Nature-based Solutions from a biodiversity policy perspective opportunities, concerns and their relationship with other terms under the CBD

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Nature-based Solutions in the CBD negotiations – supported by many, contested by others, but why?

One reason is because there is a long history of other CBD concepts.
Since 2000
COP 5, Kenya
‘Strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way’
= primary framework for action under the CBD (COP 5 Decision V/6)

Since 2009
Ecosystem-based adaptation:
‘The use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to climate change’ (CBD TS 41)

Since 2010
COP 10, Japan
Ecosystem-based approaches for adaptation and mitigation (CBD COP Dec/X/33)

Since 2014
COP 12, Republic of Korea
Ecosystem-based approaches for climate change adaptation & DRR (CBD COP Dec/XII/20)

2016
CBD COP-13, Mexico
Synthesis report on ecosystem-based approaches for adaptation & DRR (CBD TS 85) & Review of ecosystem-based mitigation actions beyond forests (CBD TS 86)

2018
CBD COP-14, Egypt
Voluntary guidelines for ecosystem-based approaches for adaptation & DRR with principles and safeguards (CBD TS 93) & Sharm-el Sheikh to Kunming Action Agenda promoting NbS

2021-2022
UNEA-5, Kenya
Resolution 5.5 on NbS incl. definition, recognizing the ecosystem approach and ecosystem-based approaches

2021-2022
CBD COP-15, China & Canada
Global Biodiversity Framework, incl. targets with NbS & ecosystem-based approaches & Kunming Declaration

2018
CBD COP-14, Egypt
Voluntary guidelines for ecosystem-based approaches for adaptation & DRR with principles and safeguards (CBD TS 93) & Sharm-el Sheikh to Kunming Action Agenda promoting NbS

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UNGA Biodiversity Summit, NY, Leaders Pledge for Nature with 93 countries “to scale up NbS on land & sea” & mobilize resources & High ambition coalition for nature and people (100 countries)
Opportunities (from biodiversity perspective)

- **NbS = “holistic problem solving” approach with and for biodiversity**, building bridges between Agenda 2030 & Rio conventions e.g.
- **Policies & plans**: Integration of NbS into NDC, revision of NBSAPs & NAPs
- **Finance**: Joint financing via public, private, international & domestic sources
- **Action**: Transformative & systemic, using the ecosystems perspective, addressing many issues – including biodiversity loss – in wide range of land- and seascapes areas;
- **Communication & awareness raising tool**: easy to communicate seen as positive by decision makers, business & finance, wider public;
- **Mainstreaming tool**: Integrates, combines & builds upon various established concepts in a “large family”, integrating biodiversity into policy and planning is more explicit than in other ecosystem-based approaches
Concerns (not only from a biodiversity perspective)

- **Misuse as carbon offsetting option**: pushed by ‘climate community’ neglecting need for rapidly phasing out fossil fuel emissions, carbon sequestration limits or tipping points.

- **Lack of stakeholder & rightsholder involvement**: privatization & commodification of nature; marginalization of stakeholders & limited involvement of IPLCs; lack of clear reference to fair and equitable sharing of benefits.

- **‘Tyranny of trees’ & focus on restoration only**: Neglecting conservation, overlooking crucial biodiversity values of other non-forested ecosystems; use of non-native species.

- **Lack of adequate monitoring**: need for robust monitoring frameworks that cover multiple benefits (not only carbon).

- **Broadness/vagueness of concept**: oversimplification; inclusion of BECCS, ocean fertilization etc; no clear links with existing approaches.
Comparing NbS with the CBD ecosystem approach

### Nature-based Solutions Global Standard & 8 criteria (IUCN, 2020)

1. Effectively address **societal challenges**
2. Design informed by **scale**
3. Net gain of **biodiversity & ecosystem integrity**
4. Economic **viable**
5. Inclusive, transparent and empowering **governance** processes
6. Equitably balance **trade offs** between primary goal & multiple benefits
7. **Adaptive management** based on evidence
8. **Sustainable & mainstreamed** within appropriate jurisdictional context

### Ecosystem approach & 12 principles (CBD, 2004)

1. Resource management **objectives** a matter of **societal choice**
2. Management **decentralized** to the lowest appropriate level
3. Consider the **effects** (actual or potential) of activities on adjacent & other ecosystems
4. Recognise potential **gains** from management & manage the ecosystem in **economic context** (market distortions, incentives, internalize costs & benefits)
5. **Conservation** of ecosystem structure & functioning as priority target
6. **Manage** ecosystems **within limits** of their functioning
7. Appropriate **spatial & temporal scale**
8. **Long-term objectives**, recognizing temporal scales, lag-effects
9. **Change management**
10. Appropriate **balance** between conservation & use
11. Consider all forms of **information, IPLC knowledge & practices**
12. Involve **all relevant sectors** of society & science

Based on GIZ, IIID, UFZ (2022) & GYBN (2022)
Conclusion – What is needed?

**More trust-building** among policymakers, planners, practitioners (in particular within CBD community) including by:

1) **Ensuring the quality, credibility & clear scope of NbS** by operationalizing the definition (UNEA 5) making effective use of existing and applied **concepts**, **safeguards, principles** (e.g. CBD), **criteria** and **standards** (e.g. IUCN, etc); BECCS, ocean fertilization, etc. are no NbS!

2) **Planning & implementing NbS with, by and for people**: empowering & engaging local people; securing land rights; ensuring decision making; showing that own actions matter; operationalizing core governance principles (e.g. socially inclusive and rights based approaches, benefit sharing, and adaptive management).

