordination Number of staff trained in climate change related fields (e.g. finance, proposal preparation)
Purpose	Climate change resilience enhanced in nine PSIS	Increased climate change resilience in SECTOR	% of community with access to potable water as per WHO

			<p>standards (water consumption volume and water quantity)</p> <p>Number or % of population protected by coastal</p> <p>Agricultural climate sensitive crop diversity</p> <p>Crop yield</p> <p>% of population covered by (water/food/vector) disease surveillance</p> <p>Incidence of water/food/vector-borne disease</p>
KRA 1	National climate change adaptation projects implemented	National climate change adaptation project implemented in SECTOR	<p>Rainwater harvesting capacity</p> <p>Water storage capacity</p> <p>Metres of coastal protected</p> <p>Metres of land under cultivation</p> <p>Number of new health measures/infrastructure</p> <p>Number of new environmental monitoring devices</p>
KRA2	Climate change mainstreamed into national and/or sector response strategies	Climate change mainstreamed into national and/or sector response strategies	Policy/plan created or revised
KRA 3	Well-articulated sectoral adaptation strategies identified to address budget support criteria	Country climate finance assessment undertaken	Climate finance assessment completed
KRA 4	Streamlined technical assistance that supports national adaptation responses delivered by regional organisations in a collaborative manner	Not applicable	

7.11 Annex 11. Summary financial data

Table 15 presents interim financial data showing the percentage of each country's adaptation project funding allocation that has been spent or committed as at 31/03/16 (Euros). The project is on target to expend nearly all (98%) of its adaptation project allocation.

Table 15: Percentage of national adaptation project funds allocated and spent as of 28th February 2016

Country	Final allocation of funds for CCA project (€)	Total acquitted (€)	% of allocation acquitted	Additional amount committed but not yet acquitted (€)	% of allocation acquitted and committed	Comments
Cook Islands	500,000.00	485,000.00	97%	15,000.00	100%	Awaiting final docs
FSM	710,000.00	450,000.00	63%	260,000.00	100%	Awaiting final docs from reallocation of funds. ETA. 4 April 2016
Kiribati	520,000.00	515,000.00	99%	5,000.00	100%	Awaiting final docs
Marshall Islands	500,000.00	487,000.00	97%	13,000.00	100%	Awaiting final docs
Nauru	146,500.00	73,000.00	50%	73,500.00	100%	Awaiting completion of demolition
Niue	587,000.00	587,000.00	100%	Nil	100%	
Palau	600,000.00	500,000.00	83%	100,000.00	85%	Awaiting final docs
Tonga	500,000.00	500,000.00	100%	-	100%	
Tuvalu	560,000.00	550,000.00	98%	10,000.00	100%	Awaiting final docs
TOTALS	4,623,500.00	4,147,000.00	90%	386,500.00	98%	

Table 16 presents the amounts and percentages of national coordinator funds allocated, acquitted and committed. The project is on target to expend all of its national coordinator allocation.

Table 16: Percentage of national coordinator funds allocated and spent as of 28th February 2016

Country	Final allocation for National Coordinator (€)	Total acquitted (€)	% of allocation acquitted	Additional amount committed but not yet acquitted (€)	% of allocation acquitted and committed	Comments
Cook Islands	54,000.00	54,000.00	100%	Nil	100%	
FSM	54,000.00	54,000.00	100%	Nil	100%	
Kiribati	40,500.00	40,500.00	100%	Nil	100%	
Marshall Islands	69,295.00	60,000.00	87%	9,295.00	100%	Awaiting final docs
Nauru	27,500.00	27,500.00	100%	Nil	100%	
Niue	54,000.00	54,000.00	100%	Nil.	100%	
Palau	95,290.00	90,290.00	95%	5,000.00	100%	Awaiting final docs
Tonga	65,850.00	60,000.00	91%	5,850.00	100%	Awaiting final docs
Tuvalu	54,000.00	54,000.00	100%	Nil	100%	
TOTALS	514,435.00	494,290.00	96%	20,145.00	100%	

Table 17 presents interim financial data showing a complete view of project expenditure and any variance between originally budgeted costs and actual expenditure. All budgeted funds are predicted to be spent by the end of the project.

