NEWSLETTER ISSUE 5 JAN TO MAR 2018

Pacific Ecosystem-based Adaptation to Climate Change (PEBACC)

NI SA BULA!

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

This edition covers the period from January to March 2018.

Through out this period, the PEBACC Project focused on establishing partnerships and systems on the ground in the project sites to support the implementation of activities.

We are pleased to share with you brief updates from our sites in Fiji, Solomon Islands and Vanuatu.

We hope you will find these relevant and useful to your work.

The PEBACC team

PEBACC IN PARTNERSHIP WITH FAO SUPPORTED AN UPGRADE AND EXTENSION OF KOROTARI NURSERY IN LABASA, FIJI. THE UPGRADE INCLUDED SIGNBOARDS TO IIMPROVE THE VISIBILITY OF THE NURSERY.

In this issue

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 and Nuclear Safety (BMU) 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.

SPREP
Secretariat of the Pacific Regional Environment Programme

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A resilient Pacific environment, sustaining our livelihoods and natural heritage in harmony with our cultures.

Farmers share knowledge on native trees for tree labels

On 16 March 2018, a group of farmers in Vanua Levu in Fiji came together to share their knowledge on native trees in Fiji.

The consultation, organised by the Department of Forestry in the northern division together with PEBACC, was aimed at gathering traditional knowledge on native trees to create tree labels for the Korotari nursery in Labasa.

Forestry Extension Officer North, Mr Maleli Nakasava explained that the tree labels are important to help farmers and visitors (including school children) identify Fiji's native trees and their benefits to the people and the environment.

"In the Northern Division we have the highest level of timber extraction and there is a great need to replant trees. This is our third year of trying to encourage reforestation and the tree labels will be a great help in creating awareness on the various native tree species.

"Many of the native trees are totem trees for the itaukei communities but the younger generations are not aware of the different tree species. The tree labels will increase their knowledge and we hope that their connection to their totem trees will encourage them to replant.

"Our plan is to develop Korotari nursery to be a centre of awareness on trees for this division. With proper labels, the nursery will look professional and more appealing to our young people and communities" Mr Nakasava added.

Korotari forest nursery in Labasa is operated and maintained by the Department of Forestry. 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.

In 2017, PEBACC supported two signboards for the nursery and in partnership with FAO, financed an upgrade and extension of the nursery.

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

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.

LOCAL FARMERS DISCUSSING INFORMATION FOR TREE LABELS

PEBACC PROJECT OFFICER, FILOMENA SERENIA TALKING TO KOROTARI NURSERY EXTENSION OFFICER AFTER THE CONSULTATION

ENCOURAGING TO SEE FEMALE PARTICIPANTS AT THE CONSULTATION

Women on Wagina Island to lead on water project

Women on Wagina Island in the Solomon Islands are preparing to take a lead role in managing water resources on their island.

In March 2018, a team from the Water Resources Division, Ministry of Forests and PEBACC visited the island and discussed the potential for partnership with the women's group to implement an alternative water source and watershed management project for Wagina.

According to PEBACC Solomon Island's Country Manager, Mr Fred Patison, "reliable and safe drinking water is a critical issue to the resilience of Wagina Island's residents and its quality and quantity is directly linked to the condition of the islands ecosystems"

"This project will involve work around basic water hygiene, protection of watersheds on the island, identifying alternative water sources for dry periods, developing a guideline on how to manage wells and education and awareness on sustainable water resource management.

"Women on Wagina are an important stakeholder group. They are at the frontline of domestic water use on a daily basis and understand water access and quality better than anyone else. Therefore it makes sense to engage them" Mr Patison said.

Water sources for drinking and domestic uses on Wagina Island are restricted to rainwater (a small number of tanks), groundwater, freshwater springs and streams. During dry periods, rainwater tanks dry out and residents rely on limited water from groundwater wells and springs as the only source of drinking water. Household wells are also continually used on a daily basis for non-drinking water uses (washing, cooking).

The water project will be implemented together with other EbA projects such as coastal tree planting, clean-up campaigns, education and awareness on environmental issues and sustainable natural resource management that will be supported by PEBACC.

