

# Ecosystem-based Adaptation (EbA)

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## Ecosystem-based Adaptation in the negotiating texts

**IUCN welcomes** the references in the negotiating texts before AWG-LCA to the several links between ecosystems and adaptation. On pages 4 to 7, **this paper analyses some of these references in detail.**

### ***What is Ecosystem-based Adaptation<sup>1</sup>?***

Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services<sup>2</sup> as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change. As one of the possible elements of an overall adaptation strategy, ecosystem-based adaptation uses the sustainable management, conservation, and restoration of ecosystems to provide services that enable people to adapt to the impacts of climate change. It aims to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change. EbA can generate significant social, economic and cultural co-benefits, contribute to the conservation of biodiversity, and build on the traditional knowledge and practices of indigenous peoples and local communities, including the important role of women as custodians of local knowledge. In addition, healthy, well managed ecosystems have climate change mitigation potential, for example, through the sequestration and storage of carbon in healthy forests, wetlands, and coastal ecosystems.

### ***Ecosystem-based Adaptation activities should be part of a broader portfolio of adaptation measures.***

Ecosystem-based adaptation can be applied at different geographical scales (local, regional, national) and within various time frames (short to long term). It can be implemented as projects and as part of overall adaptation programmes. It is most effective when implemented as part of a broad portfolio of adaptation and development interventions, such as early warning systems, education, and physical infrastructure.

### ***Ecosystem-based Adaptation is a cost-effective way to protect communities from climate change and extreme weather events.***

Healthy ecosystems, such as intact forests and wetlands, are beneficial to local populations for the many livelihood benefits that they provide: firewood, clean water, fibres, medicines, shelter and food. They can also form physical barriers against some extreme weather event such (such as storm surges). As natural buffers, ecosystems are often less expensive to maintain, and often more effective than physical engineering structures, such as dykes, levees, or concrete walls. This is a means of adaptation that is readily available to the rural poor; it is readily integrated into community-based adaptation, and addresses many of the concerns and priorities identified by the most vulnerable countries and communities.

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<sup>1</sup> This text draws from and is consistent with: **CONNECTING BIODIVERSITY AND CLIMATE CHANGE MITIGATION AND ADAPTATION-** Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change under the Convention on Biological Diversity (CBD).

<sup>2</sup> Ecosystem services are the benefits people obtain from nature, such as food regulation, storm protection, food, clean water, fuel, shelter etc.

### ***EbA promotes policy coherence***

In promoting the sustainable use of nature and biodiversity, ecosystem-based adaptation strategies provide policy coherence with other national and international commitments. For maximum effectiveness, these strategies should be aligned with ongoing action under the Convention on Biological Diversity, the UN Convention to Combat Desertification, the Ramsar Convention on Wetlands, the UN Declaration on the Rights of Indigenous Peoples, and other relevant international commitments.

### ***Analysis of references related to ecosystem-based adaptation in the UNFCCC draft negotiating text<sup>3</sup> and related documents***

The role of ecosystems in adaptation has been referred to in various ways in the current draft negotiating text (FCCC/AWGLCA/2009/INF.1) and in the subsequent reordering and consolidation of text in the revised negotiating text (FCCC/AWGLCA/2009/INF.2). Below, IUCN provides some guidance on how references on ecosystems and adaptation are used in the current documentation to refer variously to:

1. Ecosystem-based Adaptation as defined by the Convention on Biological Diversity (CBD);
2. Ecosystem Approach as defined by the CBD;
3. The separate issue of vulnerability of ecosystems and species to climate change; and
4. References that are unclear as to which definition or concept they are referring to.

#### **1. Ecosystem-based Adaptation**, as defined by the CBD's AHTEG<sup>4</sup>:

*“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.”*

References to ecosystem-based adaptation are included in the negotiating text and related documents are shown in Annex 1.

