GLOBAL CLIMATE CHANGE ALLIANCE:
PACIFIC SMALL ISLAND STATES PROJECT

REPORT ON MARSHALL ISLANDS ADAPTATION PROJECT PLANNING WORKSHOP

CMI CONFERENCE ROOM, MAJURO

26 FEBRUARY 2014

Contents

Introduction

The Global Climate Change Alliance: Pacific Small Island States (GCCA: PSIS) Project in the Republic of Marshall Islands (RMI) is entitled "**Coastal protection and management to improve atoll resilience to climate change in Woja, Ailinglaplap**".

As part of the project planning and design, a stakeholder workshop was held on 26 February 2014 at the College of the Marshall Islands (CMI) campus in Majuro. The objectives of the meeting were to:

1. To introduce to the key stakeholders a proposed climate change adaptation project, targeting coastal protection and management in Woja, on Ailinglaplap;
2. To discuss and agree on the proposed activities and intended results of the project; and
3. To discuss and agree on the roles and responsibilities of the various stakeholders during implementation of the project, including environmental assessment and further community consultation needs.

The workshop was convened by the Office of Environmental Planning and Policy Coordination (OEPPC), represented by Ywao Elanzo and Jennifer de Brum.

Workshop Participants

There were 20 participants in total, from OEPPC, the Public Works Department (PWD), Environment Protection Authority (EPA), Marshall Islands Marine Resources Authority (MIMRA), Ministry of Finance, Ministry of Foreign Affairs, Small Grants Office, College of the Marshall Islands (CMI), Sea Grant (University of Hawaii), University of the South Pacific (USP) and Secretariat of the Pacific Community (SPC). Participants in the Coastal Management Advisory Council (CMAC) were included in this group. The list of participants is presented as Annex 1.

Unfortunately no community representatives from Woja were able to attend, because of logistical and transportation difficulties, so a follow-up consultation is planned for the community in early to mid-March, to be held in Woja. A follow up meeting with community leaders based in Majuro (Woja mayor, senators and the President, as a representative of Woja) was scheduled for the following day, but was unable to be held.

Meeting Agenda

The meeting agenda is presented as Annex 2.

Summary of Proceedings

Introduction and context setting

Jennifer de Brum, OEPPC, opened the workshop and welcomed participants. The objectives of the workshop were presented as follows:

1) To update key stakeholders on the RMI government's proposed demonstration climate adaptation project under the EU-funded Global Climate Change Alliance: Pacific Small

Island States (GCCA:PSIS) project. The project chosen by RMI is focused on coastal protection and management in Woja, on Ailinglaplap;

2) To discuss and find a general consensus on the proposed activities to be undertaken in the project, and confirm the preferred implementation approach; and

3) To clarify the roles and responsibilities of different stakeholders, as well as environmental assessment requirements and information needs.

The agenda for the workshop was outlined, and participants introduced themselves.

Gillian Cambers, SPC Project Manager for the GCCA: PSIS project, gave an overview of the GCCA: PSIS project, describing its four areas of work, namely:

- mainstreaming of climate change into national planning and policies,
- supporting improved access of countries to international climate finance,
- implementation of a demonstration climate adaptation project (the focus of the workshop), and
- enhancing regional collaboration on climate change.

The total budget for the RMI adaptation project is EUR 500,000, which is to include all activities associated with the project. All expenditure must be completed by 30 June, 2015. This deadline is firm and cannot be extended. There is thus a great urgency to get this project moving towards implementation. An overview of likely changes in climate in RMI was also given.

Aaron Atteridge, SPC Climate Change Adviser for the GCCA: PSIS project, stressed that this is a project of the RMI government. It was identified by the government, and is being implemented by the government, hence requires a high degree of collaboration across agencies to ensure it will be a success. The role of SPC is to support RMI in this, as needed.

It was also emphasised that since this is a demonstration project, the aim should be to design it in a way that maximises the possibility for different stakeholders to learn from it. There is the potential for it to build the capacity of EPA, Public Works, OEPPC and of the community. There are also important lessons to be learned about implementing this kind of project in outer islands, where there are particular challenges with logistics and costs.

