



**SPC**  
Secretariat  
of the Pacific  
Community



## **GLOBAL CLIMATE CHANGE ALLIANCE: PACIFIC SMALL ISLAND STATES PROJECT**

### **REPORT ON PALAU ADAPTATION PROJECT PLANNING WORKSHOP 1-2 MAY 2013**



#### **Introduction**

The Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) project is funded by the European Union (EU) and implemented by the Secretariat of the Pacific Community (SPC) in collaboration with the Secretariat of the Pacific Regional Environment Organisation (SPREP). The project budget is €11.4 million. The implementation period for the GCCA: PSIS project is from the date of signature of the agreement, 19 July 2011, to 19 November 2014.

The overall objective of the GCCA: PSIS project is to support the governments of nine Pacific smaller island states, namely Cook Islands, Federated States of Micronesia (FSM), 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 on climate change at the national and regional level.

The project approach is to assist the nine countries design and implement practical on-the-ground climate change adaptation projects in conjunction with mainstreaming climate change into line ministries and national development plans; thereby helping countries move from an *ad hoc* project-by-project approach towards a programmatic approach underpinning an entire sector. This has the added advantage of helping countries better position themselves to access and benefit from new sources and modalities of climate change funding, e.g. national and sector budget support.

## **GCCA: PSIS Climate Change Adaptation Project in Palau**

The on-the-ground climate change adaptation project in Palau is entitled “Addressing water sector climate change vulnerabilities in the outlying island states of Palau”. A concept note outlining this project was prepared in 2012 following several multi-stakeholder consultations. This concept note was endorsed by government by letter dated 14 December 2012. The project will examine water sector climate change vulnerabilities in the outlying island states in the Republic of Palau (Angaur, Kyangel, Peleliu, Sonsorol and Tobi), and focus on identifying and addressing particular climate change vulnerabilities in the water sector. The project will be implemented by the Palau Water and Sewerage Corporation (PWSC) with support from the Office of Environmental Response and Coordination (OERC), the Environmental Quality Protection Board (EQPB) and Ministry of Natural Resources, Environment and Tourism (MNRET).

A Planning Workshop was held on 1-2 May 2013 at the MNRET conference room to:

- 1) Introduce the GCCA: PSIS project
- 2) Introduce to the key stakeholders the proposed climate change adaptation project.
- 3) Discuss and agree on the overall objective, purpose, key result areas and activities of the project.
- 4) Prepare an outline log frame
- 5) Discuss and agree on next steps including the implementation arrangements (institutional, management, etc.).

The workshop was organised by PWSC and chaired by Gustav Aitaro, Director, Bureau of International Trade & Technical Assistance, Ministry of State.

### **Workshop Participants**

There were 27 participants. Participants came from government agencies and non-governmental organisations (NGOs) and also included Governors and other representatives (including water operators) from the five outlying island states. The list of participants is presented as Annex 1.

### **Workshop Agenda**

The workshop agenda is presented as Annex 2. At the start of the workshop participants were asked to complete a questionnaire designed to gauge key information as to the extent to which climate change is integrated into institutions in Palau and participants’ understanding of climate change issues.

### **Workshop Results**

Minister F. Umiich Sengebau, Ministry of Natural Resources, Environment and Tourism opened the workshop and gave the introductory remarks. He compared the threat of climate change to an illness such as cancer and emphasised the need to lessen other stresses so as to keep the environment healthy and resilient to the adverse impacts of climate change. He noted the need to build on the work already undertaken with communities in Palau and for the outlying island states, Angaur, Kyangel, Peleliu, Sonsorol and Tobi (KAPTS) to work together.

After introductions and a description of the workshop objectives, there was a presentation by Pasha Carruthers, Climate Change Adviser SPC-GCCA: PSIS project, about the overall GCCA: PSIS project. This was followed by an outline of a “sister” SPC climate change adaptation project: Coping with Climate Change in the Pacific Island Region, given by Fenno Brunken, Climate Change Adviser, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

During discussion, participants were advised that SPC is requesting from the EU a no-cost extension of the GCCA: PSIS project through to December 2015. If this request is approved, then the period for

the implementation of Palau’s adaptation project would extend to 30 June 2015, effectively providing two years for implementation and a further six months for completing evaluation.

