

# Pacific Ecosystem-based Adaptation to Climate Change (PEBACC)



## HALO OLGETA!

Greetings from the PEBACC Project office in Honiara, Solomon Islands!

On behalf of the PEBACC team, I am pleased to introduce you to another edition of the PEBACC newsletter.

In this edition, we share articles relating to the final stages of the ecosystem and socio-economic resilience analysis and mapping (ESRAM) studies commissioned by PEBACC in Fiji, Solomon Islands and Vanuatu. In addition, we have updates about proposed ecosystem-based adaptation options (EbA) for the PEBACC sites in the three countries to build resilience of the communities to climate change. The PEBACC project is focused on EbA as a sustainable development option for building resilience to climate change.

We hope you find this a useful resource for EbA news and development.

Fred Patison  
PEBACC Country Manager  
SOLOMON ISLANDS



NASELESELE BEACH AND COMMUNITY, TAVEUNI, FIJI © WPN

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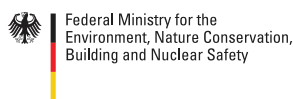
The Pacific Ecosystem-based Adaptation to Climate Change Project is a five year initiative implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) in partnership with the governments of Fiji, Solomon Islands and Vanuatu.

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



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## Taveuni communities gearing up to reforest their island



TAVEUNI COMMUNITY, FIJI. © WPN

Communities in Taveuni have a common interest in 2017 to work together to reforest degraded former forest land.

In May 2017 communities took significant steps to map out several hectares of land for tree planting to restore areas of forest that have been converted to agricultural land in the past 20 years.

The loss of native forest to dalo (taro) and yaqona (kava) farming on the island has had a significant impact on the health of the island's ecosystems.

Since 2016, the SPREP through PEBACC has been supporting community outreach work in Taveuni to educate the community leaders and people about the importance of restoring and protecting ecosystems on the island from the mountains to the sea.

Project Manager of SPREP's PEBACC Project, Mr. Herman Timmermans said "The Project's investment is beginning to pay off. iTaukei communities around the island acknowledge that deforestation is an issue and they are really fired up to do natural forest restoration work (including agro-forestry and native hardwood plantations). They are beginning to engage Fijian farmers of Indian descent and other stakeholders to do this.

"We recently completed an island wide participatory mapping of watersheds showing what kinds of EbA projects communities are interested in and where. This has generated a huge amount of interest and there are enough projects and hectares identified to keep everyone busy for quite some time." Mr. Timmermans added.

Apart from rebuilding their houses after cyclone Winston, tree planting in degraded areas is a priority for all the communities.

Filomena Serenia, PEBACC's Project Officer who has been engaged in the community outreach work in Taveuni, explained that 'the communities are grouped into 10 watersheds and they work together to plan their EbA projects in their watershed groups. We find this approach very useful because it encourages everyone on the island to look beyond land boundaries and to focus on watersheds that they share, value and aspire to protect. The communities have been very engaged in this process.'

"Apart from rebuilding their houses after cyclone Winston, tree planting in degraded areas is a priority for all the communities. Other activities include coral planting, agroforestry, natural recreation parks and others. It is great to see the tourism operators and the taxi drivers engaged as well."

With support from the project consulting company, Watershed Professionals Network (WPN), the community EbA plans and priorities are currently being mapped into an overall Taveuni watersheds management plan.

"The communities are excited because it will

be a document containing their priorities. Some are proposing that apart from being a work-plan, it will also be a guide for other donors interested in doing work on the island." Ms Serenia said.

"This is great because they have been talking about taking action on these issues for some time but they just didn't get around to starting. PEBACC's activities over the past months have motivated their interest and mobilized them to translate this interest into action. This is a positive outcome." Ms. Serenia added.

District Representative for Tikina Cakaudrove, Vataliai Tikonaivalu, confirmed that 'the communities are very interested and prepared to work on their plans because they see the need to restore their watersheds and the fertility of the soil. These are their priorities.'

According to Mr. Timmermans, not all the activities will be supported by PEBACC but this process has assisted the communities to prioritise their activities into a plan that other stakeholders and partners can support.