Ywao Elanzo, OEPPC and national coordinator for the GCCA: PSIS project, provided an overview of the background to how this project came to be the government's chosen focus for the demonstration adaptation pilot, highlighting that it builds on an earlier (2010) survey by Public Works of vulnerable coastal sites in RMI.

- In 2013 the Office of the President selected Ailinglaplap as the focus area.
- OEPPC undertook a survey of Ailinglaplap in January to February 2013, which included community consultations, and identified several potential sites for intervention. These were presented to Cabinet.
- Cabinet decided to pursue the Woja causeway site.
- A Concept Note was developed, outlining the rationale for intervention and anticipated nature of the works (see Attachment 2).
- In November 2013, a mission to Woja was undertaken with representatives from OEPPC, EPA, Internal Affairs, CMI, SPC and a coastal and marine engineering specialist, Shaw Mead from eCoast Marine Consulting and Research (eCoast). The purpose of this trip was to undertake land and marine surveys, assess the feasibility of coastal protection measures, and to consult with the community on their experiences with environmental changes over time and their hopes for this intervention. During

these meetings, the community was made aware of the funding limitations, and of the possibility that not all areas that need action would necessarily be funded under the GCCA: PSIS project.

- A feasibility report has been prepared by eCoast, and is to be presented today.

In response to a question about why the EPA was not involved in the 2010 survey of coastal sites by PWD, PWD clarified that the survey was compiled at the request of the RMI ambassador in New York, who wanted information on potential coastal adaptation projects and indicative costs, to be used in international discussions. These were not based on detailed site visits.

It was suggested that this GCCA: PSIS project has not ever been brought for discussion to the CMAC group. The CMAC was set up as an advisory council to help RMI decision makers (government, community) on coastal issues and to coordinate activities, for instance so that visits to outer islands can be shared by different missions and thus costs reduced. The CMAC consists of government departments, NGOs and other institutions.

It was noted that CMAC was represented during the 2013 site visit and further agreed that in future the GCCA: PSIS project will keep the CMAC updated of activities, through the EPA (who already attend CMAC meetings) and Ywao Elanzo as national coordinator for the GCCA: PSIS project.

Design of a coastal protection intervention at the Woja site

Shaw Mead, from eCoast, presented an overview of the Woja site and of the proposed quarry site (reef flat where there are many large rocks broken off from the outer edge of the reef that can be selected for inclusion in causeway armouring). Two priority sites have been identified as being vulnerable to active erosion (Priority 1) and flooding during high tides (Priority 2).

Shaw explained why a causeway was selected as the most appropriate intervention at this site. Other structures such as breakwaters are not suitable at this site because there is very little sand in the system. Shaw then presented the methodology for designing a causeway structure, including the factors that affect maximum wave height. Future projections of sea level rise have also been taken into account, estimating 30cm over the 30-year design life of the causeway (these projections are consistent with the findings of the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (2014)).

The proposed design was discussed. In response to a question about whether cost savings might be possible by using smaller aggregate on the ocean side of the causeway (given lower maximum wave height, compared to the lagoon side), Shaw indicated yes this would be possible; the reason that the same sized aggregate was proposed for both sides is a precaution against the possibility of larger wave action in future, though over the 30 year design life of the structure this may not be significant.

The main section needing attention at the Priority 1 site is 70m long, however the proposed causeway is around 100m in length so that it transitions more smoothly to the higher points of the surrounding land. There is expected to be enough material excavated to more than meet backfilling needs inside the causeway, and any excess material can be placed on the lagoon side of the causeway between the structure and the natural beach ridge (current road) as an additional buffer to slow erosion.

