



Pacific Ecosystem-based Adaptation to Climate Change (PEBACC)

WELCOME!

To this fourth edition of the PEBACC newsletter, an initiative to disseminate information on Ecosystem-based Adaptation (EbA).

This edition covers the period from July to December 2017.

The PEBACC Project has progressed from baseline studies called Ecosystem and Socio-economic Resilience Analysis and Mapping (ESRAM) to Ecosystem-based Adaptation (EbA) Options Assessments and Implementation Plans for each project site.

We are pleased to share with you brief updates from our sites in Fiji, Solomon Islands and Vanuatu as we move to implementation of demonstration projects over the next 2.5 years.

We value your support and partnership and we look forward to a closer working relationship in 2018.

We take this opportunity to wish you all a happy holiday season and a prosperous New Year 2019!

The PEBACC team



PEBACC AND REGIONAL PARTICIPANTS OF THE BIODIVERSITY AND CLIMATE CHANGE DIALOGUE AT NAROCIVO VILLAGE, A DISASTER RISK REDUCTION MODEL VILLAGE, REWA FIJI

In this issue

Taveuni equipped with plan to guide projects	2
Water assessment, Honiara, Solomon islands	3
PEBACC hands-over ESRAM reports	4
Committee in place to support nature park	5
PEBACC supports exchange visit for leader	6
EbA projects for Port Vila	7
Mapping of important marine areas on Taveuni	8
Tanna community vote for marine protected area	9
PEBACC presents ESRAM reports at regional mtgs	10
PEBACC partners with Fiji govt to host event	11
What is EbA?	12

The Pacific Ecosystem-based Adaptation to Climate Change Project is a five year initiative implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) in partnership with the governments of Fiji, Solomon Islands and Vanuatu.

The project is part of the International Climate Initiative (IKI). The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports this initiative on the basis of a decision adopted by the German Bundestag.

The Project focusses on strengthening and protecting the role of natural ecosystem services to enhance resilience to climate change.



Supported by:



based on a decision of the German Bundestag

The island of Taveuni in Fiji is now equipped with an EbA master plan and implementation plan to guide efforts in protecting and restoring ecosystems to build resilience to climate change and non-climate related drivers of change, including mitigating the effects of current and historic land uses.

The plans were developed by the local stakeholders with support from the PEBACC Project.

Since 2016, PEBACC has been working with communities on the island to identify vulnerabilities and needs associated with climatic and non-climatic pressures on the environment and ecosystems that support the livelihoods of people on the island.

PEBACC Project Manager, Mr. Herman Timmermans, explained that nature-based solutions are long term and PEBACC is committed to support the communities start on their identified EbA initiatives.

"The plans serve to address the vulnerabilities on the island in a range of considered options that can be implemented through time, with immediate recommendations to begin implementing EbA options as part of the PEBACC project.

Mr. Timmermans added that "the plans are designed to be a useful tool for other donor or implementing agencies to distribute capacity and resources to the broadest stakeholder groups possible as well as increase depth of knowledge on important factors affecting resource management and policy."

The process of developing the plans involved consultations and planning meetings to ascertain adaptation strategies to build the resilience of the ecosystems.

As community leaders and stakeholders wrapped up discussions this quarter at Somosomo village, eight ecosystem-based adaptation projects were identified for implementation in 2018 by the communities.

The projects include:

- Creation of a Taveuni Watershed Network Group and a watershed coordinator position in each watershed to support and facilitate quarterly meetings, provide guidance and seek funding opportunities to implement the group's EbA plans.
- Youth Stewardship Programme with "Living Classrooms" to provide for curricula development and materials to support local schools in learning about ecosystems and

Taveuni equipped with masterplan to guide EbA projects in 2018



COMMUNITY LEADERS AND STAKEHOLDERS AT A PRESENTATION BY PEBACC ON EbA PROJECTS AND FUNDING SUPPORT AT SOMOSOMO VILLAGE, TAVEUNI, SEPTEMBER 2017

stewardship, with a plant nursery and 200 trees (~0.5 ha of forest), and opportunity for youth to increase their connections with the environment at an early age.

- Training in Plant Nursery Construction and Management with funds to build a central nursery for the school (above) and 12 more to be distributed throughout Taveuni's watershed communities.
- Training in Native Plant Seed Collection with specific interest in conservation of genetic and species diversity and building a network among watershed groups to source and distribute seed stock across the island.
- Support an NGO or graduate student to run experimental trials to emphasise agricultural productivity and yield associated with different soil amendments and diversified cropping systems, including agroforestry options.
- Training for Developing and Managing Agroforestry Ecosystems involving a range of food-based crops as well as higher-value hardwoods, including implementation of ~9-10 ha of agroforestry land treatments, including supporting self-grown or propagated trees.
- Training for Plantation Management & Certified Sustainable Products Markets for both native- and non-native high-value hardwoods, and initiating potentials for value-



A COMMUNITY LEADER OF NASELESELE VILLAGE, TAVEUNI SHOWING MANGROVE SEEDLINGS THAT HIS COMMUNITY WILL BE ENGAGED IN PLANTING IN 2018, A KEY EbA PROJECT FOR HIS COMMUNITY

added processing and implementation funding to support 9-10 ha of planting and land treatments.