"There is certainly much more to do than what SPREP can support. We will be looking at drawing in additional partners as we go along. I think it would be a good time to capitalise on this momentum (once restoration works begin) to re-energise the strengthening of protected areas arrangements in Taveuni." Mr. Timmermans added.

## 'Strengthen ecosystems to build a resilient Honiara'

The ESRAM study of Honiara in the Solomon Islands has recommended the protection, restoration and strengthening of upper watersheds, river ecosystems and urban green space to increase the resilience of Honiara's communities.

"These watershed ecosystems are under threat from forest clearing due to logging, intensive shifting cultivation, urban and community expansion and un-managed timber milling.

"Well managed and healthy watershed ecosystems are critical for the provision of essential water services to maintain the health, well-being and livelihoods of all Honiara communities."

The study commissioned by SPREP through the PEBACC project highlighted that urban population growth and unplanned development are key threats to increased degradation of ecosystems in and around Honiara town.

Honiara is a highly densely populated urban center with a reported population in 2015 of 87,000 people - a 35 percent increase from 2009. Reflecting the trend in urbanization, Honiara's share of the total population is expected to increase from one fifth to one third by 2050 (equating to 180,000 people).

Many households predominantly in informal settlements are heavily reliant on some form of ecosystem services for their water and food provisions, shelter, income generation and overall health and well-being.

The watershed ecosystem provides essential services that many Honiara residents depend on but these ecosystems are today threatened by human activities.

"The ESRAM study recommended



INSPECTING AN HOUSEHOLD WELL, HONIARA. © B.TOKI



INFORMAL SETTLEMENT, HONIARA, SOLOMON ISLANDS. © B.TOKI

activities such as creation of urban green space such as parks to cater for increasing air surface temperature due to climate change that is further exacerbated by urban concrete infrastructure.

"The botanical gardens in Honiara in addition to the upper Mataniko watershed have been identified as key areas for management and support by the Government and local communities."

The study also recommended that "all levels of government must work together to improve the lack of existing infrastructure and services contributing to ecosystem degradation, enforce building regulations and monitor all new developments.

"By providing adequate access to basic services, infrastructure and shelter, the

environmental, social and economic condition will be enhanced and Honiara's resilience to the impacts of climate change strengthened.

The ESRAM study acknowledged the Honiara City Urban Resilience and Climate Adaptation plan developed by UN-Habitat as a good basis to inform implementation actions.

The study further recommended 'mainstreaming climate change into all regulations, policies and programs to ensure all decision-making processes consider climate adaptation and contribute to building a climate resilient city.'

Building on the ESRAM, an EbA Options Report and Implementation Plan for demonstration activities are currently being developed.

The ESRAM study in Honiara was implemented by BMT WBM consultancy.



## Victoria University supports SPREP to complete ecosystem study in Port Vila

STAKEHOLDER WORKSHOP, VANUATU. © D.LOUBSER/SPREP

A multi-disciplinary team from Victoria University of Wellington (VUW), New Zealand is on board to support the completion of the ESRAM study of Port Vila. The ESRAM study commissioned in 2016 by the SPREP through PEBACC is now in its final stage.

PEBACC Country Manager in Vanuatu, Mr. David Loubser, said, 'since April 2017, VUW researchers have been visiting Port Vila to undertake ecosystems mapping, ground truthing, marine surveys, and stakeholder consultations.

This ecologically focused work is to complement the ESRAM work undertaken by RMIT that had a strong focus on the social dimension of natural resource utilisation.

"VUW is also supporting the Project with the identification of EbA options for Port Vila to address priority issues identified in the ESRAM study," Mr. Loubser added.

As part of the process of identifying EbA options, a national workshop was held for key stakeholders in early June. The opportunity was used to provide

feedback on key findings of the ESRAM study highlighting the interconnectedness between ecosystems, people's wellbeing, the economy and resilience to climate and other environmental and human induced stresses.

From the suite of options identified, an EbA programme of action for Port Vila is being developed that comprises the following key strategic interventions:

1. Tagabe river riparian corridors regeneration
2. Restoration and protection of coastal vegetation
3. Intensification of suburban and peri-urban village and settlement home gardens
4. Urban trees: The strategic introduction of multi-use trees and vegetation into built up areas of Port Vila
5. Sustainable housing development

While PEBACC will implement demonstration activities within these thematic areas, it will also be looking to government, the development community and the private sector to support implementation of the broader programme.