Gillian Cambers, Project Manager SPC-GCCA: PSIS project, then gave a brief presentation on the climate change projections for Palau based on the work of the Pacific Climate Change Science Program, 2011. This was followed by discussion on observed changes in Tobi where longer dry seasons and changes in the rainfall patterns had been observed. There were also discussions about the bad droughts in the 1990s, particularly the extreme drought in 1998 when less than 120 ins of rainfall were recorded.

Maireng Sengebau, Chief Executive Officer of PWSC, then gave a presentation about the PWSC and the water issues in the KAPTS. Key items covered in the presentation and following discussions were:

- The PWSC has been in existence for 3 months and are still recruiting the core team.
- A \$6 million loan from the Asian Development Bank is being used to establish the Corporation, install a household metering program and a leak detection program, and address the needs of the Palau Water Workers Association. It is not being used for daily operations or improvements.
- The goal for the PWSC is to have a fully independent corporation with no subsidies from Government by 2015.
- New funding is available from SIDS Dock to improve the water system in Kyangel, and from the Japanese Pacific Environment Community fund through the Pacific Islands Forum Secretariat for a desalination plant in Peleliu.
- There is a need for investigations into the recharge rates for the groundwater lenses in the outlying island states.
- The goal for the outlying island states is to have efficiently operating hybrid systems using groundwater and rainwater storage in Angaur, Kyangel and Peleliu; while the two southernmost states – Sonsorol and Tobi will remain dependent on rainwater storage.

Participants then divided into small groups to discuss some key questions. The discussions around these questions provided some useful insights about water issues and climate change and are summarised in the table below.

<ul style="list-style-type: none"><li>• <b>KEY QUESTION 1:</b> What are the key concerns relating to water supply and quality in the state? <u>Angaur:</u> Supply – quantity of available groundwater unknown, lack of storage, gravity flow storage tank not utilised, drinking water obtained from the school catchment; Quality – strong hydrogen sulphide smell, inadequate chlorination, all homes use on-site septic systems. <u>Kyangel:</u> Insufficient supply, inadequate knowledge as to water lens capacity, poor quality unfit for human consumption, high risk for declaration of state of emergency <u>Peleliu:</u> Sea level rise, extreme high temperatures, saltwater intrusion (inundation of wells and taro patches) <u>Sonsorol:</u> Storage and safety of water <u>Tobi:</u> Insufficient supply, traditional wells not maintained, water tanks are old and in poor condition, no chlorination, no regular maintenance, no filtration</li></ul>
<p><b>KEY QUESTION 2:</b> Prioritise the top two water-related concerns <u>Angaur:</u> Quantity of groundwater unknown, insufficient quantity <u>Kyangel:</u> Insufficient supply and thickness of lens unknown <u>Peleliu:</u> Sewage disposal, maintenance of water catchments <u>Sonsorol:</u> Storage and safety of water <u>Tobi:</u> Tanks are old and in poor condition and need catchments</p>

- **KEY QUESTION 3:** What changes have you seen in the weather and climate in your state in the last 10 years or so?

Angaur: Less rain, higher temperatures, crops show effects of increased salt water inundation.