- Support for materials or action to accommodate additional supplies needed but not accounted for in the EbA activities through purchasing of plants, land treatment for difficult weed species, and mechanical treatments to promote faster growth and establishment.

Targeting the next generation of environmental champions



Seven high school students in Honiara, Solomon Islands advocated for a pollution-free and sustainable Pacific environment when contesting for Miss Nature at a first ever nature pageant in October 2017.

Deputy Director of the Solomon Islands Department of Environment, Ms Rosemary Apa said "A key objective of the event was to provide a space for students, youth and the general public to interact, share experiences and stories on ocean and natural resource management.

"The contestants highlighted key environmental messages for Solomon Islands and put on a striking show. We were very pleased with the outcome of the event." Ms Apa said.

Presenting as environmental champions and dressed in attire made from nature-based materials, the students astounded the judges and audience with environment focused speeches and dances.

"We need an environment that allows for good and healthy living, an environment free from pollution and harm" said Miss St Nicholas, a Form 4 student from St Nicholas school who won the Miss Nature Pageant 2017.

Miss St Nicholas was dressed in a beautiful costume made from materials from the environment and was led onto the stage and introduced to the judges by a group of dancers.

"The design of my attire is based on the beauty of nature, the beauty of this country and its people" said Miss St Nicholas.

The pageant was staged on 6 October with contestants from high schools around the capital. The event was organised by the Ministry of Environment Climate Change Disaster Management and Meteorology and the Pacific Ecosystem-based Adaptation to Climate Change Project (PEBACC) at the National Museum. The nature pageant was part of the National Resource Management Symposium organised in Honiara for environmental stakeholders to share scientific information and lessons learnt to strengthen natural resource management efforts in the country. The week-long National Resource Management Symposium was initiated by the Solomon Islands Government through the Ministry of Environment, Climate Change, Disaster Management and Meteorology in conjunction with other core partners.

CEFAS and PEBACC support SIG with water quality assessment



ONE OF THE RIVERS IN THE CENTRE OF HONIARA, SOLOMON ISLANDS, SEPTEMBER 2017

The Centre for Environment, Fisheries and Aquaculture Science (CEFAS) of the United Kingdom government and the SPREP PEBACC Project completed a collection of field data and information on water quality for Honiara coastal environment and major river systems in October to December 2017.

The rivers including the Mataniko River in the centre of Honiara play a key role in river derived ecosystem services in the provision of aquatic foods, water for domestic use, and livelihoods for the people of Honiara and nearby communities.

Initial observations by the CEFAS team confirmed high nutrient flow, pollution and waste disposal into the rivers as reported in the PEBACC ESRAM study of Honiara.

According to the ESRAM report "sites along the Mataniko River have been used as waste dumping grounds by informal settlements. The downstream reaches of both the Mataniko River and Vara Creek receive direct pollution inputs from disposal and accumulation of solid waste, contaminants from sanitation uses, industrial discharges, agricultural runoff, and watershed runoff."

...solid waste in the form of plastics and pet bottles are a major issue for rivers and coastal environment

The CEFAS team noted solid wastes in the form of plastics and pet bottles as a major issue that needs urgent action.

In a briefing to the Permanent Secretary for the Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), Dr Melchior Mataki, Mr. Andy Smith of CEFAS expressed gratitude to the Solomon Islands Government (SIG) and the SPREP PEBACC Project for facilitating the field data collection in Honiara.

"The data collected will be analysed in a laboratory and the results will be shared with the SIG in early 2018."

Mr. Fred Siho Patison, PEBACC Country Manager for Solomon Islands sees this as an opportunity to join forces to bring about positive change and build climate change resilience into the rivers and the coastal environment including the ecosystem services that they provide for Honiara.

PEBACC hands-over ESRAM reports



Three Ecosystem and Socio-economic Resilience Analysis and Mapping (ESRAM) reports of Port Vila, Tanna Island and a high level national study were presented to the Government of Vanuatu by the Secretariat of the Pacific Regional Environment Programme (SPREP) on the 29th of November in Port Vila.

At a handover ceremony to the Vanuatu Director General of the Ministry of Climate Change Adaptation, Meteorology, Geo-hazards, Environment, Energy and Disaster Management, Mr. Jesse Benjamin, SPREP's Director - Biodiversity and Ecosystem Management, Mr. Stuart Chape highlighted that the support provided by the people and government of Vanuatu enabled the development of the ESRAM studies.

Mr. Chape also pointed out "the importance that SPREP as the Regional Environmental Organisation places on working with governments and communities to implement programmes that will build both human and environmental resilience to climate change."