Table 17: Interim financial report as at 29/2/2016

Global Climate Change Alliance- GCCA: PSIS Interim Financial Report as at 29th February					
		General Budget	Actuals Expenditure	% over General Budget	% Varianc
EURO					
Technical Assistance					
<i>Long Term Technical Assistance</i>					
Project Manager/ Team Leader	GCCA 1.0	359,400	358,907	100%	0%
Climate Change Advisor-Suva	GCCA 1.0	294,690	231,298	78%	22%
Climate Change Advisor-Pohnpei	GCCA 1.0	331,470	337,440	102%	-2%
Climate Change Advisor-Suva	GCCA 1.0	189,095	178,998	95%	5%
Climate Change Advisor-Suva	GCCA 1.0	154,069	152,405	99%	1%
Project Finance Officer	GCCA 1.0	227,560	218,527	96%	4%
Project liase on Assistant	GCCA 1.0	44,500	57,240	129%	-29%
Comms Officer	GCCA 1.0	99,216	75,755	76%	24%
Long Term Tech Assist to SPREP	GCCA 1.1	360,000	319,591	89%	11%
Specialist Short Term Tech Assist to Beneficiary countries	GCCA 3.0	1,480,000	1,361,621	92%	8%
	-				
Sub Total		3,540,000	3,291,781		
Support to SPREP for Travel and in country cost	GCCA 2.0	104,000	135,169	130%	-30%
Support for participating country Proj Engagements	GCCA 5.0	520,000	472,860	91%	9%
Regional Training Workshops and Tech Attachments	GCCA 4.1 GCCA 4.0	830,950	1,144,043	138%	-38%
Project equipment and consumables	GCCA 8.0	161,500	160,819	100%	0%
Pilot Adaptation (Design)	GCCA 6.0	4,640,000	3,943,689	85%	15%
Reallocated funds	GCCA 6.1	-	414,141		
Travel and in Country Cost	GCCA 7.0	600,000	814,801	136%	-36%
Visibility	GCCA 9.0	115,000	127,135	111%	-11%
Sub Total (Direst Cost)		6,971,450	7,212,659		
Total Direct cost		10,511,450	10,504,440		
In-direct cost (7%)	GCCA 10.0	718,550	718,550	100%	0%
Evaluation	GCCA 11.0	170,000	151,935	89%	11%
Contingencies	GCCA 12.0	-	-		
Total Cost estimate for Year_4		11,400,000	11,374,926		
	*				
Expenditure Rate over General Budget					
100%					

7.12 Annex 12. Gender representation

The following table (18) and figure (4) shows the representation of men and women at national and regional training and consultation events funded by the GCCA: PSIS project.

Figure 4: Representation of men and women at training and consultation events.

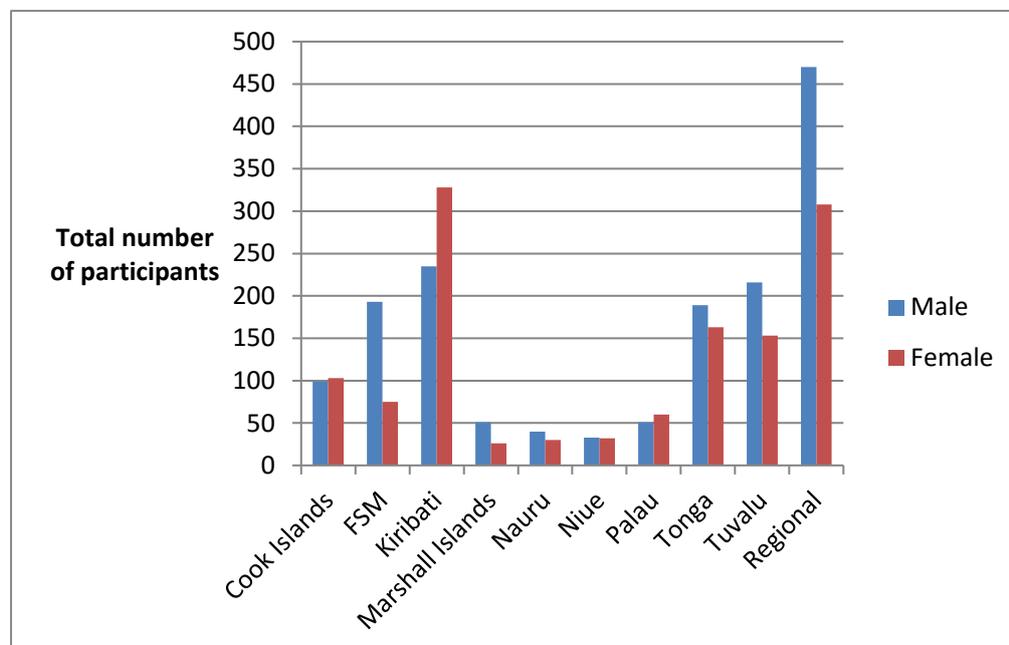


Table 18: Representation of men and women and training and consultation events.