Kyangel: More extreme temperatures and rainfall events, weather and traditional calendar no longer in sync, mosquito infestations, abnormally high tides

Peleliu: Extreme high temperatures, longer dry spells, less rainfall, increase of mosquitos because of stagnant water in the taro patches

Sonsorol: Longer droughts, heavier and more intense rainfall

Tobi: Sea level rise, ocean acidification, longer dry season, heavy rain during rainy season drowning taro and providing breeding ground for more mosquitoes

- **KEY QUESTION 4:** How many people in your state have properly maintained and well managed rainwater harvesting systems (roof catchments)

Angaur: 10% of households

Kyangel: All houses have rain catchments and some have abandoned wells

Peleliu: All households have tanks but they are not properly maintained

Sonsorol: 100%

Tobi: 85% but need for repair and better maintenance

**KEY QUESTION 5:** What water related improvements/activities are planned or ongoing for your state?

Angaur: Power is needed for back-up well which was installed with external funding support

Kyangel: Ongoing improvements to generator and pump, planting salt tolerant taro and sweet potatoes, planned outreach on smart water usage and Joint National Action Plan of Climate Change Adaptation and disaster risk management

Peleliu: \$4 million from Japan for reverse osmosis plant (brackish water to drinkable quality)

Sonsorol: Grants needed to address all of the above

Tobi: Ongoing leak repair and planned installation of water pumps and chlorination

- **KEY QUESTION 6:** To what extent are people willing to pay for improved water supply and storage?

Angaur: Most of the households would be willing to pay for improved water supply; most could be convinced to invest in household water catchment

Kyangel: They are willing

Peleliu: People see water supply as the responsibility of the government; private citizens do not have the financial resources.

Sonsorol: People are already spending time on maintaining current water catchments.

Tobi: Possibly they might be willing to pay at the beginning but there is a need for a public water catchment

A presentation was then given by Gillian Cambers on the logical framework approach. About a quarter of the participants said they had some experience with the logical framework approach. There was considerable discussion about alternative planning frameworks used in Palau where different terminology is used.

The participants worked as a plenary group to define the overall objective and the project purpose. They then divided into four smaller groups to define the key result areas. Group results were then shared and four key result areas agreed.

On Day 2 of the workshop, participants worked in small groups to define project activities. Results were then shared in a plenary session. Participants worked first on the key result area dealing with improved infrastructure (KRA2) and listed the activities on a state by state basis. Following discussion it was agreed by the stakeholder that this key result area would focus on the three south-western states: Angaur, Sonsorol and Tobi since significant investments in the water sector were already planned for Kyangel and Peleliu. The key result area dealing with capacity building (KRA1) and water studies and investigations (KRA3) cover all five outlying island states. The combined results of all the small group sessions are presented in version 1 of the log frame shown in Annex 3. This draft version does not include indicators, verifiable sources or assumptions.

The workshop was then closed. PWSC will circulate the workshop report to all participants and a key stakeholder group will be identified to provide project oversight. During the next two months a detailed project design document with budget will be prepared, and the goal is to have this signed-off by the Government of Palau and SPC in July 2013 so that implementation can start 1 August 2013.

### **Workshop Evaluation**

The results of the workshop evaluation are presented as Annex 4. Twenty one people completed the form. Twenty people found the logical framework approach useful for project planning (one person ticked “other”). Most of the participants found the logical framework approach useful for planning the project whilst recognising that they were more familiar with other terminology. The following comment summarised the participants’ response: “It was a bit challenging at first because the terms used are a bit different to what I am used to (mission, goal, objectives, activities, output) but things got clearer during the exercise.”

At the end of the workshop participants were provided with usb sticks with the project documents.

### **Conclusion**

The workshop was successful in allowing different stakeholders to play a role in the initial planning of the project and to build project ownership.

