



Submission from the Secretariat of the Convention on Biological Diversity on ecosystems, interrelated areas such as water resources and adaptation under the Nairobi work programme

The linkages between climate change, biodiversity and ecosystem services are well established and reflected in various decisions of the Conference of the Parties to the Convention on Biological Diversity (CBD). A number of activities have been undertaken by the CBD Secretariat which address the role of biodiversity and ecosystems for adaptation, such as ecosystem-based approaches for climate change adaptation.

The CBD Secretariat recently published a comprehensive study on ecosystem-based approaches for climate change adaptation and disaster risk reduction (EbA and Eco-DRR): **CBD Technical Series No. 85: Synthesis report of experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction**. The report compiles experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction from around the world, and provides an analysis of challenges, lessons learned and opportunities related to their design and implementation. The report highlights, through various case studies, the role of biodiversity and ecosystems in helping people adapt to the adverse effects of climate change. Many of the examples given below in this submission are taken from this report. The synthesis report is available at: <https://www.cbd.int/doc/publications/cbd-ts-85-en.pdf>.

Below is information addressing the specific topics mentioned in the call for submissions.

1. Adaptation planning processes addressing ecosystems and interrelated areas such as water resources

Climate Change Adaptation Database

The CBD Secretariat developed a Climate Change Adaptation Database which gathers information and tools for the integration of biodiversity and ecosystem considerations within adaptation planning from a number of partners. The database provides information to support countries in integrating climate change impacts and response activities into their National Biodiversity Strategies and Action Plans (NBSAPs), and/or integrating biodiversity and ecosystem considerations into their climate change national adaptation plans. The database is available at: <https://adaptation.cbd.int/>.

Synergies between National Biodiversity Strategies and Action Plans and National Adaptation Plans

Synergies can be realized at national level by linking national adaptation plans (NAPs) and NBSAPs, key planning tools for implementing the United Nations Framework Convention on Climate Change (UNFCCC) and the CBD. There is much overlap between the NAP and NBSAP processes, which both include stakeholder engagement, assessment of status and trends, knowledge management, and prioritization of actions. Promotion of synergies between the two processes will aid countries in meeting international obligations for climate change and biodiversity conservation, reduce vulnerability to climate change by building adaptive capacity and resilience, avoid duplication in actions to address threats of climate change and biodiversity, and ensure consistency in policy development and project implementation.

The CBD Secretariat has been collaborating and providing input to different processes under the UNFCCC, including the Least Developed Countries Expert Group (LEG) to support and promote integration of NAPs and NBSAPs. For example, the CBD Secretariat supported the participation of biodiversity experts in the NAP Expo 2016 (from 11-15 July 2016), with the aim of enhancing synergies between the biodiversity and climate change planning processes at national level. In addition, the CBD organized a half-day session during the meeting on ecosystem-based approaches to climate change

adaptation and disaster risk reduction. The NAP Expo provided various opportunities for CBD-selected participants to interact with other participants, in particular those in charge of climate change adaptation plans. Participants actively participated in discussions and shared experiences with integrating biodiversity and ecosystem services into national climate change adaptation planning. Similar input was provided during past regional training workshops on NAPs organized by the LEG.

Integration of biodiversity and ecosystems in Nationally Determined Contributions

The Conference of the Parties to the CBD, at its thirteenth meeting, in December 2016, adopted a decision on biodiversity and climate change (decision XIII/4)¹, which encourages Parties and other Governments, when developing their Nationally Determined Contributions and, where appropriate, implementing associated domestic measures, to fully take into account the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, and to integrate ecosystem-based approaches, involving the national focal points to the Convention on Biological Diversity in this work and ensuring that information and tools and guidance developed under the Convention on Biological Diversity are used, as appropriate.

Findings from the synthesis report on experiences with EbA and Eco-DRR²

A review of fifth national reports to the CBD, NBSAPs, relevant literature and project portfolios unveiled details and lessons learned from several case studies of integrating EbA and Eco-DRR into national policies (NBSAPs, National Adaptation Programmes of Action (NAPAs), and NAPs).

Challenges

Several challenges in mainstreaming EbA and Eco-DRR have been identified by Parties to the CBD in their fifth national reports. For example, a key challenge raised by Eritrea in its fifth national report is the lack of coordination among multiple agencies. Other challenges include limited timeframes. As identified by South Africa in its fifth national report, mainstreaming requires institutional changes, which may take seven to ten years – which is beyond the lifetime of typical adaptation projects. In Samoa, a key barrier to implementing EbA projects identified in the adaptation strategy is a lack of financial and human resources and data on baseline conditions, and the need for improved institutional and legal frameworks. The challenges of ensuring project sustainability was also mentioned. Other challenges include scaling-up field interventions to increase the geographic scope and impact of interventions, facilitate replication, or expand into national-level programmes and plans.

Lessons learned

Integrating and mainstreaming EbA and Eco-DRR will require bringing together different actors and expertise across sectors and encouraging multidisciplinary approaches at the project implementation and policy levels. The development and review of national adaptation plans and national biodiversity strategies and action plans presents an important opportunity to promote EbA and Eco-DRR. NAPs and NBSAPs can be effective instruments for mainstreaming ecosystem-based approaches for adaptation and disaster risk reduction into development plans and processes, and into sectoral policies. There are similarities in these processes and considerable opportunity for them to be mutually reinforcing.

