



WWF

BRIEFING

JULY  
2013



Key concepts in climate change

# ECOSYSTEM BASED ADAPTATION

## Introduction

The terms 'ecosystem based adaptation' and 'ecosystem-based approaches to adaptation' (EbA) are receiving increased attention from donors and policy makers. Ecosystem-based adaptation is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change. EbA is not adaptation for ecosystems, although it may have a conservation benefit.



## EbA is a people-focused approach

Ecosystem based adaptation differs from business as usual conservation in that biodiversity conservation is recognised as a possible benefit of EbA, rather than the primary purpose. If the target of climate change adaptation is ecosystems or biodiversity the activity is not EbA unless it explicitly puts the needs of people first.

As an approach to adaptation, EbA may be more cost-effective and accessible by rural communities than measures based on

hard infrastructure and can be particularly important to people living in poverty, who are often the most directly dependent on the services that ecosystems provide.

### Ecosystem services

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Ecosystem based adaptation relies on a good understanding of ecosystem services. Managing ecosystems for adaptation may require the prioritization of some of these services at the expense of others. For example, managing wetlands to provide coastal protection may require emphasis on silt accumulation and stabilization, possibly at the cost of reduced wildlife or amenity.

### Examples of EbA

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The following are examples of the links between ecosystems and adaptation.

- Maintenance or restoration of coastal ecosystems such as mangroves can reduce coastal flooding and erosion and protect against storm surges
- Sustainable management of rivers and wetlands can provide flood regulation or water security in times of drought
- Sustainable forest management can limit the frequency and size of uncontrolled forest fires
- Establishment of diverse agricultural systems and maintaining genetic diversity of crops and livestock can help people cope with changed climatic conditions
- Improved forest health can complement climate change mitigation through carbon sequestration and sustain the ecosystems that provide food, fibre and water resources to vulnerable people

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### Benefits of EbA

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EbA has the potential to contribute to livelihood sustenance and food security, sustainable water management, disaster risk reduction and biodiversity conservation. Approaches such as forest conservation or restoration of degraded wetlands can also contribute to climate change mitigation measures. There is growing evidence for the benefits of EbA but it is acknowledged that more systematic evidence and research is needed.

## Images

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Front cover: Fishermen, Cambodia. © Adam Oswell / WWF-Greater Mekong.

Page 3: Young girl close to Fandriana carrying reeds for the shades of a new tree nursery, Madagascar. © WWF / Martina Lippuner.

## References

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**FOR MORE INFORMATION**

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To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.