In response, Mr. Benjamin "thanked SPREP for the work they are undertaking in Vanuatu and reiterated the point that protecting the natural environment is critically important to Vanuatu and the region if we are to build strong communities in the face of climate change.

One of the three ESRAM studies, the Port Vila: Ecosystems, Climate Change and Development Scenarios identified that the most significant

direct impacts of climate change on people of Port Vila through to 2030 and beyond will be related to changes in coastal processes, flooding patterns and the health of reefs and marine fisheries.

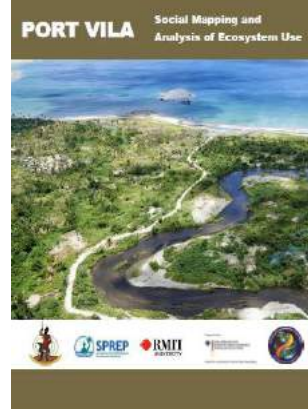
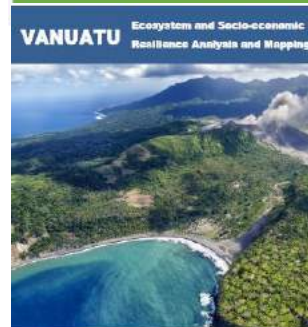
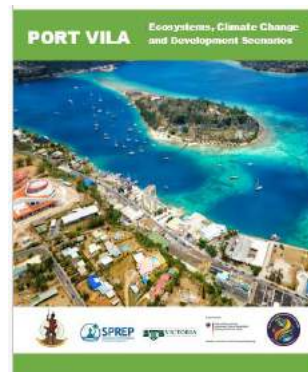
In terms of ecosystem use, the Port Vila: Social Mapping and Analysis of Ecosystem use report revealed a reliance of many urban dwellers on ecosystem goods for income.

"Roughly a quarter of Port Vila households are either dependent on, or supplemented by, the direct production of natural goods and services." The report stated.

Thirdly, the Vanuatu: Ecosystem and Socio-economic Resilience Analysis and Mapping report highlighted that Vanuatu (nationally) and Tanna communities are broadly the same in their dependence on ecosystem service benefits from the range of ecosystem types.

"Both derive between 97% and 99% of their ecosystem service benefit from coastal coral reefs and tropical forests and approximately 90% of this benefit is realised through provision of raw materials and genetic resources and the regulation of water flows and climate."

The reports of the ESRAM studies done in the greater Port Vila region, Tanna Island and a high level study at the national level were commissioned by SPREP through the Pacific Ecosystem-based Adaptation to Climate Change Project (PEBACC) and undertaken by the Royal Melbourne Institute of Technology,



Australia and Victoria University, New Zealand and Griffith University, Australia.

The handover of the reports mark the completion of the first phase of the PEBACC Project in Vanuatu.

The next phases of the PEBACC project will involve publication of Ecosystem-based Adaptation master-plans, followed by implementation strategies and implementation of demonstration projects for communities.

The approach followed by SPREP under the PEBACC project's initial phase has provided the information to decision makers to make informed decisions on actions to address global change issues, such as climate change by protecting and building resilience in our natural environments.

Committee in place to support Queen Elizabeth Nature Park



PEBACC AND MINISTRY OF ENVIRONMENT MEETING WITH BARANA COMMUNITY TO DISCUSS EBA OPTIONS INCLUDING THE SUPPORT TO QUEEN ELIZABETH PARK, SEPTEMBER 2017

The community of Barana on Mt Austen, Guadalcanal, Solomon Islands has a committee in place to work with the PEBACC project to restore the Queen Elizabeth nature park located within their area.

The committee is comprised of youth, women and men representatives including the community chiefs as the key players.

The chair of the committee, Peter Mbaranumba said "I am encouraged by the determination of the community to engage in the implementation of this EbA option that will include re-planting of trees and management of the water catchment area for the Mataniko and Lunga rivers."

PEBACC Solomon Island Country Manager, Fred Siho Patison said "establishing the committee is a great step to help move the project forward and ensure that communities take ownership of the activities."

Mr. Patison also reiterated the importance of protecting the water catchments in the area.

"The water catchments in the Mt Austen area are critical not just for Barana community but for Honiara city. They supply the water that the city is dependent on. The demand for fresh

supply of water will only increase as the city and communities expand in the coming years."

"Establishing the nature park will ensure that healthy forest ecosystems continue to maintain adequate supply of water for the communities and Honiara city." Mr. Patison added.

A member of the land-owning clan and coordinating committee member Mr. Jerry said that he is grateful that the project has come to support his plans for the nature park.