#### **IUCN suggests using clear terminology in the negotiating text that is in-line with the CBD's definition of ecosystem-based adaptation.**

#### **2. The Ecosystem Approach** as defined by the CBD:

*“The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.”* (CBD COP 5 Decision V/6)

The ecosystem approach, as a strategy, should be applied to all adaptation responses to ensure that they are environmentally sound. References to the Ecosystem Approach as applied to adaptation are included in the negotiating text and related documents, as shown in Annex 2.

- 3. The negotiating text also refers to the implementation of adaptation of particularly vulnerable ecosystems.** This means enhancing the ability of biodiversity and vulnerable ecosystems themselves to adapt to the impacts of climate change. As referred to in Article 2 of the UNFCCC, the ability of ecosystems to adapt is dependent on stabilization of greenhouse gas concentrations. Therefore, it is largely a mitigation issue. As such, **IUCN suggests** that the reference to the vulnerability of ecosystems and species be referred to under overall objectives and “Shared Vision”.

<sup>3</sup> FCCC/AWGLCA/2009/INF. 1

<sup>4</sup> Ad Hoc Technical Expert Group on Biodiversity and Climate Change

References to the adaptation of vulnerable ecosystems are included in the negotiating text and related documents, as shown in Annex 3.

**UNFCCC Article 2:**

*“...stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change...”*

4. There are additionally a number of references on the role of ecosystems in adaptation but which are **unclear** as to what type of approach they are supporting (ecosystem-based adaptation, the Ecosystem Approach, vulnerable ecosystems or other), as shown in Annex 4.

**Annex 1**

References in the texts to the role of ecosystems in adaptation, which *are consistent with the CBD definition of ecosystem-based adaptation*. Paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex II- Enhanced action on adaptation and its means of implementation

Paragraph	Reference	Observation
13 (c ) Page 27	[Particularly vulnerable ecosystems and species, <b>including through promoting [an ecosystem [based] approach to adaptation] [or] sustainable ecosystem management, conservation and restoration activities, where appropriate, to support adaptation.</b> .]	The text in bold refers to ecosystem-based adaptation as defined by the CBD <sup>5</sup> .  However, <u>IUCN suggests using the term “ecosystem-based adaptation” rather than “ecosystem-based approach to adaptation”</u> as to ensure consistency with CBD definitions. Further, ecosystem-based adaptation is focused on enabling people to adapt to climate change, not on vulnerable ecosystems and species adapting. Therefore, <u>a separate paragraph would be a better option, or linking it to the previous paragraph (13(b)) on vulnerable populations</u>
13 (i) Page 28	<b>Protect and sustainably manage the natural resource base and recognise that ecosystems and the goods and services they provide (such as water, food, soil protection and carbon capture etc.) underpin resilience and are fundamental to support human adaptation and sustainable development;</b>	The text is consistent with ecosystem-based adaptation as defined by the CBD.

<sup>5</sup> CONNECTING BIODIVERSITY AND CLIMATE CHANGE MITIGATION AND ADAPTATION- Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change under the Convention on Biological Diversity (CBD)

23 (r) Page 36	[Engage in [a [three-year] pilot phase of] adaptation activities implemented cooperatively, to catalyse rapid learning about adaptation good practice by supporting enhanced <b>implementation of demonstration projects, programmes and policies</b> in vulnerable countries, as well as regions, and communities groups, sectors and <b>ecosystems</b> within all developing countries;]	It is unclear whether “ecosystems” in this instance refers to “vulnerable ecosystems” in particular. <u>IUCN suggests rewording to include notion of “ecosystem-based adaptation” activities</u>
40 Page 43	[In addition to the above, priority consideration] [In relation to the above priorities, consideration] should also be given to [ecosystem-based and community-based <b>adaptation activities</b> , where appropriate, at local and national levels.] [sustainable <b>ecosystem management, conservation and restoration activities, where appropriate, to support adaptation.</b> ]	Direct reference to ecosystem-based adaptation, further expanded in line with CBD definition  IUCN prefers the wording “in relation to the above”  The last brackets are a definition of EbA consistent w CBD

The paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex I- A shared vision for long-term cooperative action