Discussions are underway to integrate the



SEASIDE COMMUNITY, PORT VILA, VANUATU. © RMIT

EbA programme of action into the Port Vila Urban Plan that is currently being developed.

## Coastal modeling to inform ecosystem based - adaptation actions on Taveuni



DR TIM CARRUTHERS AND LELAND MOSS MEASURING PLANT CHARACTERISTICS ON TAVEUNI © WATER INSTITUTE OF THE GULF

In June, 2017, a team of four staff from the Water Institute of the Gulf in Louisiana, USA, worked in Taveuni, Fiji with the PEBACC team and the communities of Somosomo and Naselesele.

Through consultations with the communities facilitated by PEBACC, both villages identified shoreline erosion as a threat and one that needs adaptation action.

Dr. Tim Carruthers explained that the team placed submerged wave energy and turbidity data loggers in various locations and measured water depth in the lagoon and offshore, elevation of the land around the villages and roads, and characterized the vegetation along the shorelines.

"This data will be used to build computer models of waves and inundation during fair weather and storms. The models will assist in understanding why those shorelines are eroding, and allow assessment of potential adaptation options to reduce erosion and minimize inundation in the future.

"Once developed, the computer models will be able to include potential ecosystem based adaptation actions, including coastal vegetation planting, to assess the potential effectiveness of different options in reducing wave height, flooding and shoreline erosion," Dr. Carruthers said.

While in Taveuni, the Water Institute of the Gulf team assisted PEBACC in conducting

a survey of the Taveuni shoreline. The survey mapped and photographed the biophysical and built characteristics of the shoreline noting the extent of sandy and rocky shores, coastal vegetation, seawalls and sites undergoing erosion.

This information will have multiple uses, including providing a baseline of coastal conditions for monitoring purposes.

Preliminary findings of the coastal conditions are being utilized to develop appropriate EbA activities for Taveuni that promote resilience to climate change and significant events that can affect community wellbeing.

These include enhancement of mangroves to strengthen coastlines from erosion while providing important fish and shellfish habitat, planting of stabilising trees such as Pandanus that provide other benefits, and, where appropriate, modified engineered solutions that incorporate plants to stabilise coastal banks.

Findings and recommendations from the coastal modeling will provide specific information during the PEBACC implementation phase to better prepare communities to address vulnerabilities associated with coastal wave action on Taveuni.

The PEBACC project is currently developing an island-wide EbA implementation "master plan" that incorporates activities to increase resilience to climate change and restoring land, coastal areas and the marine environment.

Activities include native forest conservation,



DR CARRUTHERS AND SKIPPER BENJAMIN PREPARING TO DEPLOY SENSORS © WATER INSTITUTE OF THE GULF



TAVEUNI ISLAND, FIJI. © WPN

re-establishment of native forest, agroforestry, plantation use, increasing agricultural diversity, ecotourism opportunities, coastal protection, aquaculture, and support for marine protected areas.

Funding opportunities exist to support these activities and training for engaged stakeholders on Taveuni.

The coastal modeling work on Taveuni by the Water Institute of the Gulf was supported by the NZ Pacific Partnership for Ocean Acidification project. The PPOA Project based within SPREP's Climate Change Division is funded by the New Zealand Ministry of Foreign Affairs and Trade and the Principality of Morocco.



## Water quality assessment aims to inform sustainable management of Port Vila bay

IFIRA ISLAND, PORT VILA. © RMIT

A water quality assessment for Port Vila, Vanuatu conducted under the Commonwealth Marine Economies (CME) Programme by the UK's Centre for Environment, Fisheries and Aquaculture Science (CEFAS) and supported by the PEBACC project, has revealed concerning nutrient levels in the urban run-off into Port Vila bay.

"Data collected within Mele Bay and Port Vila demonstrates a variable water quality gradient, with the highest concentrations of nutrients and phytoplankton biomass measured at the near shore sites reflecting the proximity to the storm water outlets that drain the urban areas of Port Vila.

"Adjacent coastal areas support many recreational activities including community swimming and diving and inshore subsistence fishing. These high pollution discharges have the potential to impact on human health and the coastal ecosystems," the assessment stated.