While in Wagina in March, Mr Patison also met with the council of elders and the schools who will be partners on the ground together with key stakeholders such as the Choiseul Provincial Government and The Lauru Land Conference of Tribal Communities (LLCTC).

Wagina Island (also known as Vaghena) lies off the south-eastern coast of Choiseul Island, in the Solomon Islands. Measuring around 13 km in length and 9 km in width. It is predominantly a limestone island with extensive mangrove ecosystems surrounded by several shallow marine lagoons and smaller islands/ islets.

The resident population (estimated ~2000) live in four villages situated on the southern coast of the island.

MR FRED PATISON (LEFT) AND THE WOMEN'S GROUP ON WAGINA ISLAND

A TYPICAL GROUND WELL ON WAGINA ISLAND

MR PATISON ALSO MET WITH THE WAGINA SCHOOL ADMINISTRATION

Vanuatu partners gearing up for campaign on plastic ban

WOMEN SELLING SINGLE PLASTICS AT THE PORT VILA MARKET FOR SHOPPING. SOURCE: TRAVELEXPERT.ORG.UK

SPREP, through the PEBACC project and in partnership with the Departments of Foreign Affairs, Environment and other relevant government, NGO and private stakeholders are developing an awareness campaign to inform the general public about the recently announced ban on certain single use plastics in Vanuatu.

From July 1 2018, it will be an offence to manufacture, sell or give away single-use plastic bags, plastic drinking straws and polystyrene boxes in Vanuatu.

There are some exceptions, for example the use of plastic to wrap and carry fish or meat.

PEBACC Vanuatu Country Manager Dave Loubser is optimistic the awareness campaign will provide strong backing to the plastic ban.

"The aim of the campaign is to change people's attitudes, behaviours and practices as far as plastic-use is concerned. Obviously, these changes in behavior will take time but none the less a worthwhile venture for Vanuatu.

We hope to reach as many people as possible through various mediums of communication, conveying key messages in the national languages." He said.

The government of Vanuatu started implementing a ban on single-use plastic bags being imported and manufactured in the country at the end of January 2018.

Companies and retailers were given a grace period of six months to use up their current stock of single-use plastic bags and polystyrene takeaway boxes.

On February 1 this year, new laws on littering took effect, with fines of US$45 for a first offence or US$90 for subsequent dumping of rubbish in public.

The government has also been consulting with private waste operators who now have to be licensed to operate any landfill, recycling centre, waste treatment plant, composting plant or incinerator.

The PEBACC Project focuses on strengthening and protecting the role of natural ecosystem services to enhance resilience to climate change. By reducing and ultimately removing plastics from the environment, communities and the ecosystems they depend on for their livelihoods become less vulnerable to the impacts of climate and non-climate related stressors and can in fact be strengthened.

By identifying natural alternatives to the banned plastics, there is opportunity for the communities to build their economic livelihoods as well as the natural environment that will provide the basis of these alternatives.

Organisations and communities have already started investigating alternatives through the development of straws made from bamboo as an alternative to plastic, and plant waste made into alternatives to polystyrene takeaway boxes.

Information for this article was also sourced from: https://www.radionz.co.nz/international/pacific-news/353201/vanuatu-bans-plastic-and-fines-rubbish-dumpers

Tree seedling nursery scoping exercise on Taveuni Island

THE TEAM VISITED SOME TREE SEEDLING NURSERIES ON TAVEUNI ISLAND DURING THE SCOPING MISSION

A scoping exercise to design a tree seedling supply system for Taveuni in February 2018 found that stakeholders on Taveuni are eager to plant trees and are supportive of more tree seedling nurseries on the island.

Commissioned by PEBACC and led by Scientific Forestry Services Limited, the two week exercise focused on current and anticipated future demands for tree seedlings on Taveuni.

Mr Usaia D Tukana, Director of Scientific Forestry Services, explained that after consulting farmers, landowners and traditional leaders in 22 villages as well as other key stakeholders, it was confirmed that there is great need and aspiration for reforestation on the island.

"Landowners like Apenisa Lalaqila Ligani of Navaca Settlement, Vuna District even offered their land for a possible nursery site.

"Apenisa is concerned about deforestation in areas like Baqarawalu in the last fifteen to twenty years. No re-planting of trees has taken place since the clearing of the forests.

