

**Pacific Adaptation To Climate Change Project  
Federated States of Micronesia  
2nd Quarter 2013**

# Newsletter



August 2013

Volume 2, Issue 2

“To reduce vulnerability and increase the adaptive capacity to the adverse effects of climate change in the coastal zone management sector”

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## From FSM PACC PMU

Welcome to our second quarter newsletter for this year. Information provided herein entails activities performed by FSM PACC Project management Unit.

### Coastal Engineer Updates the Kosrae Shoreline Management Plan of 2000

Doug Ramsey, a coastal engineer working with the National Institute of Water and Atmospheric Research in New Zealand, Visited Kosrae State from April 15th-27th.



Mr. Ramsey's presentation explained the varied impacts of coastal erosion in Kosrae in each village. By superimposing 1944 photos on current ones, people could see the changes in Kosrae's shoreline in the last 80 years. He explained that the primary cause of the recent erosion is the removal of coral boulders from the reef flats as filling material for roads and buildings foundations after WWII. The coastal structure of Kosrae, Mr. Ramsey explained, is a result of sand and broken coral on the reef flat, which builds up and eventually begins accumulating soil and vegetation. When people build on these coastal areas, there is a substantial risk of coastal flooding as waves will continue to pass over the beach into developed areas.

Moving on to a discussion of potential adaptation strategies for dealing with Kosrae's erosion, Mr. Ramsey emphasized that seawalls are not a viable permanent solution, because they can cause damage in nearby areas and are very costly. Mr. Ramsey argued that a more fruitful adaptation approach would be to move inland in the future. In his meeting with the Governor, the Governor's Cabinet, and Utilities representatives, Mr. Ramsey suggested that the rehabilitation and improvement of the farm roads be undertaken so as to provide an alternative to the coastal road in endangered areas. The coastal erosion is already near the road in parts of Malem, Lelu and Tafunsak municipalities. Kosrae currently runs the risk of roads, utilities and housing being impacted in these areas during weather situations in which large waves are present. Additional risks include the possibility the access to the Airport and Seaport facilities in Kosrae could be cut off. Mr. Ramsey told the public that extreme changes are not expected until two generations (approximately 50 years), but we should nonetheless begin preparations now. As part of the rehabilitation and improvement of the farm roads, they should be climate proofed as required by State Law 10-2, using the guidelines used in the FSM PACC Pilot Road project for the ex-



pected increase of rainfall. Mr. Ramsey also met with the KIRMA Board and the Housing representatives to suggest that they avoid issuing permits for further development in highly endangered coastal areas. Mr. Ramsey based his analysis of coastal erosion and management in Kosrae on his extensive experience working from 1998-2000 in Kosrae. Mr. Ramsey's work was funded by the German Technical Cooperation Agency, GIZ and the SPC North Pacific, based in Pohnpei.

## FSM PACC Project Presentations during the 2013 Kosrae Department of Education Annual Conference.

The Kosrae Department of Education had their Annual Conference during the week of June 11-14<sup>th</sup>. Teachers were the main target group, but also general public was present. The FSM PACC Project was invited to give presentations on June 13<sup>th</sup>. Two lectures were given, “Adapting to a Changing Climate Flipchart as a tool for teaching about Climate Change”, and “Loss and Damage associated with Coastal Hazards as a result of Climate Change”.



FSM PACC project assistant, Carlos Jose Cianchini, talked about the Adapting to a Changing Climate flipchart as an aid to teaching about climate change. Teachers had the opportunity to see the flipchart, which there is a copy at the Department of Education available to them. A website was provided to the participants to download the flipchart booklet, which has all the information needed to work with the flipchart. Mr. Cianchini also informs the teachers of other sources of information available at the office for the teachers to get. An information board was also displayed with information about the FSM PACC Project and awareness materials. The Flipchart was developed by the Micronesia Conservation Trust, The Nature Conservancy, The Micronesia Challenge and the Pacific Islands Managed and Protected Area Community.

The booklet on the flipchart can be downloaded at [http://pcep.dsp.wested.org/content\\_items/1524355](http://pcep.dsp.wested.org/content_items/1524355) which is a site from the Pacific Islands Climate Education Partnership, PCEP.

The second presentation was by the FSM Project Coordinator, Mr. Simpson Abraham. He talked about the Loss and Damage project on Kosrae. On this project, close to 400 households were interviewed to know how they have dealt with coastal erosion. Lack of expertise and money were the main reasons of the damage caused on their properties by the loss of coastline. Mr. Abraham also talked to the teachers about the extent of coastal erosion on the last seventy years with the use of aerial and satellite images. Another point of his presentation was the plans to rehabilitate the existing farm roads further inland to begin relocation of infrastructure needed before people moving upland.