Country	Number of people		Percentage	
	Male	Female	Male	Female
Cook Islands	99	103	49%	51%
FSM	193	75	72%	28%
Kiribati	235	328	42%	58%
Marshall Islands	51	26	66%	34%
Nauru	40	30	57%	43%
Niue	33	32	51%	49%
Palau	51	60	46%	54%
Tonga	189	163	54%	46%
Tuvalu	216	153	59%	41%
Regional	470	308	60%	40%
Total	1577	1278	55%	45%

7.13 Annex 13. Communications Tools Summary

Table 19 documents a number of project communication tools used by the SPC GCCA project. Findings and results for each tool are briefly discussed.

Table 19: Communications tools

Communication tool	Results and discussion
<p>Media releases</p> <p>Nine media releases from SPC between February and November 2015. Additional media releases created prior to this date by SPC and country teams.</p>	<p>On average it was noted that 15-20 different media outlets picked up on each release, resulting in an estimate of well over 200 published articles.</p> <p>At least three GCCA media releases were picked by the EU resulting in published online articles¹⁸⁴</p>
<p>Website</p> <p>Official SPC GCCA website established with country project profiles and summary document repository¹⁸⁵. Proper acknowledgement given to EU and SPC.</p> <p>Cap4dev (GCCA community blog site)</p> <p>Countries promoted the project on local government websites</p>	<p>Website attracted 3,800 unique website visitors who visited 7200 web pages in 2012 alone. Most website visitors were located in the USA, Australia and China. France, Great Britain, New Caledonia, France, New Zealand and Germany were the next most active visitors which provides some evidence to support that the website did provide some SPC GCCA project exposure to EU member countries.</p> <p>Cap4dev published approximately seventeen blog posts about SPC GCCA project¹⁸⁶. Fact sheets were also published¹⁸⁷.</p>
<p>Pacific Climate Change Portal</p> <p>Pacific Climate Change Portal used as main project document repository storing over project documents.</p>	<p>Approximately 200 SPC GCCA project documents uploaded to Portal attracting 37,900 views¹⁸⁸. This is the main archive of documents for public use.</p>

¹⁸⁴ Silver Surfers (29 July 2014), <http://www.gcca.eu/news-and-events/gcca-stories/silver-surfers-expand-climate-change-knowledge-in-the>; GCCA events: the value of exchange (26 August 2013), <http://www.gcca.eu/news-and-events/gcca-stories/gcca-events-the-value-of-exchange>

¹⁸⁵ <http://www.spc.int/en/our-work/climate-change/gcca.html>

¹⁸⁶ For example, 'Simple Solutions: Reducing Climate Change Vulnerability with Water Tanks' <http://capacity4dev.ec.europa.eu/gcca-community/blog/gcca-news-april-2014>

¹⁸⁷ <http://capacity4dev.ec.europa.eu/gcca-community/blog/gcca-psis-latest-programme-updates>

¹⁸⁸ PREA compiled a spreadsheet of Climate Change Portal documents and hits as at February 2016. Please contact PREA if this list is required for verification purposes.

Communication tool	Results and discussion
	In April 2016, a new website for climate change website was established under SPC GSD and all GCCA: PSIS documents from the Portal are also being uploaded there ¹⁸⁹ .
<p>Newsletters</p> <p>SPREP Climate Change Matters (CCM) newsletter was heavily used to promote the SPC GCCA project activities and achievements in over 20 articles¹⁹⁰.</p> <p>The SPC GCCA funded SPREP Communications officers gave the project increased access to this newsletter.</p> <p>Most (but not all) articles promoted both the EU and SPC's role in the project¹⁹¹.</p> <p>SPC climate change and disaster risk newsletter published three SPC GCCA articles.</p> <p>Countries (e.g. Cook Islands) published content in national newsletters. See Country Evaluation reports for details.</p>	CCM reaches 1700 subscribers. Average readership for CCM during the project period was approximately 150 people per issue ¹⁹² .
<p>Video</p> <p>Fifteen official videos produced (5 raising awareness about climate change issues in the Pacific, 10 lessons learnt from SPC GCCA¹⁹³). All feature partner names, logos and in most cases a verbal mention about their role in project. A</p>	<p>Videos distributed via DVD, USB, online, screened on TV ('Pacific Way') and screened at national and regional events. Collectively, videos received over 39,000 views on YouTube. DVDs containing videos were also distributed.</p> <p>Videos highlighted as effective by both country partners and external stakeholders interviewed.</p> <p>Videos were shown extensively by Pacific Way on national TV (Q3, 4 2015 and Q1 2016)</p>