The road surface is proposed to be crushed coral. The source of this material was queried (estimated at around 175m^3). PWD indicated that often a material called “lim” is used in RMI, it has a natural cementing quality. Availability of lim on Ailinglaplap will need clarification (usually it has to be quarried). One of the possible contractors, Pacific International Inc. (PII), has a supply which they could transport to the site, this is the material they are using at the

runway. EPA indicated that PII's current permit for quarrying the material to use at the airport would not cover additional quarrying, so a new application would have to be considered. Also transport costs associated with transporting this volume of material from Majuro will need to be considered.

There was discussion of the community consultation process, and the need to clearly explain the available options to the community. The EPA stressed that community expectations need to be understood before a decision can be taken on which of the two priority sites is to be progressed through this project.

MIMRA (CMAC) raised the issue that the community of Ailinglaplap, and specifically Woja, has been raising complaints about an outbreak of ciguatera. The fish that are being reported as affected are not those usually associated with ciguatera. The cause is unknown (tourism, development, nutrient loading, dredging are potential causes). The local mayor believes it is related to the use of a chemical shark deterrent by the surf resort to the north. MIMRA would like to set up ciguatera monitoring sites, which could collect seagrass to study the outbreak. If possible, Florence Edwards would like to visit Ailinglaplap for further investigations, possibly combined with future GCCA: PSIS missions..

SPC asked the views of the different agencies present at the workshop on whether it would be preferable to advance work with Priority 1 or Priority 2 site, given likelihood of funding not being sufficient for both, noting that this is also a question that the community needs to provide address..

Priority 1 was generally understood as in more urgent need of being addressed, given the active erosion that is ongoing. EPA emphasised that communication with the community should help them to understand the different benefits between addressing issues at the two priority sites.

PWD suggested it would be beneficial to tender for both sites, since we may find that the costs are lower once the specifics of the projects (including detailed drawings with more precise fill measurements) are available. This was agreed as a good idea.

OEPPC described that in earlier consultations, the community reported changes in their environment, and they are aware of the vulnerability. They are also aware that funding is not likely to be sufficient to address both areas.

The Priority 2 site was described by Shaw as not being actively eroded (it is already at basement rock level), hence the only changes to this site in terms of inundation will be related to gradual sea level rise and tidal variations. Higher water levels could further restrict access, but are unlikely to result in other major changes to the site.

CMI suggested that alternative options for these sites might be more efficient use of available resources. Two examples were offered: (1) a barge-and-pulley system might resolve the high tide access problems at Priority 2 site; (2) large-scale replanting across the whole area, with more aggregate placement, and let nature take its course. It was noted that in this case the process is probably too far along to initiate a major change to the project, given the deadline for finishing (mid-2015), but perhaps for future projects it would be valuable to think about a wider range of options from the outset, and to discuss different ways of solving problems with communities – and not pre-determine the solution.

It was pointed out that the RMI government had identified coastal protection as its objective, and also that this is supposed to be a demonstration project, wherein lessons learned can be transferred to other areas of RMI.

The EPA raised a query about whether the causeway might exacerbate erosion problems on the lagoon side, by acting as a barrier to the movement of water across from lagoon to

ocean side, and whether culverts under the causeway might be needed. Shaw explained that culverts would actually increase erosion.

EPA queried whether any sites had been identified for fill material, if needed. Shaw indicated that the excavation of the footings for the causeway is expected to produce more than enough fill for the structure, so no additional material would be needed.

PWD indicated that if this project was in Majuro, a geotechnical team would come in and do boreholes and present detailed technical drawings of the site. This is not possible since the site is in an outer island.

Gillian indicated that in the case of the Tongan GCCA: PSIS coastal protection project around two thirds of the total available budget was used for actual construction work, while around one third was needed for other costs. This is a useful guide for estimating budget needs for the Woja project. Not all of the EUR 500,000 is available for construction.

PWD indicated that the budget estimated in the feasibility study might be an over-estimate, since when the actual volume of fill materials are calculated (based on detailed engineering drawings) it is probable that it will be less than the figures used in the report. This would represent a budget saving. The bid document will include specific volumes.

PWD suggested we tender for both priority sites (P1 and P2), and see what responses we get regarding costs. If both could be done together there are obvious advantages, for instance only one mobilisation cost to cover both, only one community disturbance, etc.