### Annex 1 Participants List

	Name	Title, Office	Email
1	Director Gustav Aitaro	BITTA – MOS	<a href="mailto:gaitaro@palaumos.net">gaitaro@palaumos.net</a>
2	J. Maireng Sengebau	CEO, PWSC	<a href="mailto:jmsengebau@palauwsc.com">jmsengebau@palauwsc.com</a>
3	Lynna Thomas	IWRM Coordinator, EQPB	<a href="mailto:Lynna.thomas7@gmail.com">Lynna.thomas7@gmail.com</a> <a href="mailto:eqpb@palaunet.com">eqpb@palaunet.com</a>
4	Governor Jeffrey Titiml	Kayangel State Government	<a href="mailto:kayangel@palaunet.com">kayangel@palaunet.com</a>
5	Asteen Marcil, Kayangel State Rep	Kayangel State Government	<a href="mailto:kayangel@palaunet.com">kayangel@palaunet.com</a>
6	Governor Thomas Patris	Hatohobei State Government	<a href="mailto:hsg@palaunet.com">hsg@palaunet.com</a>
7	Wendy Arurang, Peleliu State Rep	Peleliu State Government	<a href="mailto:psg@palaunet.com">psg@palaunet.com</a>
8	Governor Jacob Yangilmau	Sonsorol State Government	<a href="mailto:sonsorol@palaunet.com">sonsorol@palaunet.com</a>
9	Governor Maria Gates-Meltel	Angaur State Government	<a href="mailto:Angaur@palaunet.com">Angaur@palaunet.com</a>
10	Darren Fritz	National Authorizing Officer, EU, MOF	<a href="mailto:darrenfritz@gmail.com">darrenfritz@gmail.com</a>
11	Ann Hillmann Kitalong	TEI	<a href="mailto:kitalong@palaunet.com">kitalong@palaunet.com</a>
12	Umai Basilius	PCS	<a href="mailto:snyd@palaunet.com">snyd@palaunet.com</a>
13	Madelsar Ngiraingas	Program Manager, PALARIS	<a href="mailto:madelsar@palaunet.com">madelsar@palaunet.com</a> , <a href="mailto:palaris@palaunet.com">palaris@palaunet.com</a>
14	Carol Emaurois	Chief Education Officer, PICRC	<a href="mailto:picrc@palaunet.com">picrc@palaunet.com</a>
15	Sandra Mincer	President, NDBP	<a href="mailto:sdmincer@ndbp.com">sdmincer@ndbp.com</a>
17	Judy L. Dean	Grant Coordinator, Office of the President	<a href="mailto:Rop.president@palaunet.com">Rop.president@palaunet.com</a> , <a href="mailto:judy@palaunet.com">judy@palaunet.com</a>
18	Charlene Mersai	OERC	<a href="mailto:charmairsai@gmail.com">charmairsai@gmail.com</a>
19	Greg Decherong	Palau Energy Office	<a href="mailto:energy@palaunet.com">energy@palaunet.com</a>
20	Nyk Kloulubak	Palau Energy Office	<a href="mailto:nyk@palaunet.com">nyk@palaunet.com</a>
21	Alonz Kyota	NEMO	<a href="mailto:palaunemo@gmail.com">palaunemo@gmail.com</a>
22	Laura I. Miles	TEI	<a href="mailto:laurairago@yahoo.com">laurairago@yahoo.com</a>
23	Darla Ellechel	Grants Office, Office of the President	<a href="mailto:Rop.president@palaunet.com">Rop.president@palaunet.com</a>
24	Surech Hideos	Micronesian Challenge Regional Office	<a href="mailto:Surech.bells@mcro.com">Surech.bells@mcro.com</a>
25	Wandalyyn T. Remeliik	PWSC	<a href="mailto:wtremeliik@palauwsc.com">wtremeliik@palauwsc.com</a>
26	Johnny Kintaro, Jr.	PWSC	<a href="mailto:jkintaro@palauwsc.com">jkintaro@palauwsc.com</a>
27	Clarissa Adelbai	PWSC	<a href="mailto:Adelbai@palauwsc.com">Adelbai@palauwsc.com</a>