¹⁸⁹ SPC GSD climate change website <http://gsd.spc.int/ccprojects/>

¹⁹⁰ <https://www.sprep.org/newsletters/climate-change-matters>. 19 articles promote SPC GCCA between November 2014 and December 2015 as a starting point.

¹⁹¹ Most articles revised acknowledged SPC and EU. Some did not. E.g. 'Pacific Small Island States meet in Tonga to discuss budget support modalities for climate change' (September 2013), <http://www.pacificclimatechange.net/index.php/new/6994-gcca-tonga-workshop-september-2013>

¹⁹² PREA created a spreadsheet with CCM newsletter hits between 2012 and 2015. Please contact PREA to review this data.

¹⁹³ 'Climate Change Adaptation – the Pacific Way' series. One video for each country and one overall video 'Experiences & lessons learnt from the past 5 years'.

Communication tool	Results and discussion
<p>National media</p> <p>GCCA partner country national media outlets were used to publicise information about the project's activities. Outlets included radio, television, newspapers, newsletters and online websites.</p>	<p>Whilst countries were advised to follow SPC's procedures and the EU Visibility Plan, there were instances where national media did not promote SPC or the EU. This missed visibility opportunity arises from not following the communications guidelines, national media requirements and the freedom of the press to publish or not publish all text in a media release. National coverage of events, specifically LFA training in Niue, Cook Islands and Tonga was noted.</p> <p>See country evaluation reports for more details on national media coverage.</p>
<p>Regional Radio</p> <p>In-country project staff or SPC staff were interviewed by international media organisations (ABC and Radio New Zealand) which picked up on media releases on more than three occasions.</p>	<p>These regional radio channels have extensive listenership. The evaluation lacked time and resources to verify SPC and EU acknowledgement, however, it is highly likely these were present in cases where SPC were involved.</p>
<p>Social Media</p> <p>SPC Facebook, Twitter and YouTube account used to promote SPC GCCA stories, media releases and videos</p>	<p>Very minimal use of social media (SPC Facebook page and Twitter). Social media was constrained in part due to SPC's policy to centralise social media activities and not allow projects to create their own social media accounts. Successful presence on YouTube to promote the fifteen official videos produced. Tweets of GCCA news was sent to and re-tweeted from EU stakeholders¹⁹⁴.</p>
<p>Fact sheets</p> <p>Thirteen fact sheets produced. One for each country (9) and one each for SODIS, LFA training, overall project, and lessons learnt.</p>	<p>Handed out at EU day and at regional events. Evidenced distribution of packs of fact sheets at LFA training events and during meetings with key Government stakeholders in participating countries.</p> <p>Fact sheets stored online attracted approximately 150 views each (for 9 fact sheets)¹⁹⁵.</p>
<p>Workshops, trade exhibitions, events and roadshows</p>	<p>Provided opportunities for display tables, banner display, fact sheet promotion, presentations and networking. Photo evidence shows SPC GCCA</p>

¹⁹⁴ Twitter Retweet dated 27/4/2015, https://twitter.com/andrew_jacobseu/status/592604516970668032

¹⁹⁵ <http://capacity4.dev.ec.europa.eu/gcca-community/blog/gcca-psis-latest-programme-updates>. More views of fact sheets achieved from the Climate Change Portal, however, these statistics are already captured in that specific item in the table