Other ways in which cost savings might be achieved were discussed. For instance, the Woja community might be willing to assist with collection of some of the armour units from the reef flat, which would reduce time and effort needed by contractor for this. Whether this is feasible was discussed, since the community might have labour available but not the equipment needed, and the rocks are likely to be heavy. This is an idea that can be brought up with the community during the forthcoming consultation.

Small group discussions on complementary activities that could support coastal protection

Group 1:

- Knowledge products targeted at the community, focused on how to adapt to changes. Build capacity of communities to understand that seawalls are not the only option for coastal protection, that other strategies can be employed too. For example, Murray Ford has developed a coastal protection guide, it could be translated and made more locally suitable. Communities are unaware of the damage they do to coral reefs when extracting materials, not aware it could change beach dynamics.
- Engage elders in sharing traditional knowledge about coastal and coral reef protection. This has previously been done in Jaluit, in Wotje. Elders are invited to talk to the community about traditional management practices. Some communities have been implementing these ideas.
- Planting along coastlines to reduce erosion. Local governments are interested in shoreline stabilisation. Combine this with education about why erosion is happening, probably in partnership with R&D ministry. PWD and EPA could help identify areas for planting, based on vulnerabilities.
- Paving outer island runways to enable water collection, as a measure to boost water security.
- Other infrastructure also needs to be brought into focus, for instance schools and housing. Some schools are just 2 feet above sea level. There are no building codes in

RMI that can help direct what kind of development takes place. Development of building codes is a proposal in the JNAP draft, as well as climate-proofing could also be used to achieve other objectives at the same time (e.g. installation of renewable energy). Proposal to develop a building code for Ailinglaplap which incorporates climate change considerations, as a pilot for the rest of RMI (since a similar code could be rolled out as a template). This could be supported financially through Technical Assistance budget line. Would provide minimum design requirements for all public buildings. Further, it would be a useful tool for the EPA to use in their approvals for (some) private housing developments, EPA could link these approvals to the building code. EPA has a regulation for septic tanks (which focuses on leak prevention). Development of a code should be supplemented with (i) engagement of traditional land owners since they often make the decisions about development, hence their capacity and ownership is vital, and (ii) training of local government personnel who issue permits, in how to review plans.

- Monitoring and evaluation of proposed causeway structure (EPA noted this will require a separate management fee).
- Maintenance of project infrastructure.
- EPA and MoE could work with students on Ailinglaplap, to use the Woja site as a laboratory for learning about environmental science. Could expand the local school curriculum, students can monitor changes at the project site over time, making visits before, during and after the project to study fauna, beach profiles, etc. “Hands on education”.

Group 2:

- Support for local handicraft development, such as training of women in weaving as a livelihood strategy (part of the USP program)
- Replanting of trees around the site, with a mix of different species for both shoreline stability and food security.
- Upgrade the recreation area adjacent to the project site at priority 1 area, including demonstration of composting toilets.
- Local employment opportunities during the project, e.g. rock removal, re-vegetation
- Reef monitoring project to study ciguatera outbreak (MIMRA)
- A resource management plan for Ailinglaplap, which focuses on the “bigger picture” of coastal management.

Environmental assessment requirements and process

Lani Milne (Director Coastal Division EPA) and EPA staff provided an overview of the environmental assessment process in RMI.

A Major Earthmoving Application will need to be submitted for the Woja project. The process is as follows:

1. The permit application is submitted to EPA by the proponent (in this case, by PWD/OEPPC), including the detailed structural design drawings and feasibility study.
2. EPA undertakes a Preliminary Environmental Assessment (PEA), and provides a response to the proponent within 30 days of the permit being lodged. During this time the EPA would usually undertake a site visit. The response includes a decision on what needs to be addressed by the proponent. EPA makes a decision on whether a full Environmental Impact Assessment (EIA) is needed or not. If no EIA is necessary,

this must be endorsed by the EPA General Manager. In this case, EPA will require an Environmental Management Plan (EMP) to be submitted before works commence, which explains how the proponent will manage potential risks to the environment. The final decision goes through the EPA Board.