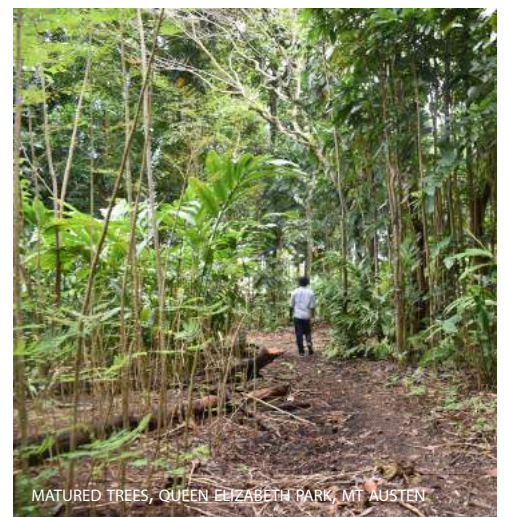
"This area is close to Honiara and it has always been my plan to protect and convert it to a park. To get new ideas from SPREP is encouraging. I look forward to pursuing this vision.

"Recently, we experienced water problems and it will get worse. We must do something now to protect our water catchment areas" Mr. Jerry added.

Support from the SPREP PEBACC project will commence with the formulation of a Management Plan to provide strategic direction and priorities for the on-ground support to Barana community. Discussions with the community happened in September 2017 where the PEBACC Project and officials from the Ministry of Environment discussed the priority EbA options with the community.



MR. JERRY, A MEMBER OF THE LANDOWNING CLAN OF THE QUEEN ELIZABETH PARK DURING AN INTERVIEW WITH PEBACC



MATURED TREES, QUEEN ELIZABETH PARK, MT AUSTEN

PEBACC supports exchange visit for traditional leader



NEGROS OCCIDENTAL COASTAL WETLANDS CONSERVATION AREA RAMSAR SITE, PHILIPPINES

With support from the Ramsar Convention Secretariat and the PEBACC project, Fiji's traditional leader of the Macuata province, Ratu Wiliame Katonivere visited a Ramsar site in the Philippines in late October for an exchange of ideas, knowledge, and experiences.

Returning from the successful visit, Ratu Katonivere says he is committed to working with his people to protect fish stocks, fish breeding grounds and the Great Sea Reef in his province.

"Today, up to 60% of fish that is sold in the Suva markets is from Macuata Province. Already there is a lot of pressure on our resources. Without proper management of the fish stocks and the breeding grounds, our future generations will have no fish left.

"As the custodian of the natural resources in my province, I want to leave a foot print here. I want to see communities taking ownership of conservation efforts to protect fishing grounds and sustainable harvesting of fish stocks.

While in the Philippines, Ratu Katonivere visited the Negros Occidental Coastal Wetlands Conservation Area, a Ramsar site that hosts a number of threatened marine species.

"I was given the opportunity to visit the Ramsar site in Philippines to learn about how a Ramsar site is managed and how the resources are protected under the Ramsar Convention.

"The Great Sea Reef in the Macuata Province is a proposed Ramsar site. My first big work is



RATU KATONIVERE (MIDDLE) DURING A FIELD VISIT, OCTOBER 2017, PHILIPPINES

to focus on the certification of the site. I will then work through my chiefly system to continue the protection of our resources. We need to go beyond just involving people in meetings. We need to now give them the ownership of the initiatives because I believe that when one owns something, they will do anything to protect it.

"We have started regulating fishing licenses in our province and we will also look at helping our communities with plans to help them manage their resources. Protecting and restoring our mangroves is also an area that we will be working on."

The Great Sea Reef (GSR), locally known as

Cakaulevu, is the third longest continuous reef system in the Southern hemisphere that spans over an area of 202,700 square kilometres.

With the help of environmental organisations, work on the proposed Ramsar site began back in 2011 and the submission is now with government for the final approval.

The PEBACC Project will be partnering with the World Wide Fund for Nature (WWF) in Fiji to continue to support the establishment of the Great Sea Reef as a Ramsar site.

Ecosystem-based adaptation projects for Port Vila

Following a holistic assessment of the threats and opportunities in the Greater Port Vila catchment, five broad EbA projects have been identified that will provide catchment wide resilience to climate change and other environmental threats.

Together these projects provide a master plan for the Greater Port Vila area to buffer the city against environmental threats. This represents a significant opportunity to embed EbA into Port Vila's formal planning framework, and ensure alignment with the National Sustainable Development Plan in the national context. Climate change impacts will affect all of Vanuatu, but the impacts in urban areas may well be felt differently to rural areas.

Addressing the challenges of climate change adaptation and urbanisation / development issues in integrated national, provincial and local contexts, goes to the heart of building resilience into Port Vila and Vanuatu future sustainable development.

The proposed projects are:

Tagabe Riparian Corridor Regeneration Project

The Tagabe Riparian Corridor Regeneration Project is an integrated catchment management programme of activities focused on the riparian margins of mid to lower catchment streams in the Tagabe catchment.

The purpose of this project is to build resilience into the riparian system to safeguard human well-being in the face of current and future climate change challenges.

A more resilient riparian system in this catchment will reduce risks and impacts associated with floods, droughts and cyclones, and will improve water quality for human consumption and habitat for freshwater and inshore marine fish stocks.

Restoration and Protection of Coastal Vegetation Project

This project aims to restore and protect coastal vegetation, particularly mangrove habitats, along key parts of the greater Port Vila coastline.