3) **Keeping the dual role of biodiversity in mind**: biodiversity as a mean to address societal challenges + biodiversity benefits as a key outcome maintaining and increasing ecosystem integrity; e.g. balance between conservation, restoration and sustainable use.

4) **Better evaluating the full range of benefits**: go beyond carbon and measure what matters (e.g. human wellbeing, ecosystem services, resilience, biodiversity); identify, manage, and mitigate trade-offs and conflicts.
Thank you very much for your attention!

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New thematic paper series by GIZ, IISD and UFZ on synergies between biodiversity and climate policy frameworks available here:

https://www.adaptationcommunity.net/

1. Linkages and synergies between international instruments on biodiversity and climate change
2. The role of science–policy–practice interfaces for ensuring coherent policies and actions
3. Nature-based solutions: an approach for joint implementation of climate and biodiversity commitments
4. Good governance for integrated climate and biodiversity policy-making
5. From national to local implementation: a collaborative, multi-level effort to achieve joint climate and biodiversity goals
6. Delivering financing for joint biodiversity and climate solutions
Backup Slides
Terms under CBD: Ecosystem-based approach & Ecosystem Approach & Nature-based Solutions

Under the CBD, NbS were originally discussed as “ecosystem-based approaches”

= Umbrella term for various ecosystem-based planning and management approaches. In CBD context ecosystem-based approaches for climate change adaptation (EbA) and disaster risk reduction (Eco-DRR) are important.

Sometimes mixed up with ecosystem approach, described by the Convention on Biological Diversity (CBD, 2000) is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way

= primary framework for action under the CBD and therefore the term ecosystem-based approaches at present is preferred by many member countries. (CBD, 2004).

But CBD Technical Series 93 also refers to NbS as an umbrella concept for various ecosystem-based approaches (e.g. EbA and EcoDRR)
### All EbA & Eco-DRR measures qualify as NbS

<table>
<thead>
<tr>
<th>Hazard/climate change impact</th>
<th>Ecosystem type</th>
<th>EbA or Eco-DRR intervention options</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drought</td>
<td>Mountains and forests</td>
<td>Sustainable mountain wetland management</td>
<td>Improved water regulation</td>
</tr>
<tr>
<td>Soil erosion</td>
<td></td>
<td>Forest and pasture restoration</td>
<td>Erosion prevention</td>
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<tr>
<td>Erratic rainfall</td>
<td></td>
<td>Restoration of pastures with deep-rooting native species</td>
<td>Improved water storage capacity</td>
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<tr>
<td>Flood</td>
<td>Inland waters</td>
<td>Conservation of wetlands and peatlands</td>
<td>Improved water storage capacity</td>
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<tr>
<td>Drought</td>
<td></td>
<td>River basin restoration</td>
<td>Flood risk reduction</td>
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<tr>
<td>Erratic rainfall</td>
<td>Agriculture and drylands</td>
<td>Transboundary water governance and ecosystem restoration</td>
<td>Improved water provisioning</td>
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<tr>
<td>Temperature increase</td>
<td></td>
<td>Ecosystem restoration and agroforestry</td>
<td>Improved water storage capacity</td>
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<tr>
<td>Shift of seasons Drought</td>
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<td>Intercropping of adapted species</td>
<td>Adaptation to higher temperatures</td>
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<td>Extreme heat</td>
<td>Urban</td>
<td>Using trees to adapt to changing dry seasons</td>
<td>Adaptation to shifting seasons</td>
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<tr>
<td>Temperature increase</td>
<td></td>
<td>Sustainable livestock management and pasture restoration</td>
<td>Improved water provisioning</td>
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<td>Floods</td>
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<td>Drought resilience by sustainable dryland management</td>
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<td>Erratic rainfall</td>
<td>Marine and coastal</td>
<td>Green aeration corridors for cities</td>
<td>Heat wave buffering</td>
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<td>Storm surges</td>
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<td>Storm water management by green spaces</td>
<td>Adaptation to higher temperatures</td>
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<td>Cyclones</td>
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<td>River restoration in urban areas</td>
<td>Flood risk reduction</td>
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<td>Sea level rise</td>
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<td>Green facades for buildings</td>
<td>Improved water regulation</td>
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<td>Salinization</td>
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<tr>
<td>Temperature increase</td>
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<tr>
<td>Ocean acidification</td>
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Source: CBD, 2019

[https://www.cbd.int/ts/]
Fig. 1. Conceptual representation of the NbS umbrella for five categories of ecosystem-based approaches (adapted from Fig. 6 Cohen-Shacham et al., 2019). Acronyms used: Ecological Restoration (ER); Ecological Engineering (EE); Forest Landscape Restoration (FLR); Ecosystem-based Adaptation (EbA); Ecosystem-based Mitigation (EbM); Climate Adaptation Services (CAS); Ecosystem-based Disaster Risk Reduction (Eco-DRR); Natural Infrastructure (NI); Green Infrastructure (GI); Ecosystem-based Management (Ebmgt); Area-based Conservation (AbC). The approaches in brown dashed boxes are those selected for the comparative analysis. The lower circles represent the societal challenges they address: climate change, food security, water security, disaster risk, human health, and social and economic development.

Source: Cohen-Shacham, E., et al 2019: Core principles for successfully implementing and upscaling Nature-based Solutions
Fig. 2. Extent to which each of the eight NbS principles is included within the principles of the other five analyzed approaches. Line weight represents the number of times the NbS principle is referenced in the principles of other frameworks’ (dashed lines = one time, thin lines = two times, thicker lines = three times). Codes for each NbS principle are provided in Table 1.

Source: Cohen-Shacham, E., et al 2019: Core principles for successfully implementing and upscaling Nature-based Solutions