3. If a full EIA is required, EPA normally allows around 1 year (now reducing this to 6 months) for assessment and approval. If there is an EIA, the process includes public hearings and consultation. Review of the final EIA by EPA requires at least 1 month, once the final report is submitted (post-consultations).

4. EPA undertakes compliance monitoring during the project, using the EMP as the basis. Compliance fees are additional to the permit application fee.

A question was asked of the EPA whether the feasibility study that has been prepared for the Woja project would be sufficient to make a decision on whether the project will need a PEA only or also a full EIA. EPA replied that the information available now is inadequate. The proponent needs to indicate what the final scope of works will be (including a decision on whether works are proposed at both priority sites, or only one, and which one, as well as the final designs). Consultation with the community and written agreement of the landowners is needed before even these details are finalised.

Project management and implementation

Rey Sunga and *Melvin Dacillo* from Project Management Unit at Public Works Department gave an overview of the process for implementation of the Woja project.

Once the final design is submitted by eCoast, the bidding process for contractors can be initiated. PWD will publish the advertisement in the journal for 3 editions (3 weeks), as part of a competitive bidding process. Both priority sites will be tendered. PWD agrees with proposal to implement Priority 1 site if both cannot be funded.

The Project Management Unit (PMU) can manage the project, but it needs full time supervision. Therefore, they need funding assistance to hire a short-term (12-months) engineer to be the quality control person on site.

PMU can visit the site on a random basis, to assist with monitoring and reporting.

Anticipate that construction works on the site would require around 3 months, from the time notice is given to the contractor to proceed.

PWD can order the geotextile fabric in advance.

The bid process requires approximately 3 months, from advertising until award of the contract. PWD want to advertise internationally, but realistically the project is quite small and so unlikely to attract international bidders. Therefore, expect possibly 2 local bids: from PII and from Anil (though Anil doesn't have the complete equipment needed).

It would be a good idea to invite possible contractors (at least the local ones) to the site during the consultation visit in March, so they can visualise the project and are aware of all of the logistical and design parameters (including possible locations for office/camp site).

If an EIA is required, this needs to be completed before the contracting process can begin.

OEPPC asked whether the EPA will require four separate earthmoving applications to be submitted, to cover each of the four sites of disturbance (rock collection site, camp site, priority 1 and priority 2). OEPPC and SPC will follow up with EPA to confirm.

EPA offered to provide SPC/PWD/OEPPC with electronic copies of EIA template, EMP template and the earthmoving application.

Next steps

Aaron Atteridge summarised the discussions and the list of proposed next steps that need to be undertaken in order to have the project design finalised, endorsed, and implemented (presented as Annex 3).

Closing of meeting

Ywao Elanzo and *Gillian Cambers* closed the meeting.

Workshop Evaluation

Eleven people completed the evaluation form. Most participants found the workshop useful and considered that overall the objectives were fairly well met. However, the main concern raised by participants was the absence of Woja community representatives from the meeting. Some participants were concerned that since their views were not directly represented in the discussions, this hindered the ability of the workshop to agree on some of the important elements re priorities and designs.

The results of the evaluation are summarised in Annex 4.

Conclusion

Noting the comments above regarding the absence of the community representatives (which was flagged in the meeting itself, and was due to logistical problems with transportation) , the workshop was overall very successful in allowing different Majuro-based stakeholders to play a role in the planning of the project. As a RMI government project, participants were able to discuss the detailed design and implementation of the project, offer ideas about complementary activities as well as emphasise the importance of understanding community needs and expectations.

OEPPC will coordinate a joint mission to Woja in early March, with PWD and EPA (and possibly other stakeholders) to consult with the community on the proposed activities and seek their endorsement to proceed.