The project has been designed to protect the very significant and generally well-recognised ecosystem service values provided by these habitats.

It is centred on a practical restoration component of replanting and regenerating areas where mangroves and other important coastal tree species have been depleted. Restoration work would be undertaken as a co-management approach between local communities, NGOs, government agencies and other stakeholders.

Intensification of Suburban and Peri-urban Home Gardens Project

Maintaining, or improving, food and cooking fuel security for communities in Greater Port Vila over the period to 2030 and beyond would make a major contribution to improving their resilience and overall well-being.

This could be done if the extent and productivity of home gardens (common throughout Port Vila) were to be increased and, with an eye to the future, if home gardens were made as resilient as possible to the effects of climate change.

Urban Trees Project

This project involves the strategic introduction of multi-value trees and vegetation to key urban areas and coastal environments in Port Vila. This project is a fairly low-risk and low-cost project that could be implemented rapidly, would be highly visible to the public, and may thereby act as a catalyst for public interest in, and valuing of, other SPREP PEBACC projects.



In terms of increasing human resilience to climate change this project focuses on increased food security and access to raw materials.

Secondary potential benefits include increased water security, and increased human health and economic wellbeing. Additional human benefits include the use, sharing, support and preservation of traditional knowledge and possible benefits to tourism within the city.

The aim of an urban trees project is to transform key existing urban streets and promenades with the addition of urban trees and other suitable vegetation (including where appropriate mini wetlands, rain gardens and swales), in order to address the following climate change resilience and rapid urbanisation issues: increased temperatures; increased intense rain events; increased air pollution; and increased pressure on food and raw materials provision.

Sustainable Housing Development Project

This project involves the design and implementation of a demonstration housing project in Port Vila.

The main goal of this project is to build more sustainable or regenerative communities in Port Vila, starting with a demonstration project, with social and cultural components placed at the core of every design decision.

A major benefit of EbA approaches to climate change is that the initial analysis of drivers of changes to ecosystems typically reveals multiple drivers of change that come from both climatic changes and also from the activities of local people. In many cases in developing nations, including Vanuatu, these local human caused drivers of change of ecosystems are often as significant as, if not more so, than current climate change induced changes to ecosystems.

EbA projects, while seeking to reduce the negative impacts of climate and associated ecosystem changes, typically also concurrently address other issues that can lead to a reduction in human well-being.

The PEBACC project will be identifying projects from the broader five projects and implementing these as demonstrations on how to undertake effective EbA implementation. Partners will be sought to ensure the whole suite of five projects will be addressed.

Mapping of important marine areas on Taveuni



DRONE PICTURE OF LAVENA VILLAGE, TAVEUNI, OCTOBER 2017

From 13-22 November 2017, a joint team from the New Zealand Government funded SPREP Pacific Partnership on Ocean Acidification (PPOA) project and the PEBACC project consulted with communities in Taveuni on important marine areas and ecosystems that need to be protected.

The primary purpose was to meet with communities to extend PEBACC-related goals and link potential ecosystem-based adaptation (EbA) activities for the coastal and marine environments to support Fiji's recently declared commitments at the United Nations Ocean Conference to the United Nations Sustainable Development Goal 14 (SDG 14) on Oceans.

These commitments focus on conservation and sustainable use of marine resources, particularly with regard to the adverse impacts of climate change (including ocean acidification), overfishing and marine pollution that are jeopardizing the future of Fiji's marine resources.

The joint PEBACC and PPOA team met with coastal communities to identify priorities and mapped potential EbA activities that communities can implement to meet long-term sustainability goals.

Communities included the traditional

fishing areas (qoliqoli) of Naselesele, Naqeru, and Qamea Island communities of Naiivi and Nadilo, as well as qoliqoli in Bouma (Waitabu and Lavena) and Vuna (Kanacea, Korovou, and Navakawau).

Overall communities identified a range of potential project areas and desired outcomes that are attainable and enforceable at local levels.

These included the creation of:

- no-catch (*tabu*) areas at certain times and at aggregate areas for finfish and invertebrates
- creating *tabu* areas that are temporary but longer term (1-5 years) as well as permanent *tabu* areas
- identifying areas where coral transplanting can help strengthen coral populations
- areas for farming giant clams
- mangrove planting to increase breeding and nursery habitat for fish and invertebrates while improving shoreline conditions

The PPOA project, working in tandem with the PEBACC project, will begin work on these EbA activities in early 2018.



PEBACC PROJECT OFFICER, MS. FILOMENA SERENIA AND COORDINATOR OF BOUMA NATIONAL HERITAGE PARK ON TAVEUNI, MR. SIPIRIANO QETEQUETE DURING THE FIELD TRIP, LAVENA, TAVEUNI

Tanna community vote for marine protected area

The community of Port Resolution on the eastern coast of the Island of Tanna in the southern Vanuatu province of Tafea have voted unanimously to work towards the establishment of a protected area covering more than five kilometres of coastline.