"Peter Kjaev and Lillian Ekboum, owners of Vunivasa Estate arrived on the island from Denmark thirty years ago. With the dalo boom in the past twenty years, they have witnessed wide spread deforestation as gardens moved up the mountains.

"Tree seedlings are rare on the island. We support a central tree nursery to be located in Waiyevo as the most central place and the best approach to bridge the gap in availability of seedlings.

THE TEAM MET WITH DIFFERENT GROUPS INCLUDING WOMEN'S GROUPS IN THE VILLAGES

The assessment team also looked at tree species preference and willingness to pay for seeds, seedlings and planting stock.

At the Bouma Forest Park, Mr Tukana and his team took time to survey trees that can provide seeds for the nurseries.

"Dakua makadre (*Agathis macrophylla*) trees near the Tavoro Falls were seen as good seed sources. From the top of the falls we viewed seed sources such as Dakua trees, large Dawa, Ivi (Tahitian Chestnut), Kavika and at the Bouma Forest Reserve, we sighted and measured two Dakua trees; one measuring 129 cm diameter and the other 142 cm diameter.

"This was a useful exercise for the team to appreciate local sources of seeds" Mr Tukana said.

Interviews were also carried out to understand the level of local technical knowledge on tree planting, maintenance and the training needs of various stakeholders.

"Training on value of trees and their propagation and care was also strongly expressed by stakeholders" Mr Tukana added.

The full report of the assessment will be submitted to PEBACC by the end of April 2018.

The report is expected to provide a blueprint for the establishment of an effective seedling sourcing, propagation and distribution system to support stakeholders in their replanting efforts. In so doing it will highlight potential sites for a nursery (or nurseries), recommend economically viable designs and identify interested parties to manage them.

The scoping exercise is part of a reforestation project for Taveuni, proposed as an EbA option through PEBACC to help restore degraded ecosystems and strengthen resilience of communities to climate change.

Protect urban trees and green spaces

Do you know that over fifty percent of Fiji's population now live in urban areas?

With this trend set to continue, cities and towns in Fiji are rapidly expanding to make room for everyone and to cater for growth in social and economic development-related infrastructure.

As a result, green areas and forests in urban areas are under pressure to be converted to other forms of land-use, such as residential and commercial developments, even though the services provided by the remaining trees and forests are critical for the well-being of residents. Urban green spaces also have a critical role to play in building urban resilience to climate change.

Is Fiji prepared to give up its urban forests for development?

Today, 21 March 2018, World Forest Day, pause to appreciate the remaining urban green spaces and advocate for the protection of these valuable areas for present and future generations. It is essential that authorities strengthen their planning and regulatory systems to ensure the protection of these critical assets and as responsible and concerned citizens it is important that we make our voices heard.

Urban forests - normally associated with parks, sports grounds, cemeteries, slopes and coastal areas - are important 'green lungs' for cities as they serve to absorb CO2 and release oxygen. They also provide habitat for our native plants, birds and animals.

It is not surprising therefore that the introduction of more vegetation into urban environments is widely recognised as having multiple benefits.

For example, forests in urban water catchments serve to filter and improve the quality of water. They also act like a sponge, releasing the water slowly over a longer period of time. Cloud forests in upper catchments help capture precipitation from the clouds, transferring it to ground and surface water systems for human benefit. These services provided by urban forests will become more important in light of the increasing water needs of growing populations, and also in light of more frequent droughts taking place as a result of climate change.

Trees and forests in cities provide shade making them more pleasant and liveable and adding to their aesthetic appeal - beneficial for residents and tourists alike. Again this becomes even more important as average air temperatures increase and higher air temperature extremes (heatwaves) become more frequent under climate change, turning our cities into major heat sinks. Think of urban trees as natural air conditioners that cool and filter the air.

Coastal vegetation, including mangroves, is very important for protecting coastal infrastructure from water inundation, especially relevant in cities that are located in river deltas (e.g. Suva) or along floodplains (e.g. Rakiraki). Apart from its role in providing habitat and food supplies, coastal forest vegetation is also our first line of defence from rising sea levels and increasing storm surges associated with climate change.

