Ecosystem-based adaptation in the concept of nature-based solutions and its application for climate change adaptation and disaster risk reduction
1. What is EbA? Is it NbS?

2. When and where can we use EbA?

3. How to make EbA effective?

4. What are some examples of EbA?
What are Nature-based Solutions?

Actions to protect, manage and restore natural or modified ecosystems, which address societal challenges, effectively and adaptively, providing human well-being and biodiversity benefits.
Nature-based Solutions approaches

1. Ecosystem restoration approaches
   - ER
   - EE
   - FLR

2. Issue-specific ecosystem-related
   - EbA
   - EbM
   - Eco-DRR
   - CAS

3. Infrastructure-related approaches
   - GI
   - NI

4. Ecosystem-based management
   - EbMgt

5. Ecosystem protection approaches
   - AbC
What is Ecosystem-based Adaptation?

“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”

- Convention on Biological Diversity, 2009
Ecosystem-based Adaptation (EbA)

= Nature-based Solutions (NbS) for climate change adaptation
1. What is EbA? Is it NbS?

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A leader in EbA
Limits and conditions

- Potential limitations of ecosystem services under a changing climate
- Difficulty in monitoring, evaluating, and establishing the evidence base
- Governance and institutional constraints
- Economic and financial constraints
- Social and cultural barriers
1. How should we finance EbA?
2. Long-term objectives vs. short-term thinking
3. Evidence is mostly anecdotal
4. Governance: communication and cooperation
Opportunities and entry points

- EbA is human-centric
- EbA contributes to local economies
- EbA is inclusive
- EbA integrates climate science and traditional knowledge
Friends of EbA

- Promoting ecosystem-based approaches
- Effective and efficient collaboration (e.g. joint papers, workshops, events)
- Bridging the gaps between academia, practice, policy
- Developing tools, guidelines and M&E mechanisms
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EbA Qualification Criteria and Quality Standards

- Practical assessment framework for designing, implementing and monitoring EbA measures
- 3 elements, 5 qualification criteria and 20 quality standards
- PDF in English, Spanish, French
# EbA Qualification Criteria and Quality Standards

## Ecosystem-based adaptation:

**Question-based guidance for assessing effectiveness**

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### Table: EbA Qualification Criteria

<table>
<thead>
<tr>
<th>Name</th>
<th>Phases</th>
<th>Expected Outcomes</th>
<th>Target</th>
<th>Indicators</th>
<th>Methodology</th>
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<td>Phase 2</td>
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<td>Phase 3</td>
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### Diagram: EbA Qualification Criteria

1. Describe the EbA approach to identify and prioritize adaptation measures.
2. Evaluate the effectiveness of EbA measures using established criteria.

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**INTERNATIONAL UNION FOR CONSERVATION OF NATURE**

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**iied**

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**UN environment**

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**WCMC**
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Putting EbA into Practice

Climate change hazards:
- Flooding
- Erratic rainfall
- Shift of seasons
- Temperature increases and extreme heat
- Drought
- Storm surges and higher cyclone intensity
- Sea level rise, salinization, and coastal erosion
Putting EbA into Practice

Potential impacts on people:
- Decrease in agriculture production
- Food and water insecurity
- Economic losses due to livelihood disruption
- Direct harm to human health and wellbeing
- Infrastructure damage
Putting EbA into Practice

Landscape-scale wetland management
Putting EbA into Practice
Putting EbA into Practice
Putting EbA into Practice

Forest and pasture restoration
Putting EbA into Practice

- Risk resilience
  - No other source of income after typhoon and/or epidemic damages (Photo: philstar.com)
  - If coconuts are damaged by natural disasters such as typhoon, it is still possible to harvest from other crops.

- Keeping good farm environment
  - Monoculture causes soil nutrient distortion and erosion, and pest & diseases spread (Photo: PlantVillage)
  - Intercropping helps prevent soil problems as well as pest and diseases (Photo: PCA)

Project on Rehabilitation and Recovery from Typhoon Yolanda in the Philippines Final Report (II)

Intercropping of adapted species
Putting EbA into Practice

Greenspace storm water management

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Coastal wetland protection, management and restoration
International Union for Conservation of Nature

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Verónica Ruiz
Programme Officer, Nature-based Solutions
Veronica.Ruiz@iucn.org

Global Ecosystem Management Programme

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