Over 45 teachers and general public attended two sections of each of our presentations.

## Regulations for Development Projects and Environmental Impact Assessment Guidelines Workshop

A workshop to review the proposed amendments to be incorporated in the Regulations for Developing Projects and for finalizing the Environmental Impact Assessment (EIA) Guidelines for Kosrae State was held on June 18-19. The FSM PACC Project and the Kosrae Island Resources Management Authority (KIRMA) invited stakeholders to review the proposed amendments to the Regulations for Development Projects and the EIA guidelines. On both documents climate change impacts are to be incorporated in the Kosrae State Code as required by Kosrae State 10-2.

A total of twenty six stakeholders attended the workshop and included representation from the island Mayors, Kosrae State Legislature, Housing program, the Attorney General, Permitting Office, Foreign Investing and NGO's. These documents states the impact reducing requirements for developing projects ranging from private houses to big infrastructure projects (either government or foreign companies) that new development should follow. Coastal development will be limited by new distance from high water level mark as suggested by coastal engineer Mr. Doug Ramsey. KIRMA's Environmental lawyer, Ms. Emily Gibson, was in charge of presenting the information to the participants, which gave their feedback back to her to integrate it to both documents.



## Pilot Project Accomplishments

Construction activities on this project during this report period includes clearing roadway traveled way including side slopes and roadway side ditches restoration along road segment RS-3. Hauling of common fill for roadway embankment continue between Melo and Okat road section. Spreading of previously delivered common fill materials were done and compaction to follow as soon as road roller is available at site. After compaction of this common fill materials is done sub-base materials are needed to be laid over this common fill materials as a wearing course to make the roadway section passable during wet weather condition. Source of sub-base materials are still under negotiation with the landowner. Revised work schedule is under preparation to reflect actual work activities including construction cost of roadway drainage structures based on the outcome of contractor's bids. This revised work schedule will quantify the present status of the project and would be the basis in identifying appropriate measures on how to update progress accomplishment. Construction works on the PVC Pipe Culverts roadway drainage headwalls, wing walls and aprons by the contractor has resumed. Pre-construction meeting was conducted on June 27, 2013. The four (4) contractors who will construct the R.C. Box Culverts along road segment RS-4 were in attendance along with PACC Administrative Officer. Important matters relative to construction procedures, safety and progress billing procedures were the main topics of discussions. To date the total accomplishment of this project is 25.36%.



Clearing the drainages



Common fill to raise road

## Law Enforcement Training

During the month of April, a Law Enforcement Training was conducted here in Kosrae by professional trainers from Guam Police Force. The training was targeting the law enforcement for the coastal areas as well as the Environment. These trainers taught 25 employees from all the environmental related agencies on the island. These trainees learned about different ways of confiscating weapons, fish, equipment, etc. Since the fishing and sand mining on the island has increased, the enforcement of the law governing the coastal areas and the Marine needs to be increased. The FSM PACC Project needs this task force to maintain the adaptation measures that are being built to prevent human impacts. As we see today, human impacts to the coastal erosion is probably the main issue that we all are facing. These impacts can be minimized if the enforcement of the laws that preventing the people from abusing the environment.

## Kosrae State Strategic Development Plan—Environment

During April and May, Kosrae State reviewed the Strategic Development Plan. FSM PACC attended the Environmental Sector working group, joining other environmental related Agencies and NGO's. On the first meeting, the group subdivided in smaller groups to do a SWOT Analysis. The strengths, weaknesses, opportunities and threats of the Kosrae environmental agencies were identified by the stakeholders and presented to the whole group. On subsequent meetings those findings were prioritized to work upon.



Mr. Abraham addresses the environment sector stakeholders.



Sub groups present their SWOT analysis

The FSM PACC Newsletter is a quarterly publication to share the project achievements and news with our stakeholders and colleagues. It is written, revised and edited by the FSM PACC Coordinator and assistant. The photos were taken by Carlos Jose Cianchini unless credited to another person. Waves painting from Microsoft Clip Art.

### About FSM PACC:

The Federated States of Micronesia is part of the 14 Pacific Islands Countries under the Pacific Adaptation to Climate Change Project. The Project is implemented by the United Nations Development Programme in partnership with the Secretariat of the Pacific Regional Environment Programme. It is funded by the Global Environment Facility and the Australian Government. FSM PACC is adapting coastal road designs to take into consideration the impacts of climate change.

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