Based on the workshop discussions, the final feasibility design document will be prepared by eCoast by the end of March 2014. Then, based on this as well as the discussions with the community and the outcome of the environmental assessment process by EPA, a Project Design Document will be prepared by SPC and RMI government, for endorsement by the RMI Cabinet. Once endorsed by Cabinet, the project can begin implementation.

Annex 1. List of Participants

Name	Position	E-mail
Gillian Cambers	SPC-GCCA:PSIS	gillianc@spc.int
Aaron Atteridge	SPC GCCA:PSIS	aarona@spc.int
Melvin Dacillo	PMU, Public Works Department	architectpmurmi2005@gmail.com
Rey V Sunga	PMU, PWD	rvsunga@yahoo.com
Don Hess	College of Marshall Islands	cmihess@gmail.com
Tamara Greenstone Alefaio	USP-GCCA	greenstone-t@usp.ac.fj
Ywao Elanzo	OEPPC	elanzo28@gmail.com
Jennifer de Brum	OEPPC	Jennifer.debrum@gmail.com
Candice M. Guavis	MIMRA	Cmguavis@gmail.com
Karl Fellenius	Sea Grant, University of Hawaii	Karl.fellenius@hawaii.edu
Juda Langrine	EPA	Juda_l@yahoo.com
Larry C. Baitatan	EPA	???
Lani Milne	EPA	lanimilne@gmail.com
Obet Kilon	Ministry of Foreign Affairs	obetkilon@gmail.com
Julian Alik	EPA	julianalik@yahoo.com
Florence Edwards	MIMRA / CMAC	f.t.edwards@gmail.com
Joseph Cain	OEPPC	Jsphcain4@gmail.com
Emi L. Bobo	Ministry of Finance	Emilemae22@gmail.com
Jim Hicklin	Grant Writing Office	???
Shaw Mead	eCoast Marine Research and Consulting	s.mead@ecoast.co.nz

Annex 2. Workshop Agenda

Time	Session	Presenter(s)
8.30 to 9.00	Arrival	
20 mins	**General welcome and introductions**	Jennifer de Brum, OEPPC, Meeting Chair
15 mins	**Introduction to the GCCA: PSIS project**	Gillian Cambers, SPC-GCCA: PSIS Project Manager
10 mins	**Workshop objectives and outcomes** • What do we want to achieve – wider objectives and benefits that could be built into the project (to flag that this should be about learning and sharing what is learned, as much as building) • Key questions for the day – expectations • Outline of Agenda	Aaron Atteridge, SPC-GCCA: PSIS Climate Change Adviser
10 mins	**Summary of activities to date** Selection of Woja site for coastal protection project, and community consultations to date	Ywao Elanzo, OEPPC, national coordinator of the GCCA: PSIS project
15-30 mins	**Introduction to the site** Photos, problems to be addressed,	Shaw Mead eCoast Marine Consulting & Research
10.15 to 10.30	Morning tea break	
1.5 hours	**Presentation of feasibility study and proposed design of coastal protection works** + Discussion and questions	Shaw Mead
1 hour	Lunch	
60 mins	**Project Activities - Small group sessions** Small groups to discuss and identify other key activities for this climate change adaptation project, in addition to the coastal construction measures. Group inputs presented and compiled into project activities	Facilitated by Aaron Atteridge & Gillian Cambers
30 mins	**Environmental impact assessment requirements**	Lani Milne, EPA

Time	Session	Presenter(s)
	Overview of process, expected outcomes Discussion	
30 mins	**Implementation of the project** Logistics (including major steps in process), management capacity needed	Rey Sunga and Melvin Dacillo, PMU, Public Works
10 mins	Summary of next steps	Aaron Atteridge
5 mins	Closing remarks	Ywao Elanzo, OEPPC
5 minutes	Workshop evaluation	SPC-GCCA: PSIS