PP 15, 3 Page 7	The <b>maintenance of healthy ecosystems and their services</b> is necessary to maintain the life support system on earth in the face of climate change, providing food and livelihoods, contributing to human welfare and enabling sustainable economic development.	This is consistent with ecosystem-based adaptation as defined by CBD
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The paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex IV- Enhanced action on the provision of financial resources and investment

Paragraph	Reference	Observation
11 (f), alt 6 Page 129	In addition to the above, priority consideration should also be given to <b>ecosystem-based adaptation activities</b> ;	IUCN supports this principle for providing financial support to ecosystem-based adaptation activities where these activities are appropriate.

## Annex 2

References in the text that are in *line with the Ecosystem Approach as defined by the CBD*. Paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex II- Enhanced action on adaptation and its means of implementation

Paragraph	Reference	Observation
16 (b) Page 32	[With a view to promoting adaptation planning] [all] Parties should:  (b) Promote climate-resilient development in a manner that is practical, informed by the best science, <b>environmentally sound</b> , and economically efficient, and that promotes on-the-ground results	This paragraph is consistent with the Ecosystem Approach, which supports the incorporation of environmental considerations into adaptation planning and practice.

### Annex 3

References to the *adaptation of vulnerable ecosystems*: there are a large numbers of these, due to the wording at Art 8 (h) of the Convention ‘Countries with areas with fragile ecosystems, including mountainous ecosystems’... among the countries due special consideration in relation to various forms of ‘action’. Therefore, only a few of the other references are in the table below. Paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex II- Enhanced action on adaptation and its means of implementation

Paragraph	Reference	Observation
13 (a) (ii) Page 27	Developing countries with <b>fragile [ecosystems, including] mountainous [and highland] ecosystems</b> [estuaries, coastal wetlands, mangroves, coral reefs, sea-grass beds, and sand dunes with particular attention to sedimentations as well] ..... Countries with <b>unique biodiversity</b> , [tropical] and mountainous glaciers and fragile ecosystems]	These paragraphs refer to the vulnerability of ecosystems, and the importance of ecosystems adapting to climate change, rather than to the use of ecosystems and their services to enable people to adapt to climate change.
13 (c ) Page 27	<b>Particularly vulnerable ecosystems and species</b>	
47 Page 45	[To] [support][assist] [ <b>particularly vulnerable</b> [[regions, communities, groups, sectors, and <b>ecosystems</b> within] [all]] developing countries,]	

### Annex 4

References to the role of ecosystems in adaptation *that are unclear*: Paragraph numbers in the table below refer to document FCCC/AWGLCA/2009/INF.2- Annex II- Enhanced action on adaptation and its means of implementation

Paragraph	Reference	Observation
8 Page 26)	Adaptation to the adverse effects of climate change is aimed at reducing the vulnerability and increasing the resilience of ecological, social and economic systems to present and future climatic changes, in order to minimize the threats to life and livelihoods, assets, amenities, <b>ecosystems</b> and sustainable development.	This paragraph refers to the ability of ecosystems to adapt – as explained above, this is more relevant to overall objectives and mitigation and as such IUCN suggests this be referred to under “Shared Vision”
14 (d) Page 28	Support the establishment of flexible long-term processes and mechanisms for adaptation in recognition of the long-term nature of climate change impacts, respective adaptation and climate-resilient development. Adaptation should be consistent with local, subnational, national and regional development objectives, programmes and plans, and <b>consider ecosystem feedbacks</b> to promote poverty reduction and long-term resilience	It is unclear what “ecosystem feedbacks” refer to
14 (k) Page 28	Operationalize adaptation through existing and proven institutions and process including <b>ecosystem-based management</b> and integrated coastal and ocean management and processes at local, national, and regional scales	It is unclear what “ecosystem-based management” refers to here
15 (c ) (iii) Page 31	Adaptation actions that incorporate <b>ecosystem strategies</b> where appropriate	It is unclear what “ecosystem strategies” refer to