



Artwork developed for the 9th Pacific Island Conference on Nature Conservation and Protected Areas, Fiji, 2013

WHAT IS BIODIVERSITY?

“Biodiversity” is a shortened way of saying Biological Diversity which basically means the variety of living things.¹

The Convention on Biological Diversity defines biodiversity as “the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”².

Ecosystems are a community of plants, animals and smaller organisms that live, feed, reproduce and interact in the same area or environment. There are many different types of ecosystems such as forests, rivers, coral reefs and mangroves.

- 1 Secretariat of the Convention on Biological Diversity (CBD). 2007. <http://www.cbd.int/doc/groups/youth/youth-bio-cc-en.pdf> Retrieved from the internet May 2014
- 2 Secretariat of the Convention on Biological Diversity (CBD). <http://www.cbd.int/convention/articles/default.shtml?a=cbd-02> Retrieved from the internet May 2014

BIODIVERSITY AND CLIMATE CHANGE

By the end of the century, climate change and its impacts may be the dominant direct driver of biodiversity loss and changes in ecosystem services globally³.

Climate change is already forcing plants and animals to adapt either through shifting habitat, changing life cycles, or the development of new physical traits.⁴

Encouraging biodiversity can support efforts to reduce the negative effects of climate change. Trees help remove carbon dioxide from the atmosphere. Halting deforestation and forest degradation therefore has an important role in reducing emissions and slowing climate change.

WHAT IS ECOSYSTEM BASED ADAPTATION (EbA)?

This is when you integrate the use of biodiversity and ecosystem services to help people adapt to the adverse impacts of climate change.

Having a healthy environment helps to secure our supply of freshwater, food and other natural resources. The benefits that come to us from the natural environment are called ‘ecosystem services’.

Examples of ecosystem services include: fertile soils, removal of carbon dioxide from the atmosphere, coastal protection, controlling soil erosion, filtering of water, pollination of plants and even pest control. The healthier the ecosystem, the more robust the services they provide.

EXAMPLES OF ECOSYSTEM BASED ADAPTATION



Sustainable management of upland wetlands and floodplains helps with maintenance of water flow and quality.



Conservation and restoration of forests helps to stabilise land slopes and regulate water flows.



Maintenance and restoration of mangroves can help reduce inland flooding, tidal surges and coastal erosion.

- 3 Millennium Ecosystem Assessment 2005. Ecosystems and Human Well-Being Biodiversity Synthesis. <http://millenniumassessment.org/documents/document.354.aspx.pdf> Retrieved from the internet June 2014
- 4 Secretariat of the Convention on Biological Diversity (CBD). <http://www.cbd.int/climate/intro.shtml> Retrieved from the internet June 2014.

HOW CAN ECOSYSTEM BASED ADAPTATION HELP US ADAPT TO CLIMATE CHANGE IMPACTS IN THE PACIFIC?

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.

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

There are many different approaches to adapt to climate change. 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 measures, such as building seawalls, EbA, or a combination of both.

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

EbA ACTIVITY IN SAMOA

A beach strengthening project at Vaiula Beach Fales in Tafatafa on Upolu has seen the planting of native coastal tree species to address the severe erosion along the front of the beach. The plants will enhance the site, provide shade, fruits and seeds, and strengthen the coastline.

Community awareness and ownership is encouraged as part of this project with signs alongside the different plant varieties explaining in English and Samoan the name of each tree as well as the service they provide in strengthening the beach.

The trees planted were: To'ito'i also known as the beach naupaka, *Scaevola taccada*; Niu or Coconut, *Cocos nucifera*; Milo or the Portia tree, *Thespesia populnea*; Fue moa or Beach morning glory, *Ipomoea pes-caprae* and the Fetau or Alexandrian Laurel, *Calophyllum inophyllum*.



REFLECTION ON POSSIBLE NEWS ITEMS

- **Your community, your environment:** What EbA activities are happening in our local communities? How successful are these?
- **You and your environment:** How can you contribute to EbA activities in your community?
- **Your culture:** Is there any link between EbA and our traditional practices for living on our land? If yes or no, consider writing about these.

To learn more on this topic there is also a factsheet from the [Convention on Biological Diversity on the Ecosystem Approach](#), as well as the [CBD Secretariat website](#). If you visit the [Pacific Climate Change Portal](#) you can find a range of information on climate change, including country profiles, news and events. Other websites of interest that you can research to find more information for your news items include the [Secretariat of the Pacific Regional Environment Programme \(SPREP\) website](#) that will lead to resources on Ecosystem based Adaptation activities in the Solomon Islands and Fiji as well as information on EbA in general.

This factsheet is produced with input from the SPREP 'Ecosystem-based Adaptation brochure' developed with support from USAID and Australian Aid: https://www.sprep.org/attachments/Publications/EbA_brochure.pdf



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