For Vanuatu and, in particular around Port Vila, modeling and mapping of water quality issues has become increasingly important as population, tourism and infrastructure grow and expand.

CEFAS conducted the assessment in response to environmental health

concerns identified by national and regional stakeholders. The work was conducted together with the Vanuatu Government, SPREP and the University of the South Pacific.

The report states that "accurate water quality data enables national decision makers and local stakeholders to plan how to use and manage the bay's natural resources for sustainable marine economic development for a range of purposes, such as diving and other tourism activities or the identification of areas suitable for aquaculture sites".

The assessment data was collected between May and August 2016, with the majority of the sampling occurring in Port Vila harbour, Mele Bay and the lagoons to focus on the issues around urban and industrial run-off. In addition, there was a sampling effort in Northern Efate to look at water quality issues in the northern less urbanised coastline.

Parameters collected and analysed through the project included salinity, light attenuation, turbidity, nutrients, suspended solid and phytoplankton biomass (chlorophyll-a).

The results are being incorporated into the ESRAM for Port Vila as they provide a useful



PORT VILA BAY, VANUATU. © RMIT

evidence base for monitoring coastal water pollution linked to land based activities.

The Commonwealth Marine Economies (CME) Programme is being delivered on behalf of the UK Government by a partnership of UK government marine expertise: the United Kingdom Hydrographic Office (UKHO), CEFAS and the National Oceanography Centre (NOC).

SPREP has signed an MOU with CEFAS in order to support the implementation of the CME Programme in the country and across the region. PEBACC will continue to work closely with CME on water quality as well as blue carbon assessments in Fiji, Vanuatu and the Solomon Islands. Preliminary Outcomes of an Integrated Water Quality Assessment for Port Vila, Efate (Vanuatu) can be sourced from [www.sprep.org/pebacc](http://www.sprep.org/pebacc).

## 'Baran community concerned about water sources'



BARAN COMMUNITY LEADER

A community leader of the Baran community on Mt Austen outside of Honiara city, Chief Marx Puchavu has expressed concerns over water shortages in his community and warns that the water sources in the area are at risk due to logging activities in the vicinity of the water catchments.

"We are in urgent need of assistance in terms of access to water but the whole community also needs to ensure that those who allow their land for milling or related activities do so with proper management plans in place." Chief Puchavu said.

Chief Puchavu raised his concerns at a workshop organised by SPREP through

PEBACC in March 2017 in Honiara.

"Forest clearing and deforestation activities such as logging and un-managed milling are happening on the upper Lunga and Mataniko rivers and are directly affecting our water sources.

"For our community, the springs and wells closer to home have dried up and we now have to walk long distances to collect water for cooking, drinking and other domestic use. It is getting very difficult for the people." Chief Puchavu said.

Discussions at the workshop revealed that the water catchments in the area are critical for Honiara city because they supply the water that the city is dependent on.

SPREP PEBACC Country Manager for Solomon Islands, Mr. Fred Patison explained that sustaining a healthy forest will help maintain and secure adequate supply of water for the affected communities and Honiara city.

"This is a critical issue that calls for attention by the communities and the relevant authorities.

"Our communities must be guided to see the important functions of these ecosystems and the preservation of the ecosystems for our needs and survival today and into the future."

Mr. Patison added that the demand for fresh supply of water will increase as the city and

communities expand.

The stakeholder workshop was organised as part of consultations on the ESRAM study undertaken for Honiara city including the greater Honiara area such as Baran community.

The SPREP PEBACC project is in the process of identifying EbA options to implement in partnership with the communities in Honiara and on the outskirts of the city.

Government, NGO and community representatives were part of the consultation in March including the Guadalcanal provincial council who will be a key player in the implementation of the Project activities.

Since May 2017, consultation meetings were also held with the Guadalcanal province, Honiara city council, the Mataniko river project and the Barana community to discuss EbA activities such as a nature park, urban green space and river ecosystem restoration amongst others for implementation at the Mataniko catchment and Honiara.

Similar consultation meetings were held with Choiseul provincial government to discuss activities for Wagina Island, Sasamuga and Choiseul Bay.