The coastline includes some significant features, including the most southerly mangrove forest in Vanuatu, seagrass meadows which occasionally attract dugongs, white and volcanic sand beaches, which support nesting turtle populations and one of the best kept secret surfing breaks only known by the locals.

The communities have been experiencing decreasing protein sources as their fish stocks are increasingly depleted and their natural environment changing. Coastal trees are disappearing and plastic waste is becoming an increasingly common feature of the coastline.

The PEBACC project has been working with the community to support them in their drive to buffer themselves against these changes, and where possible ensure that they can maintain benefits from their ecosystems in a way that is sympathetic to the natural environment.

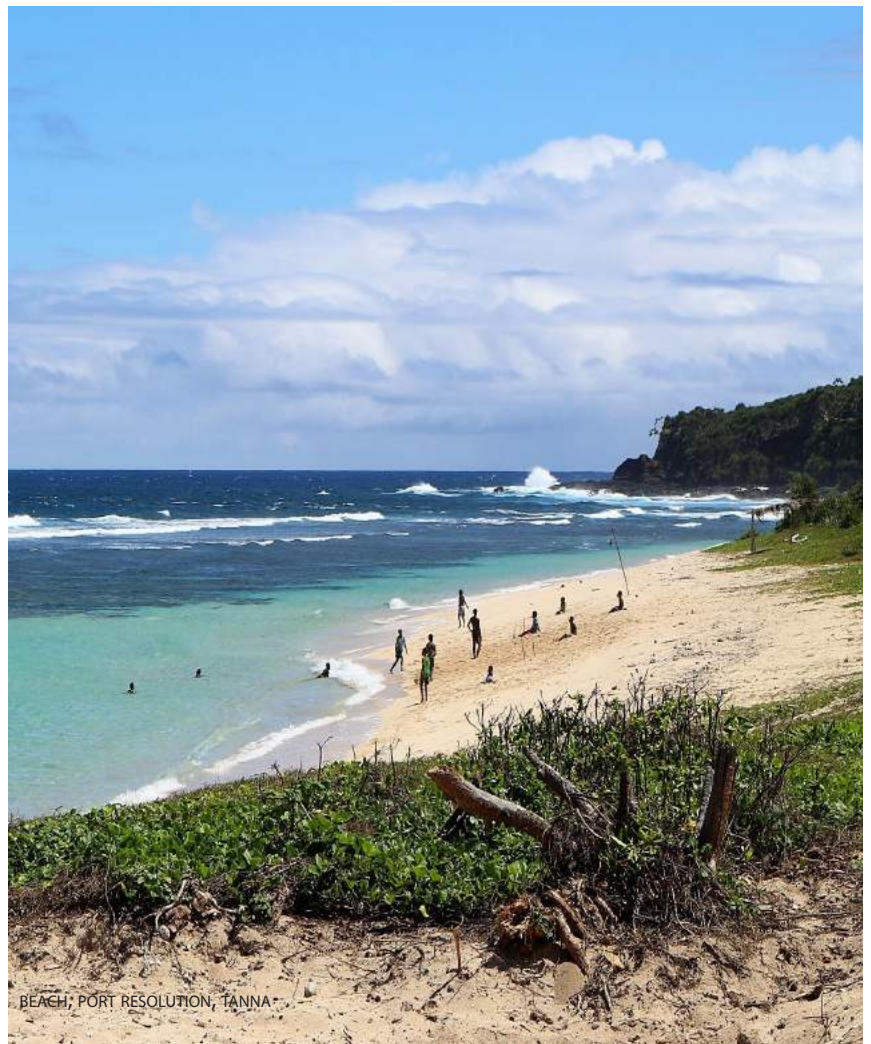
In October 2017 a series of community meetings were held where the concept of a Community-based Marine Protected Area was outlined by the project champions Mr. Werry Narua and Mr. Napua Nelson. During these meetings there was unanimous consent given by the community leaders of the five Nakamals which own the coastline of the proposed protected area.

In early December 2017, the first Port Resolution Environmental Committee meeting was held at the Port Resolution Yacht Club. In addition to the committee, which represents the five Nakamals, the meeting was attended by Mr. Herman Timmermans, the SPREP PEBACC Project Manager and Mr. Dave Loubser, the SPREP Vanuatu Country Manager.

The next steps for the development of the new Port Resolution Marine Protected Area are to undertake baseline biodiversity assessments, develop a Protected Area Management Plan and a Business Plan to ensure ongoing sustainable management of the area.



ENTRANCE TO PORT RESOLUTION, TANNA



BEACH, PORT RESOLUTION, TANNA

PEBACC presents ESRAM studies at regional meetings



PHOTO DISPLAY AT THE PEBACC SITE EVENT, PIRT CONFERENCE, HONIARA, SEPTEMBER 2017

The PEBACC Project took the opportunity to present the findings of its ESRAM studies in Fiji, Solomon Islands and Vanuatu at two Pacific regional environment meetings in September and October 2017.