Communication tool	Results and discussion
<p>SPC GCCA project had presence at over fifteen international events.</p> <p>Nine lessons learnt roadshows conducted.</p>	<p>presence at Pacific Climate Change Roundtable and CRGA 2015 SODIS demonstration SPC GCCA lessons learnt roadshows also evidenced from partners where roadshows were given (GIZ, UNDP)</p> <p>Project displayed at EU day events, 2012, 2013, 2014, 2015</p>
<p>Project banners</p> <p>Pull-up and hanging banners featuring project partner logos provided to every country.</p>	<p>Displayed at all training events, significant meetings and project openings. Banners are present in many photos of events and openings and clearly display partner logos. Banners witnessed during LFA training in all nine countries and during in-country visits (in project office)</p>
<p>Project stickers</p> <p>Over 1000 Large and small project stickers featuring project partner logos produced.</p> <p>FSM printed World Water Day stickers (English and local language) and rainwater tank stickers with maintenance task reminders.</p>	<p>Displayed on most larger and small infrastructure items. Stickers viewed in project photos and during in-country site visits on tanks, computers, vehicles and laboratory water testing equipment.</p>
<p>Billboards and plaques</p> <p>Large billboards and small plaques featuring project partner names and logos installed.</p>	<p>Installed at some, but not all main projects sites. Viewed during in-country visits to Tonga, Kiribati, Niue and Tuvalu. Viewed in project videos and photos. Billboard in Palau planned, but not yet installed. No evidence of billboard at RMI Woja Island which is a missed opportunity and was perhaps not progressed due to remoteness and time constraints. No evidence of signage in Nauru at B10 tank site as works have not been completed.</p>
<p>Project posters and brochures</p> <p>50 sets of six large posters designed and printed featuring climate change challenges in the Pacific. Posters displayed partner names and logos.</p> <p>Tuvalu agroforestry and Kiribati SODIS posters also developed at the national level</p>	<p>Posters delivered to all nine countries for display. Displayed at regional events and roadshows.</p>

Communication tool	Results and discussion
<p>USB drives and flash cards</p> <p>500 USB drives and 250 flash cards distributed containing project collateral (videos, documents, fact sheets). Names of key partners printed on each unit.</p>	<p>Distributed at events in 2014 and 2015 to promote paperless policy and provide ease of access to documents.</p>
<p>T-shirts, caps and bags</p> <p>Approximately 400 t-shirts, 200 caps and 300 bags produced and distributed. Featuring partner name and logos.</p>	<p>Distributed as promotional items at meetings, conferences and events in 2014 - 2015. Viewed SPC and project staff in nearly all countries wearing t-shirts at official events. Viewed bags being distributed at training events.</p>

7.14 Annex 14 DAC Evaluation Report Summaries

Subject of the Evaluation: Global Climate Change Alliance: Pacific Small Island States Project

The Global Climate Change Alliance: Pacific Small Islands States (GCCA: PSIS) Project is a European Union (EU) funded initiative to assist nine smaller Pacific Island states (Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Tonga and Tuvalu) to adapt to climate change. The project was implemented by the Pacific Community (SPC), with an implementation period from July 2011 through to November 2016. The project consisted of on-ground climate change adaptation projects, climate change mainstreaming, regional collaboration and progressing access to new climate change financing modalities.

Evaluation Description

The purpose of the end-of-project evaluation is to provide the decision-makers from the EU, SPC, partner countries and regional organisations with an overall independent assessment about the performance and impact of the project, clarify key lessons and formulate practical recommendations

Methodology

Qualitative methods used included the desktop review of 900 documents, key informant interviews with 113 stakeholders and observations from field trips to three countries. Quantitative data methods included the counting of assets, estimating the project reach and comparing initial budget and timeline estimates with actual results.

Main Findings

Overall, the project was highly effective and successful in achieving all but one of its targets in the revised regional logframe, and within the revised project timeframe.

Key results:

- 1,588 participants in regional and national trainings
- 82,905 direct beneficiaries from on-ground projects
- 1397 kilolitres of additional rainwater storage added
- 1,620 meters of coastline protected
- 5 water quality testing laboratories refurbished
- 4.5 acres of climate sensitive agroforestry created and 9 climate resilient crops trialled.

Capacity was built:

- 200 national sector specialists trained to integrating climate change adaptation three sectors (media, finance, Pacific Climate Change Portal)
- 396 people trained in proposal preparation using the logical framework approach

Climate change was mainstreamed at the national and sector level:

- National climate change policy that integrates disaster risk management in three countries
- Four countries with new/revised sector plans incorporating climate change resilience
- Review of mainstreaming of climate change into national plans and policies completed for all nine countries.