WOMEN ACCESSING WATER, WIN VALLEY SETTLEMENT IN HONIARA. PHOTO: B.TOKI

## Ecosystem-based Adaptation through conservation and sustainable management – a Pacific example

Solomon Islands declares first marine protected area

Arnavons Community Marine Park (ACMP) was gazetted and declared a protected area by the Solomon Islands Government on the 11th of May 2017. This is a first for Solomon Islands.

The area, the largest rookery site for hawksbill turtle in the South Pacific is comprised of 3 small uninhabited islands located in the manning strait between Isabel and Choiseul Province.

The park is adjacent to Wagina island – a PEBACC project site. This is an important development for the communities of Wagina as the biodiversity benefits from the protected area will enhance the resilience of their natural resource based livelihoods. In this sense the initiative is complementary to the objectives of PEBACC which are to promote conservation, sustainable management and restoration of natural ecosystems to help people adapt to climate change and at the same time provide significant co-benefits for biodiversity and people.

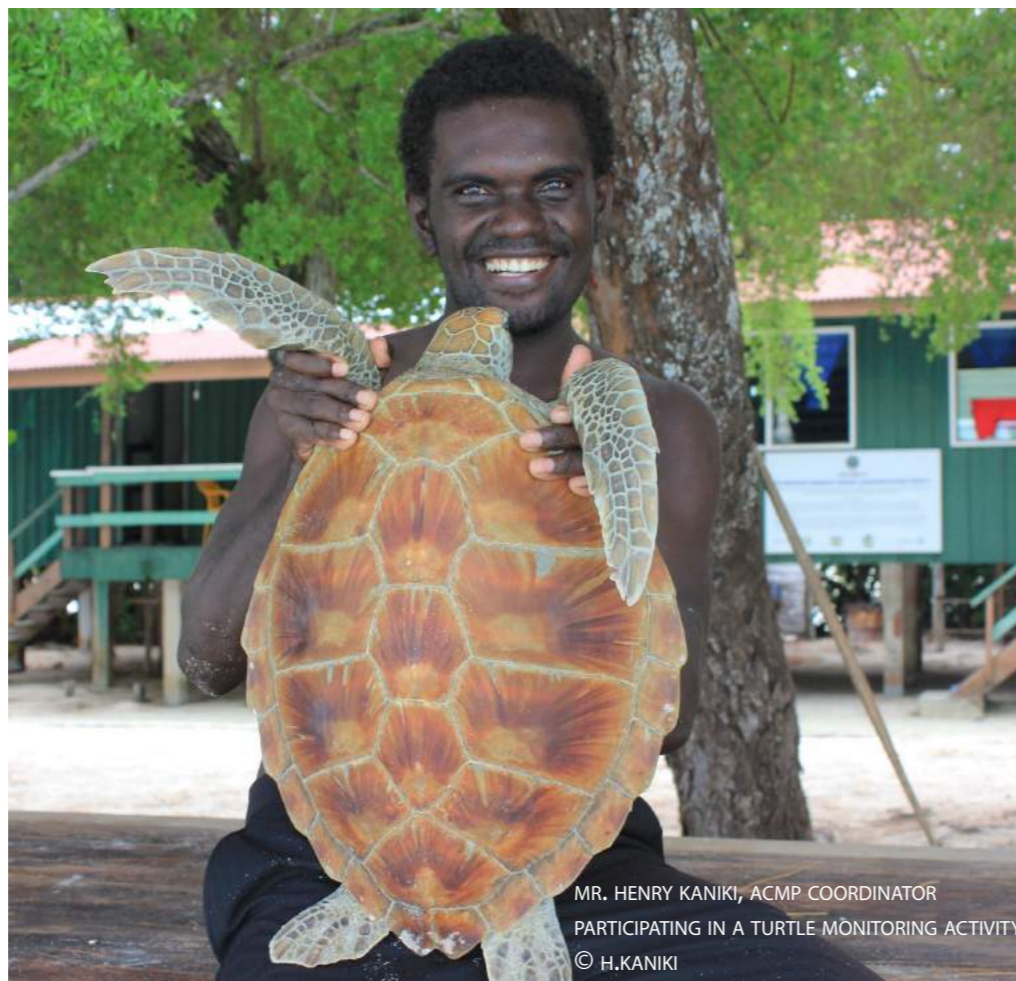
Henry Kaniki is the Project Coordinator of the newly declared marine protected area. Mr. Kaniki, a passionate conservationist, joined ACMP in 2013.