In September, the PEBACC team presented at a side-event at the Pacific Island Roundtable for Conservation (PIRT) in Honiara, Solomon Islands.

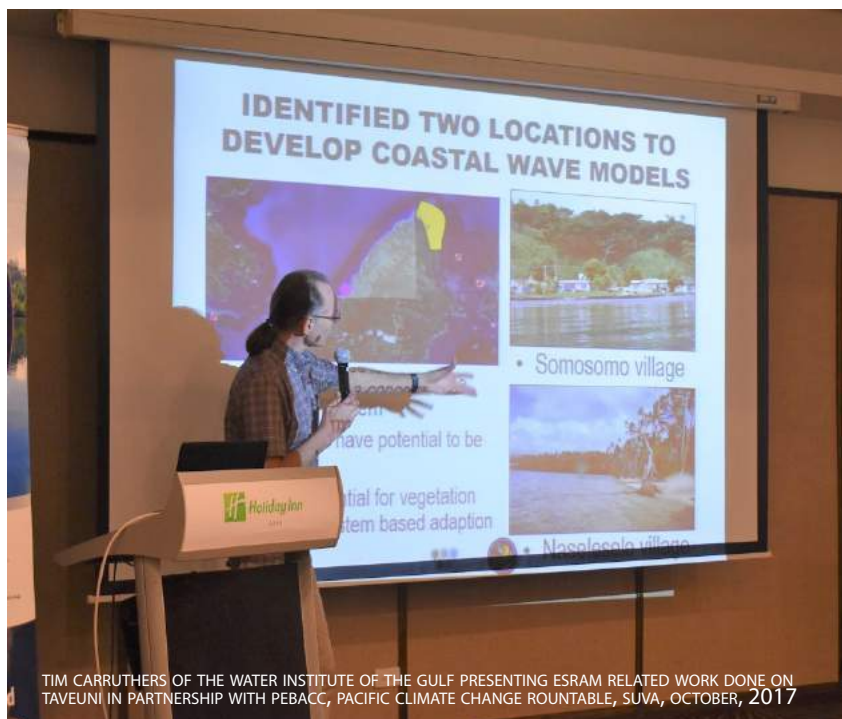
PEBACC Project Manager, Mr. Herman Timmermans explained that “The ESRAM studies are the first stage of the PEBACC Project in the 3 Pacific island countries, designed to understand the local ecosystem services in the 3 countries.”

“Understanding the ecosystems is significant for the design of appropriate adaptation measures to deal with climatic and non-climatic threats on the ecosystems that Pacific communities are dependent on.” Mr. Timmermans said.

Solomon Islands Permanent Secretary for the Ministry of Environment, Dr Melchior Mataki encouraged the PEBACC Project to develop a guideline on how to conduct ESRAM studies that is simple enough for Pacific island countries.

In addition, Dr Mataki advocated for capacity building or training to accompany the guideline.

In October, PEBACC presented at the Pacific



TIM CARRUTHERS OF THE WATER INSTITUTE OF THE GULF PRESENTING ESRAM RELATED WORK DONE ON TAVEUNI IN PARTNERSHIP WITH PEBACC, PACIFIC CLIMATE CHANGE ROUNDTABLE, SUVA, OCTOBER, 2017

Climate Change Roundtable in Suva Fiji.

Both presentations included a photo exhibition and a display of the ESRAM study reports.

The ESRAM studies in the 3 countries were implemented from 2016 to 2017 by different consulting groups namely: BMT, Griffith University, Watershed Professional Network, RMIT University and Victoria University of Wellington.

The ESRAM studies have resulted in the development of EbA implementation options and plans for each country.

PEBACC partnered with Fiji Government and international bodies in hosting regional dialogue



PARTICIPANTS OF BIODIVERSITY AND CLIMATE CHANGE DIALOGUE DURING A VISIT TO KOROIPITA SUSTAINABLE HOUSING SCHEME, A LOW COST URBAN HOUSING DESIGNED FOR CLIMATE AND DISASTER RESILIENCE AND ECOLOGICALLY SUSTAINABLE LIVING

In October 2017, the Fiji Government in partnership with the PEBACC Project, the Secretariat of the Convention on Biological Diversity (SCBD) and SwedBio at the Stockholm Resilience Centre (SRC) organised a Regional Dialogue and Learning Mission on 'Integrating Biodiversity and Climate Change Action' in Suva, Fiji.

The purpose of the event was to explore the potential of ecosystem-based approaches in addressing climate change threats including ecosystem-based adaptation, mitigation and disaster risk reduction in the Pacific.

Speaking at the opening ceremony, Fiji's Permanent Secretary for Environment, Mr. Joshua Wycliffe encouraged Pacific countries to embrace ecosystem or nature-based solutions to climate change.

"We all appreciate that ecosystems form the very foundations of our lives, our social and economic activities and our lives are intricately tied to the well-being of ecosystems.