Access the new modalities of climate change funding was progressed in all countries:

- Review and assessment of national and sector policies in relation to budget support modalities in the Pacific Smaller Island States completed for nine countries
- Two countries assisted with accessing new climate finance modalities

Climate change adaptation projects were successfully implemented:

- Eight of nine national adaptation projects completed by March 2016 with remaining project is on schedule to complete by June 2016

Regional collaboration with donors and other partners was increased:

- Two new regional coordination tools available (Pacific Climate Change Portal, SPC climate change project matrix)
- 200 SPC GCCA project documents uploaded to PCCP attracting 37,900 views. SPC GCCA website attracted 38,000 hits.

Overall, the evaluation findings were positive across all key DAC / EU evaluation criteria¹⁹⁶.

Relevance / Coherence / EC-value added	Very good
Effectiveness	Very good
Impact	Very good
Sustainability	Good
Efficiency	Very Good
Gender	Good
Environment	Very good
Visibility	Very good

Key challenges were:

- Capacity constraints at the national level to implement projects
- High costs and logistical challenges of implementing projects in remote outer islands
- Small private sector in some PSIS caused procurement difficulties
- Lengthy process (average 17 months) to develop concept notes and project design documents

Project success factors:

- Holistic approach to project design. Projects included on-ground adaptation, mainstreaming and regional collaboration.
- High levels of country ownership of projects through countries leading the project design and implementation phases.
- Skilled and resourced PMU. Regional PMU (SPC) was sufficiently staffed with capable individuals to provide a high level of support to national projects. Specifically:
 - High ratio of climate change advisers to countries, including a North Pacific based adviser.
 - SPC's flexibility, responsiveness and solutions focused approach to managing challenges and risk was essential to nearly all projects in achieving their purpose.
 - Frequent field trips to countries by SPC's climate change and sector-specific advisers were essential to keeping national adaptation projects moving forward.
 - SPC leveraged expertise across their different divisions to support country projects.

¹⁹⁶ Rating ranges from Very Weak, Weak, Good, Very Good

- EU – SPC collaborative approach. Regular formal and informal communications between the PMU and EU delegation allowed issues to be discussed as they arose, and solutions identified.

Recommendations

Six the nineteen key evaluations recommendations are presented below.

1. Longer implementation period.
A 5 year implementation period is required for large regional projects to allow sufficient time to ramp up and close down, and leave sufficient time for on-ground implementation (allow up to 12 months for procurement, and 18+ months for implementation). Recognising the EU's new D+3 rule, countries need to ensure that all procurement is contracted by the end of the third year of implementation.
2. Make clear funding reallocation rules.
Letters of Agreement (LoA) with countries need to contain and make clear funding reallocation clauses that can be actioned if implementation timeframes and other specified requirements are not met. SPC to develop clear plan as to how to respond to funding reallocation situation.
3. Identify relevant gender targets.
Relevant gender targets from the EU Gender Action Plan to be incorporated into projects.
4. Ensure capital works projects are realistic considering time and budget:
 - Ensure the scope of capital work projects is realistic in relation to the available timeframe (e.g. D+3) and budget, noting this project's lessons learnt from delivering projects on outer islands (logistical, capacity and capability constraints and costs for outer island projects).
 - Consider applying a contingency of up to 20% to the project budget for capital works projects on outer islands when accurate costs/quotes contributed to developing the project budget.
 - Apply SPC's "rule of thumb" lesson learnt and double initial timeline and budget estimates where accurate costs are not available in determining the project budget.
 - Large infrastructure projects in PSIS require either recent feasibility and design studies that are accurately costed or the ability to refer to recent similar projects in the region to obtain reliable costing and time estimates.
5. Actively assist countries with known implementation constraints.
Provide active oversight for projects in countries that have historically experienced difficulties in successful project implementation.
6. Conduct LFA training early.
Provide training in the LFA at the outset of a new project to support the development of robust logframes with relevant indicators.

Donor: European Commission	Region: Oceania	DAC sector:
Evaluation type: Efficiency, effectiveness and impact.	Date of report: 14/04/2016	Subject of evaluation : Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) Project
Language : English	Author: Damien Sweeney, Martin Pritchard	N° vol./pages: 134

Programme and budget line concerned:		
Type of evaluation : () ex ante () intermediate / ongoing (X) ex post		
Timing	Start date : 10/1/2016	Completion date : 14/04/2016
Contact person	Authors : Damien Sweeney damien@prea.com.au , Martin Pritchard martin@prea.com.au Pacific Research & Evaluation Associates www.prea.com.au	
Cost : Euro 11.4m	Steering group :	