“I enjoy working with the local communities to manage their natural resources for the present and future generations. I feel so content when I see the resource owners benefitting from their natural resources and still have enough for the future.

Mr. Kaniki’s interest in conservation work spans as far back as his high school days.

“I grew up in Kubolia, a coastal community in Vella la Vella Island in the western province of Solomon Islands. I spent most of my life fishing with my uncles and brothers and enjoying the environment. This was my life and I really enjoyed it.”

“I first heard about Arnavon when I was in high



MR. HENRY KANIKI, ACMP COORDINATOR  
PARTICIPATING IN A TURTLE MONITORING ACTIVITY  
© H.KANIKI

school and it made a big impression upon me. I decided to study biology and later, marine science in University so I could contribute to this work. Joining ACMP is a dream come true for me.”

As Project Coordinator for ACMP, Mr. Kaniki manages 12 rangers whose responsibilities include monitoring nesting turtles, assessing hatchling turtles, collecting DNA samples of turtles, night tagging of nesting turtles, area patrolling, sea level rise monitoring, beach clean-up, assisting in scientific research activities and others.

“Local youths are employed as rangers and high school students are brought on tours to learn about the group’s conservation efforts. The islands are a living laboratory for students and the communities.” Mr. Kaniki said.

In 1995, with the help of The Nature Conservancy the communities of Katupika, Wagina and Kia, Isabel Provincial Government, Choiseul Provincial Government, the Ministry of Fisheries and Marine Resources and the Ministry of Environment Climate Change Disaster Management and Meteorology came together to protect the islands. Since then, The Nature Conservancy reported that ‘the number of hawksbill turtle nests that are laid annually at the Arnavons has doubled and biological surveys show that other species, such as giant clams and trochus, are also thriving.’

“A management committee that represents the three founding villages—Kia, Wagina, and Katupika—helps to resolve resource conflicts. This initiative has led attempts to diversify sources of income and nutrition for the villages’ fishing

communities, including making handicrafts for visiting tourists, seaweed harvesting, and small-scale agriculture.” Mr. Kaniki said.

Enthusiastic about the marine conservation work, Mr. Kaniki has big plans for the Arnavon Islands.

“My long term goal is for ACMP to be a conservation model not just for Solomon Islands but for the Pacific region. This means that we need to build the capacity of our rangers in legal training, technical skills such as scuba diving, research, tour guide, hospitality and others. Also, I would like to see high level of engagement with our National Rangers Association and International Rangers Federation (IRF).

“Furthermore, I would like to see ACMP get its business arm registered so that we can explore opportunities to access funding for financial sustainability of the organization.” Mr. Kaniki added.

The creation of the Arnavons Community Marine Park is an important step in maintaining and restoring the health of marine ecosystems in the area making them more resilient to climate change. This will in turn have a positive impact on community resilience given their dependence on the goods and services provided by these ecosystems.

For further information about ACMP, visit [www.arnavons.com](http://www.arnavons.com) or email: [arnavoncoordinator@gmail.com](mailto:arnavoncoordinator@gmail.com)

## Korotari forest nursery upgraded to meet demand

The Korotari Nursery in Labasa has recently been upgraded to cater for an increased capacity of around 30,000 seedlings, thanks to the Food and Agriculture Organization (FAO) and the SPREP PEBACC Project.

The nursery upgrade is an important initiative to support activities such as native forest conservation, re-establishment of native forest and agroforestry that PEBACC will be focusing on to build the resilience of communities to climate change.

The Korotari forest nursery is operated and maintained by the Department of Forests. It serves to raise native tree seedlings to rehabilitate logged areas and also replant trees on forest reserves encroached areas in the three provinces of Macuata, Bua and Cakaudrove.

Forestry Extension Officer North, Maleli Nakasava explained that the increased capacity of the nursery will meet the growing demand for tree seedlings in the northern division of Fiji.