Annex 3. Outline of next steps in project

Action	Lead responsibility
Administrative set up – Design documents, permits, financial transfers	
Final feasibility study, including **detailed engineering construction drawings**.	eCoast (under contract)
Bid Committee to agree approach *Decision needed on sole sourcing vs competitive tender – immediate*	PWD, OEPPC
RMI **Institutional arrangements for project coordination**, implementation and finance to be finalised (e.g. MOU) *Decision needed on arrangements – immediate*	Finance, OEPPC, PWD
Further **community consultation** in Woja, and land owners' consent obtained	OEPPC, PWD
Earth Moving Permit submitted to EPA, to formally initiate EA process	OEPPC, PWD
Historical Significance Permit submitted to IA	OEPPC
EPA responds with **decision of PEA**, indicating whether full EIA is required, and if not what conditions are to be satisfied by EMP *Decision needed on whether EIA needed or not – following PEA*	EPA
Project Design Document completed and endorsed by Cabinet. (PDD includes summary of activities, expected outcomes, budget breakdown, project schedule).	SPC, OEPPC
SPC **transfers funds** to Ministry of Finance	SPC, Finance
If full EIA required	
Recruitment of consultant to undertake EIA: TOR prepared, tender advertised, consultant selected and appointed	OEPPC, PWD, SPC
Study conducted, report submitted to EPA	Consultant
EPA **review of EIA**	EPA
Selection and appointment of engineering contractor	
Tender documents prepared	PWD

Contractor hired – includes tender process through to appointment of contractor (selected contractor must be approved by Bid Committee)	PWD
Letter of Acceptance (LOA) is issued to contractor, and contractor is given one week to provide documentation (e.g. insurance policies)	PWD
PWD issues a **Notice To Proceed** (NTP), and requires initiation of project work by the contractor within 5 days.	PWD
Identify and **contract senior project engineer** to work with PWD as Woja causeway coordinator	PWD
Geotextile fabric ordered for delivery to RMI	PWD
Environmental Management Plan (EMP)	
Contractor prepares EMP and submits to PWD	PWD
EPA reviews EMP and gives final approval to proceed at site	EPA
Causeway construction	
Contractor mobilises to Ailinglaplap, along with project engineer	PWD, contractor
Contractor **establishes camp site**	PWD, contractor
Causeway construction	PWD, contractor
Mid-construction **monitoring survey of reef**, and other compliance monitoring as deemed necessary by EPA	EPA compliance officer
Engineering **sign-off** on satisfactory completion of works	PWD
Post construction	
Post-construction **monitoring survey** of reef	EPA compliance officer
De-mobilisation of contractor	Contractor
Ongoing **monitoring**	???

Annex 4: Workshop Evaluation

Eleven people filled in the workshop evaluation form. Their feedback is summarised below.

a) Please rate on a scale of 1-5 (with 1 being the lowest and 5 the highest) whether you think the workshop objectives were achieved:

1) To introduce to the key stakeholders a proposed climate change adaptation project, targeting coastal protection and management in Woja, on Ailinglaplap

Score	1	2	3	4	5
No. of responses			1	5	5

2) To discuss and agree on the proposed activities and intended results of the project; and

Score	1	2	3	4	5
No. of responses		1	3	2	5

3) To discuss and agree on the roles and responsibilities of the various stakeholders during implementation of the project.

Score	1	2	3	4	5
No. of responses			1	2	8

b) How could the workshop have been improved?

- Open it up to the general public, to capture views of the people who might have connections to the proposed site
- All good
- Needs to have more details about the site … and the point of view from the local people. The local people present in the workshop will be very helpful to have confidence to discuss the useful information about the project, but without these it not really useful to discuss things and making decision and agreement on what kind of methodologies to be implemented for the project…. Without local knowledge the workshop may mark as "2".
- Ailinglaplap community presence
- OEPPC already have submitted the earthmoving application (a concern that this came before the workshop)
- The workshop would have been improved by involving the head or manager of each agency, to discuss the constraints regarding approval / permits, or landowners' approval.

- The workshop we have it good because of the ideas for the project and we know what is the best way forward
- Good learning experience
- It was all good
- Would have been good if the stakeholders (Woja reps) were present at this workshop
- Concerned that no Woja representatives were here.