



Building Capacity for Ecosystem-based Adaptation

EbA in the international climate policy debate

The concept of ecosystem-based adaptation (EbA) has become an increasingly important aspect of the international climate policy debate. For instance, over 20 countries refer explicitly to EbA in their INDC submissions (Intended Nationally Determined Contributions) to the UNFCCC while over 100 countries indicate ecosystem-based visions for adaptation¹. Furthermore, EbA measures are often embedded in National Adaptation Plans (NAPs) as well as many other decisions and planning making processes. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) specifically promotes the approach through its International Climate Initiative (IKI).

EbA approach: Managing natural resources sustainably

EbA was defined by the Convention on Biological Diversity (CBD) and non-governmental organisations as increasing the adaptive capacity of the population through the sustainable use and conservation of ecosystems. EbA is thus an anthropocentric approach. It aims at increasing the resilience of human societies in the face of climate change by managing natural resources sustainably and using them purposefully. This approach treats natural resources as complementary to or as a substitute for infrastructure measures.

Benefits of EbA: Boosting adaptive capacity

The benefits of EbA are obvious: ensuring that people have secure access via ecosystems to water, food and other vital resources while moderating the effects of floods, fire and drought safeguards people's livelihoods. It also yields benefits such as poverty reduction, biodiversity conservation and carbon sequestration in terrestrial and aquatic ecosystems. EbA measures therefore deliver results, irrespective of whether the anticipated climate impacts occur.

The EbA approach is often cheaper and more sustainable than technically oriented adaptation solutions. Quantified cost/benefit studies show that within a short period the benefits of restored ecosystems significantly outweigh the costs of their rehabilitation. In addition, such measures are often demonstrably cheaper than infrastructure measures. For instance, in Vietnam, planting and maintaining mangrove forests to serve as breakwaters and protect the coast has been found to be significantly cheaper (US\$1.1 million for 12,000 hectares) than the mechanical repair of wave-induced dyke erosion (US\$ 7.3 million annually) (The Economics of Ecosystems and Biodiversity, 2009).



¹ <http://pubs.iied.org/pdfs/17364IIED.pdf>



PROJECT EXAMPLE

EbA in action: Global Project in Mountain Regions

EbA in the IKI

For BMUB, EbA is one of the priority areas in the field of adaptation, funding to date over 29 projects with a total value of almost €100 million.

IKI finances pilot measures that put EbA to the test in practice and in the context of different ecosystems. The IKI is supporting projects that help to mainstream the EbA approach at political and strategic levels in the partner countries. In addition to fostering EbA in the framework of bilateral projects, the IKI also supports regional or international programmes and initiatives such as the Secretariat of the Pacific Regional Environment Programme (SPREP). The experience gained is fed by BMUB into the international discussion processes in order to promote further development of this innovative approach.

The IKI supports specific measures which include, among others, improved management, conservation or restoration of

- mangroves, to protect coasts against floods, storms and the consequences of sea-level rise – for instance in Vietnam, the Philippines, Thailand, Colombia and especially on Pacific Islands;
- forests, meadows and pastures that provide protection against soil erosion and landslides, caused in part by increased heavy rainfall – for example in Nepal, Peru, Chile, Uganda;
- wetlands, riverine landscapes or floodplains to control flooding in areas at risk of floods, thus responding to changing precipitation patterns – for example in Vietnam, Mexico, Thailand, Colombia, Costa Rica, Burkina Faso, Ghana, Kenya.

In one of the IKI's key adaptation projects, the EbA Flagship Programme (2010–2016), local communities in mountain regions of Nepal, Peru and Uganda are learning to improve the conservation or restoration of their regulating ecosystem services, such as water supply, firewood or climate regulation. The objective of this lighthouse project is to use ecosystem-based adaptation (EbA) options to reduce the vulnerability of communities in mountainous regions. In addition to implementing and documenting pilots, the project focuses heavily on capacity building.

In Peru a workshop on the 'Community-Based Risk Screening Tool; Adaptation and Livelihoods' (CRISTAL) was conducted with the key stakeholders in the Nor Yauyos-Cochas Landscape Reserve (the city of Lima's water catchment area) in order to assess the social dimensions of climate change and a review of the master plan for the protected area was supported.

In Nepal, the project supported restoration of more than 50 water sources and natural ponds in order to ensure drinking water supply and irrigation; it also supported restoration of degraded ecosystems on more than 80 hectares.

In Uganda, the project conducted vulnerability analyses in the region around Mt. Elgon (Sironko, Bulambuli, Kapchorwa and Kween districts); gravity-based drip irrigation systems were established in Kapchorwa along with associated EbA activities which benefit more than 1,000 community members. Furthermore, more than 60 decision makers and 600 households were trained on EbA. Also, ten nurseries were established in the context of erosion control.

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