2. Monitoring and evaluating the implementation of ecosystem-based adaptation

Preparation of guidelines for the design and implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction

In decision XIII/4, the Conference of the Parties to the CBD requests the Executive Secretary to prepare, subject to the availability of resources, in collaboration with relevant organizations, in particular the United Nations Framework Convention on Climate Change and the United Nations Office for Disaster Risk Reduction, voluntary guidelines for the design and effective implementation of ecosystem-based

¹ <https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-04-en.pdf>

² <https://www.cbd.int/doc/publications/cbd-ts-85-en.pdf>

approaches to climate change adaptation and disaster risk reduction, and to ensure that the voluntary guidelines consider existing guidance and include information on, inter alia, tools for assessing the effectiveness of ecosystem-based approaches to climate change adaptation and disaster risk reduction while safeguarding biodiversity at various scales and tools, and indicators for monitoring the effectiveness of ecosystem-based approaches to climate change adaptation and disaster risk reduction.

Findings from the synthesis report on experiences with EbA and Eco-DRR

Challenges

The analysis of national reports and submissions to the CBD revealed that monitoring and evaluation frameworks were not often reported on, but several countries identified lack of capacity as a key challenge, including insufficient technical capacity and finances leading to problems with periodic data collection and monitoring protocols.

Monitoring and evaluation challenges identified in the GEF-funded project, “Implementation of Pilot Adaptation Measures in coastal areas of Dominica, St. Lucia and St. Vincent and the Grenadines” included:

- a) Lack of clear links between the objectives, outputs and indicators;
- b) Indicators that were not measurable or were not relevant to EbA;
- c) Monitoring and evaluation tools should have been incorporated in each activity, and appropriate instruments for measurement, registry and stocking of information should have been included. Their absence in several pilot activities (in some cases due to increased costs resulting from the purchase of such tools) has prevented a more accurate and detailed gathering of information.

Monitoring and evaluation were identified as a specific concern for the government of Palau in its fifth national report. However, this has been addressed by using community members’ often extensive anecdotal knowledge of local environmental conditions, which is valuable in bridging some information gaps.

Improved monitoring and evaluation methods are needed, particularly methods with some level of standardization, if appropriate, which will enable comparisons between EbA approaches. Currently much evaluation is anecdotal, has not been peer-reviewed, and focuses mainly on success stories

Lessons learned

Monitoring and evaluation is also necessary for adaptive management – needed in all adaptation processes given the uncertainty inherent in climate change projections – which enables a flexible approach in the face of uncertainty of future climate impacts. Adaptive management enables incorporation of relevant information as it becomes available (for example on emerging local changes due to climate change), and maintaining flexibility and diversity in approaches.

Opportunities

A variety of innovative tools for monitoring and evaluation have been developed and could be adopted to a greater extent. For example, the CBD and the Biodiversity Indicators Partnership have developed a series of factsheets and potential indicators to assist with national implementation of activities related to the Strategic Plan for Biodiversity 2011-2020 and Aichi Biodiversity Targets³. Regional facilitators to assist in biodiversity indicators development are also available⁴.

3. Tools for assessing the benefits of mitigation and adaptation to enhancing resilience and emissions reductions that ecosystem-based adaptation provides

³ The Strategic Plan Indicators Factsheets are available via a searchable database at <http://www.cbd.int/sp/indicators/>.

⁴ Regional facilitators can be contacted via <http://www.bipnational.net/GetInvolved/FindaFacilitator>

Here are some of the tools identified in the synthesis report on EbA and Eco-DRR:

The Toolkit for Ecosystem Service Site-based Assessment (TESSA)

Piloted in protected areas, TESSA guides non-specialists through methods for identifying which ecosystem services may be important at a site, and for evaluating the magnitude of benefits that people obtain from them currently, compared with those expected under alternative land-use.

<http://www.birdlife.org/datazone/info/estoolkit>

Integrated Valuation of Environmental Services and Tradeoffs (InVEST)

InVEST is a suite of software models used to map and value the goods and services from nature that sustain and fulfil human life. This tool enables decision makers to assess quantified trade-offs associated with alternative management choices and to identify areas where investment in natural capital can enhance human development and conservation. <http://www.naturalcapitalproject.org/InVEST.html>

Exploring Nature-Based Solutions: The role of green infrastructure in mitigating the impacts of weather- and climate change-related natural hazards

This report proposes a simple, practical methodology for screening (rather than assessing) ecosystem services in areas where green infrastructure may contribute to reducing current (or future) weather- and climate-related natural hazards. The hazards addressed include landslides, avalanches, floods, soil erosion, storm surges and carbon stabilization by ecosystems. Several case studies at the European level outline the screening process and also summarize recent estimates of the economic value of green infrastructure.

<http://www.eea.europa.eu/publications/exploring-nature-based-solutions-2014>

Risk and Vulnerability Assessment Methodology Development Project (RiVAMP) in Jamaica

This training manual was developed by UNEP to provide instruction on how to implement a methodology that helps to quantify the role of ecosystems in DRR and climate change adaptation, based on a pilot project implemented in Jamaica from 2009-2010.

http://www.grid.unep.ch/products/3_Reports/RiVAMP_Training_2012.pdf

The Panorama Initiative: a IUCN-led effort to collate case studies that showcase how protected areas provide solutions to some of the world's key challenges, including climate change. The online platform allows practitioners to share their stories and to learn about how others have tackled problems drawing on protected area solutions across the globe. www.panorama.solutions