# COP 21 Paris: Press Brief

## Ecosystem-based approaches to adaptation and disaster risk reduction

There is a growing recognition of the role that healthy ecosystems can play in increasing resilience and helping people adapt to climate change through the ongoing delivery of a range of ecosystem services. Ecosystem services are the indirect and direct benefits provided by ecosystems for human well-being. These services not only supply food, water and energy, they also permit adaptation to climate change. Ecosystem-based approaches were created in order to take advantage of those services, which can lead to climate change adaptation and a reduction of disaster risk. Those approaches are based on sustainable management, conservation and restoration of ecosystems.

**Several Ecosystem-based approaches are used for climate change mitigation, including:**

- Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services so as to increase ecosystems' resilience, and thus achieve climate change adaptation. It also has for objective the reduction of people's vulnerability to climate change.
- Ecosystem-based disaster risk reduction (Eco-DRR) is an approach that uses sustainable management, conservation and restoration of ecosystems to diminish disaster risk.

EbA and Eco-DRR approaches overlap. In fact, they are both based on methods dealing with biodiversity conservation, climate change adaptation and livelihood development. For example, implementing forest and grasslands conservation to protect from erosion and sandstorms, and integrating native vegetation into urban spaces to provide relief from heat waves and improve air quality. A rationale for implementing EBA and Eco-DRR as part of overall approaches to climate change and disaster risk reduction is due to the anticipated multiple benefits they may bring. These benefits include the contribution to sustainable livelihoods by maintaining the provisioning ecosystem services that provide clean water, food and fiber, supporting poverty reduction, heritage conservation, and preservation of local identities, such as in forest communities.

**EbA and Eco-DRR provide multiple benefits**

- EbA and Eco-DRR provide multiple social, economic and cultural benefits for local communities. These multiple benefits increase resilience of communities in numerous ways and thus are especially effective in terms of adaptation, because successful adaptation needs to be undertaken in a multi-faceted, integrated manner.
- Ecosystem-based approaches are often the most cost-effective, requiring only modest long-term investment.
- Ecosystem management delivers social and economic benefits to stakeholders, which thus decreases risk. One example would be the restoration and conservation of mangroves, which would first enable the protection from storm surges, but also permit carbon sequestration and community participation.

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- Ecosystem-based approaches can also provide a suite of benefits that are non-monetary, such as cultural, spiritual, research or educational benefits.

The international policy arena supports and promotes ecosystem-based approaches to adaptation and disaster risk reduction, including the recently adopted Sustainable Development Goals. Goal 13 on Climate Action, for example, calls for urgent action to combat climate change and its impacts, including a target to strengthen the resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

**Lessons learned**

- The economic benefits of EbA and Eco-DRR might be hard to evaluate due to the youth of programmes and activities implemented, however research has proven the effectiveness of these measures.
- EbA and DRR approaches should be accompanied by vulnerability assessments that take into account the underlying drivers, existing policies, community perceptions, including an analysis of potential vulnerabilities of the EBA option itself to climate change impacts
- EbA and Eco-DRR should be included in national policies and regulations, which will thus provide a framework for implementation. Mainstreaming should be also used to scale up EbA and Eco-DRR.
- Monitoring and evaluation are important instruments that can permit the assessment of policy and plans according to the objectives set.
- Traditional and local knowledge could help in the detection of climatic and environmental changes and natural hazards, and thus permit the management of climate change and disaster risk.
- Adaptation and DRR policies and programmes can be strengthened if contributions from both women and men are incorporated. Therefore, gender mainstreaming should be a significant aspect of the adaptation and disaster risk reduction planning and implementation process to ensure success and sustainability of policies, programmes and projects. The inclusion of all segments of society, men, women, children, minorities and ethnic groups are important at all stages of decision making.
- Finally, it is important to recognize the potential limitations of using ecosystem-based approaches for adaptation or DRR. Ecosystems are subject to climate change impacts, and therefore any intervention utilizing the ecosystem approach can be vulnerable to change, which should be accounted for when planning activities. EBA and Eco-DRR should thus be considered within overall integrated adaptation or DRR strategies.

**Work of the Convention on Biological Diversity**

The Conference of Parties to the Convention on Biological Diversity (CBD), through various decisions, has requested Parties, other governments and relevant organisations to, inter alia, identify regions, ecosystems and components of biodiversity that are vulnerable to climate change; and assess the threats and impacts of climate change; take appropriate actions to address and reduce the impacts of climate change, and climate change mitigation and adaptation activities on biodiversity and biodiversity-based livelihoods, including implementation of ecosystem-based approaches to climate change mitigation and adaptation; and monitor the impacts of climate change on biodiversity and biodiversity-based livelihoods.

The Secretariat of the CBD is supporting Parties to implement these decisions by commissioning expert analyses the potential of a wide range of ecosystems to contribute to climate change mitigation, develop a credible estimate of the contribution of the CBD to the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) to develop scenarios and pathways for achieving the objectives of the CBD and UNFCCC simultaneously with other sustainable development goals. The Secretariat has also commissioned the compilation of experiences with implementation of EbA and Eco-DRR. This compilation includes lessons learned, opportunities and challenges for implementation and an

analysis of major policy issues, including trade-offs, gender, contribution of indigenous peoples and local communities and safeguards.

**Important links**

- Convention on Biological Diversity: www.cbd.int
- Aichi Biodiversity Targets: www.cbd.int/sp/targets/
- Global Biodiversity Outlook 4: www.cbd.int/gbo4/
- United Nations Decade on Biodiversity: www.cbd.int/2011-2020/

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