Similarly, riparian forest vegetation along river banks and high areas at the edge of cities is important to mitigate urban flooding and to reduce the flow of sediment and pollution runoff from getting into rivers and streams and eventually the ocean.

More trees in cities, as opposed to hard surfaces (e.g. roads, paving), allows for better penetration of rainwater into the ground where it can be filtered and absorbed, rather than running off the surface collecting pollution along the way, and ending up in drainage channels that discharge it into the sea. These functions of urban forest vegetation will become more critical in light of the increased intensity of rainfall events predicted to occur as a result of climate change.

With regard to biodiversity, changes in temperature and rainfall under climate change will affect the areas in which certain plants, animals and birds can survive. Having an urban green space network linked by green corridors will help them to move to areas better suited to them. Birds in particular play a key role in controlling insect disease vectors that are also likely to increase with climate change. The network should ideally be distributed over an elevational gradient so that they can 'escape' to higher (cooler, wetter) or lower (warmer, dryer) areas as needed.

To conclude, green spaces are essential to build healthy and resilient cities in Fiji and around the world. Speak out for the protection of urban trees and forests today.

(This article by PEBACC was published in the Fiji Sun on 21 March 2018, World Forest Day).

PEBACC promotes EbA at Pacific Climate Change conference

A workshop on ecosystem-based adaptation to climate change across the Pacific was hosted by the PEBACC project on 20 February 2018 as part of a series of pre-conference workshops before the 2nd Pacific Climate Change Conference at Victoria University in Wellington (VUW), New Zealand.

The workshop, held at the Victoria University Wellington's Pipitea Campus, was facilitated by Mr Paul Blaschke of VUW's School of Environment, Geography and Earth Sciences, and Mr David Loubser, the PEBACC Vanuatu Country Manager.

"Our aims through the workshop and the conference in general was to contribute to a greater understanding of EbA as a cost effective adaptation approach to climate change, to provide the workshop and conference attendees with a detailed overview of the of the ESRAM process through examples highlighting the work done to date by the PEBACC team and to reinforce the understanding of the need to restore and protect ecosystem services as an essential approach in building community resilience in the face of climate change in the region" said Mr David Loubser.

EbA is a holistic approach to adaptation planning that harnesses the potential of healthy ecosystems and biodiversity to strengthen social and ecological resilience.

The PEBACC project was at the core of the workshop, introducing participants to EbA assessment case studies drawn from project implementation in Fiji, Solomon Islands and Vanuatu. Participants were tasked with brainstorming approaches and solutions for EbA interventions across the region.

The workshop examined the potential of EbA as an adaptation strategy for the Pacific islands as well as the barriers to successful implementation.

The workshop provided an opportunity for the consultants who conducted the ESRAMS under PEBACC to, interactively, take the participants through each of the components of the ESRAMS.

BEACH MORNING GLORY (*IPOMEA PES-CAPRAE*) AND BEACH GRASS PLANTED ALONG THE BEACH TO PROTECT THE SAND AND COASTAL TOP SOIL FROM EROSION, AN EXAMPLE OF EBA

"The opportunity allowed us to share our work with climate change professionals from across the Pacific and present a standardised approach for assessing Ecological and Socio-economic resilience across the region" said Mr Loubser.

"There is certainly great interest in this area of work and PEBACC is pleased to have shared experiences and findings from its country assessments" added Mr Herman Timmermans, PEBACC Project Manager and workshop presenter.

Who joined PEBACC this quarter?

Margaret Morris, an Australia Volunteer for International Development (AVID), started with PEBACC Vanuatu on 21 March 2018.

Margaret has a background in environmental capacity building, experience with horticulture (viticulture actually) and environmental management.

She will primarily be assisting with PEBACC implementation in Port Vila, and is currently assisting in preparing for the Vanuatu Mitigation Hierarchy and plastics ban awareness Workshops.

Robin Mace-Snaith (in white shirt) , an EU Erasmus Mundus Master's student in Environmental Science, Policy and Management (MESPOM), joined the PEBACC team in Suva in March to do thesis research on the implementation of ecosystem-based adaption and its effectiveness, using Fiji as a case study.

Robin will be with PEBACC until the end of April 2018.

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.