**Annex 2 Workshop Agenda  
Secretariat of the Pacific Community  
Government of the Republic of Palau**

**GLOBAL CLIMATE CHANGE ALLIANCE: PACIFIC SMALL ISLAND STATES  
PROJECT DESIGN WORKSHOP**

**Addressing water sector climate change vulnerabilities in the outlying island states of Palau**

**Day 1: Wednesday 1 May 2013**

<b>Time</b>	<b>Activity/Topic</b>	<b>Lead Person</b>
08:30-09:00	Introductory Remarks	Minister F. Umlich Sengebau, OERC
09:00-09:30	Introduction Objectives of the workshop	Director Gustav Aitaro, Bureau of International Trade & Technical Assistance
09:30 –10:00	Outline of Secretariat Pacific Community Climate Change Programs and the Global Climate Change Alliance: Pacific Small Islands States Project	SPC – Pasha Carruthers
10.00-10.05	Completion of baseline questionnaire	SPC – Gillian Cambers
10:05-10:30	Morning Tea	
10:30-11:00	Outline of Climate Change Adaptation Project in Palau: <b>Addressing water sector climate change vulnerabilities in the outlying states of Palau</b>	Water and Sanitation – J Maireng, PWSC
11:00-12:30	Small Group Sessions: Priorities for water sector in the outlying states	Facilitated by SPC -
12:30-13:30	Lunch	
13.30-14.00	Outline of logical framework analysis	SPC – Gillian Cambers
14.00-15.30	Small Group Sessions to identify Key Result Areas	SPC Facilitate
15.30-16.00	General discussion and close	SPC - Gillian Cambers

**Day 2: Thursday 2nd May 2013**

08:30-09:00	Recap of Day One: Summary of overall objective, project purpose and key result areas	SPC – Gillian Cambers
09:00-10:30	Small Group Sessions to identify project activities	SPC Facilitate
10:30-11:00	Morning Tea	
11:00-12:00	Discussion on indicators, responsibilities, implementation, monitoring and evaluation	All
12:00-12:30	Next steps and wrap-up; workshop evaluation	SPC Gillian Cambers
12:30	Closing and Lunch	

### Annex 3 Draft Project Log Frame Version 1

(Verifiable indicators, verification sources and assumptions have not yet been drafted)

<b>Description:</b> Addressing water sector climate change vulnerabilities in the outlying states of Palau
<b>Overall Objective:</b> Increasing resilience of the water sector to climate change impacts in Palau
<b>Purpose:</b> Helping ensure water quality and supply meets the needs of the people in the outlying island states of Palau
<b>Key Result Area 1:</b> Capacity of PWSC enhanced to monitor and maintain water systems in the outlying states
<b>Key Result Area 2:</b> Appropriate water sector infrastructure improvements have been made in outlying states
<b>Key Result Area 3:</b> Studies undertaken of availability and quality of water resources in the outlying states
<b>Key Result Area 4:</b> Level of awareness about water conservation raised and appropriate measures implemented by Palauan residents
<b>Activities</b> 1.1 Develop and implement water operations certification programs by PWSC. Programs will focus on monitoring and maintenance 1.2 Develop a scholarship program which will include training for water system operators. 1.3 Build capacity of existing water sector workers in the south western states. 1.4 Prepare a report on a mechanism for sustainable water maintenance at the national level, giving the states the capacity to maintain and troubleshoot. 1.5 Recruit a project manager/coordinator to oversee the implementation of this project within the PWSC.  2.1 Contribute to the water sector infrastructure needs in Angaur, possibly including some of the following: replace catchment tanks at the community centre and develop as a demonstration of an effective water catchment demonstration site for the state, repair water leaks, repair existing pumps and filters, purchase

back-up generator for coastguard well, purchase aerator and carbon filter system to remove hydrogen sulphide smell, repair existing holding tanks, purchase solar power system as back-up for pumps.

2.2. Contribute to the water sector infrastructure needs in Sonsorol, possibly including some of the following: repair existing water storage tanks and install pumps

2.3 Contribute to the water sector infrastructure needs in Tobi, possibly including some of the following: purchase and install household stainless steel tanks, repair two community storage tanks

2.4 Contribute to the water sector infrastructure needs in Kyangel and Peleliu including possibly the following: install/replace pumps, chlorinator, generator, additional water tank, voltmeter

3.1 Conduct a hydrological study into the sustainability of the water lens and the quality of ground water in each outlying island states.