"These ecosystems can either make or break our future. We need to discuss ways to maintain healthy ecosystems around us. For example healthy corals which do not bleach quickly and forests that can recover faster, watersheds and wetlands that are interconnected to provisions of clean water. The overall conditions of our corals, forests and mangroves are critical to reducing the impacts of climate change and natural disasters."

Cook Islands representative at the Dialogue, Mr. William Tuivaga of the Prime Minister's office pointed out that ecosystem-based approaches are not a new concept to the Pacific.

"The terms and acronyms we use today like DRR, CCA, mitigation and adaptation are

new to our people but the activities are not. Our Pacific ancestors have been practicing these for thousands of years to safeguard their natural resources and their families. We exist today because of this knowledge and these practices. They too have come through cyclones and other natural threats.

Now, more than ever, we Pacific Islanders need to look back at our traditional ecosystem knowledge and practices as these are the tools that will help us cope with the impacts of climate change."

For example; there are traditional signs for cyclones like an abundance in *kuru* (breadfruit) or the twisting of banana tree leaves. Sometimes if we slow down, stop talking and listen carefully, we will hear the cries of Mother nature – saying that enough is enough."

Based on the deliberations, the following outcomes statements were released to reflect the common understanding shared during the event:

- While the terms EbA, EbM and Eco-DRR are new to practitioners in the region, the link between biodiversity, ecosystems and the environment for building community resilience is well understood as it finds strong expression in the culture of Pacific Islanders.
- It is acknowledged however that we are living in rapidly changing times and that indigenous knowledge and natural resource management systems have been undermined by forces of modernisation and globalisation.
- Delegates agree that ecosystems critical to community and economic resilience are similarly being degraded due to commercialisation, development pressures, and erosion of traditional natural resource governance systems.

- There is understanding that ecosystems are also under pressure from changing climatic conditions and associated hazards, further eroding the potential of ecosystems to provide services critical for social and economic resilience to climate change.

- Agreement that most countries have achieved progress in integrating biodiversity and environmental management into their climate change policies, but that more could be done to strengthen the focus on ecosystem-based management approaches.


- Acknowledgement that significant challenges are faced with the implementation of these integrated policies due to institutional, personnel, geographical, and cost factors amongst others.

- Agreement that more could be done with regard to incorporation of ecosystem-based adaptation and mitigation approaches in Nationally Determined Contributions (NDCs) which are currently focused on renewable energy sources and energy conservation strategies.

The event comprised of a two-day Dialogue, an evening Talanoa session with conservation NGOs in Suva and 2 days of field visits to relevant projects and initiatives around Viti Levu Island to facilitate learning and inter-country exchange.

The Talanoa session was hosted by the International Union for Conservation of Nature (IUCN) in Suva, Fiji with support from World Wildlife Fund (WWF), Conservation International (CI), Wildlife Conservation Society (WCS), NatureFiji and Birdlife International.

Over 40 participants from 13 Pacific island countries participated in the week-long event.



ECOSYSTEM-BASED ADAPTATION

PROMOTING NATURAL SOLUTIONS TO CLIMATE CHANGE

MANGROVE FOREST, VANUATU
PHOTO: DAN LAFFOLEY

WHAT IS ECOSYSTEM-BASED ADAPTATION (EbA)?

“Ecosystem-based Adaptation is the use of biodiversity and ecosystem services, as part of an overall adaptation strategy, to help people to adapt to the adverse effects of climate change...it aims to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of adverse effects of climate change.” CBD 2009

What are the benefits of EbA?

Having a healthy environment around us secures our supply of freshwater and other natural resources.

These are called ‘ecosystem services’ and are the added benefits that do not come when ‘hard’ engineered adaptation solutions, such as when seawalls are built.

But what is adaptation?

Adaptation is making changes in order to reduce the vulnerability of a community, society or system to the negative effects of climate change.

When is EbA the best adaptation option?

There are many different approaches to adaptation. The best option will reduce the vulnerability of a group of people in the most cost effective way over the long term.

This could be through conventional adaptation, EbA or a combination of both.

The ability to compare EbA with conventional solutions will need to be built through effective monitoring of and evaluation of current EbA projects and by building the capacity of local decision-makers to select the best adaptation options available.

In the Pacific, how can EbA help us adapt?

By protecting intact ecosystems, managing natural resources and restoring degraded ecosystems.

For example, steep slopes in our region are often stabilised by deep rooted vegetation. As rainfall is expected to be more intense in the future, this natural buffer protects communities from flooding and landslides and also ensures that reefs are healthy by reducing the impact of sediment flows from erosion.

Keeping forests intact, or replanting them, also provides a source of building materials, crops and firewood.

Water catchments are also protected and in the sea, healthy reefs can then support greater fish populations.

Where can I get more information?

For further information about EbA and the PEBACC Project, visit www.sprep.org/pebacc.

About SPREP

SPREP is the primary intergovernmental environmental organisation working in the Pacific. Visit www.sprep.org for more information about the work of SPREP in the region.