“In the north, we have the highest timber extraction and there is a great need to replant trees immediately. This is important for the restoration of water catchments on islands like Mali. If this doesn’t happen now, we will have no trees in 20 years time. The existing saw mills employing up to 500 people in the north will close down and there will be no work for the communities.

“With the upgrade, the nursery now has a total of 28 bays that can cater for a stock of 11,200 seedlings on the bays and 20,000 seedlings on the floor and



KOROTARI NURSERY, MACTUATA PROVINCE, FIJI



around the nursery.

“The nursery is also a good model for surrounding communities and schools. Because of the upgrade, the nursery now looks more professional and the communities are showing interest in replicating the project in their areas.” Mr. Nakasava added.

Another priority need for Korotari nursery is a storage facility for seeds.

“A good storage facility will preserve and improve the hygiene of our seeds. This will

greatly boost the survival rate of our seedlings.” Mr. Nakasava said.

The Department is working in partnership with communities who have shown interest to plant trees based on their identified thematic areas of food security, watershed management, rehabilitation of river banks and coastal erosion.

The Department of Forestry’s core function in alignment with adaptation to climate change is to encourage communities to engage in the reforestation programme.

# The Brisbane Declaration on Ecosystem Services and Sustainability, Oceania

In March 2017, SPREP attended the first ever Oceania Ecosystem Services Forum in Brisbane. At the forum, SPREP through the PEBACC Project presented the draft findings of ESRAM studies in Fiji, Solomon Islands and Vanuatu.

In addition, SPREP and the International Union for Conservation of Nature (IUCN) presented a new framework for addressing coastal resilience for the Pacific Islands that will underpin the design of a full programme proposal for support through the Green Climate Fund (GCF). The framework proposes to take ecosystem based adaptation approaches to scale in the region.

The following is the forum declaration that calls for recognition and action to remove barriers to using ecosystem services approaches and addressing sustainability in the Oceania region.

We the participants of the Oceania Ecosystem Services Forum having met in Brisbane, Australia (27th – 31st March 2017), reaffirm the universal call to action to 'end poverty, protect the planet and ensure people enjoy peace and prosperity' as agreed by nations signatory to the UN's Sustainable Development Goals (UNDP 2016). The Brisbane Forum which provides the platform for our community of practice (ACES) epitomises 'the spirit of partnership and pragmatism' necessary to respond to sustainability challenges in Oceania (UNDP 2016).

We the participants of the Brisbane Forum recognise the fundamental role the provision of ecosystem services plays in sustainability; and the following challenges to sustainability in the Oceania region: mitigating and adapting to climate change and climate variability; reducing species loss and meeting Aichi Biodiversity Targets; ensuring food security through productive ecosystems; transcending disciplinary thinking and information sharing; and weak and ineffective existing policy and regulatory frameworks.

We the participants of the Brisbane Forum call for governments, international and regional programs/platforms, academic and philanthropic organisations, and those with authority and capacity to enact the following Actions to remove barriers to using ecosystem services approaches and addressing sustainability in the Oceania region.

## Action

1. Data quality should not stop action on climate change
2. Technical and methodological support is required for:
  - a. Developing a common language
  - b. Environmental-economic accounting
  - c. Maps and spatial infographics
  - d. State and trends in environmental assets
3. Respect and support participatory action/research
4. Take on board indigenous and local knowledge
5. Support youth skills development and empowerment
6. Support forums for ongoing dialogue across sectors.
7. Build the capacity of existing networks and community of practices
8. Support businesses' shift in thinking about ecosystem services
9. Support the very important role of the finance sector
10. Provide aid and support to link ecosystem services to the Sustainable Development Goals.

## SOLOMON ISLANDS

### World Environment Day - in pictures Solomon Islands

Students and the general public visited the SPREP stall for environmental information



**PEBACC promotional materials dispatched to Environment and Conservation Division staff**  
Ministry of Environment, Solomon Islands





# 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](http://www.sprep.org/pebacc).

### About SPREP

SPREP is the primary intergovernmental environmental organisation working in the Pacific. Visit [www.sprep.org](http://www.sprep.org) for more information about the work of SPREP in the region.

PROMOTING NATURAL SOLUTIONS FOR ISLAND RESILIENCE

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