3.2 Strengthen/install the rain gauge network in each outlying island state

4.1 Develop an awareness raising plan about water conservation for all Palauan states.

4.2 Implement and evaluate the awareness plan

4.3 Conduct a feasibility study into a water efficiency loan incentive programme together with the National Development Bank of Palau\*

\*This can be funded through separate technical assistance support under the GCCA: PSIS project

## **Annex 4 Workshop Evaluation**

Twenty-one people filled in the workshop evaluation form.

1. Did you find the Logical Framework Approach useful for project planning?  
20 answered 'yes', one person ticked "other".

Comments:

- .Was a bit confusing but really helpful once understood
- At first it was confusing to me the way it progresses from objective to purpose until Madel pointed out the difference between the British English vs American English. With the new definitions of terms the framework itself proved very useful
- I thought the exercise was very useful as it allows us to really identify indicators, results and activities based on the true needs of each island state. Having Heads of States and/or representatives of the beneficiaries was key
- Good group work, discussions and presentations were very helpful
- None to add
- It was a bit confusing at first
- Yes, steps and criteria became useful when planning out a new design approach
- Hope the funding will assist the need for states just to have safe water which is an essential need for humans and address climate change as well
- Very well structured workshop, good learning experiences, very lively discussions
- I enjoyed being with all the participants and learning about the programs and projects ongoing + proposed
- Keeps a big group of people on track to accomplish a common goal
- The logical framework approach is a good way. I think next time it would be helpful to fully explain in terms the participants understand from the beginning, maybe a logical framework example with different types of activities could be handed out.
- It's useful to know what other states need and to know that some have other resources to solve their problems, while others have nothing.
- East to compartmentalise and prioritise
- I am new to this but I think it is useful
- The workshop was quite informative and helpful to the line of work I am doing
- It's painful but it helps to organise thoughts to be clear about needs
- Sorry – had to leave before this session
- It was a bit challenging at first because the terms used are a bit different to what I am used to (mission, goal, objectives, activities, output) but things got clearer during the exercise

2. Recognising this meeting is a first stage in project planning, how could the meeting have been improved?

- Content excellent. Room could be colder
- We had only one operator in attendance. His input for the Kyangel project was invaluable. Other states' water operators input might have been good. More experts on hand to advise us might have helped. I thought overall the meeting was excellent. Thank you.
- Probably more visual evidence through pictures or video of the actual issues the island states are faced with
- We could have worked in groups for each of the 5 KAPTS. I think if the governors were notified earlier to bring in baseline plans for this grant we could have been able to go into details when working out activities. But overall it was OK.

- More detailed information for all participants on what PWSC is doing on the ground
- I think the meeting was thorough enough in its objectives
- More advanced insight for stakeholders on planning out project costing and opportunities to understand the necessary design
- Very productive – key results were decided and agreed. Moving forward to address and implement needs.
- Extra note takers, pin-boards for visualisation of discussion
- All very good and would have liked to hear more on the health issues. Need more state autonomy on outer islands to deal with water – an area they know very well
- Assign each group to work on specific KRAs as we did towards the end of the workshop
- Maybe larger group to decide KRAs and smaller groups to decide activities and costing.
- In the beginning I didn't really understand the approach but in the end I began to know. Thanks a million.
- The meeting was very informative, however, I wish there were more example documents of the logical framework to observe
- Participants needed more direction on staying focussed – kept veering away from climate change adaptation measures
- I think it was OK but since I am new I suggest extend the time
- Longer hours and more participants
- No, I think the makeup of the group required the time and structure that comprised the workshop
- If each state assessment plans were given before the workshop, had each state done the logical framework analysis exercise before the workshop and then compiled collectively for KAPTS during the workshop.
- I believe that knowing the amount of money before we started would have made planning easier for each state, so that each state would have its own plans
- It would have been better if more people were there – lesson from this, send out summary of outcomes (KRAs and activities) to others who weren't here to add their comments.