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MAIN FINDINGS AND KEY MESSAGES

85

Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction

UNEP

Convention on Biological Diversity

Introduction

In decision XII/20, paragraph 7, the Conference of the Parties requested the Executive Secretary to compile experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction and to share them through the clearing-house mechanism. Pursuant to this request, a synthesis report was prepared by a consultant in coordination with the Secretariat and with input and guidance from a technical reference group comprising experts from international organizations. Input and comments were also received from participants in the technical workshop on ecosystem-based approaches to climate change adaptation and disaster risk reduction, held in Sandton, South Africa, from 28 September to 2 October 2015. The synthesis report is published in Technical Series No. 85: *Synthesis report on experiences with ecosystem-based approaches to climate change adaptation and disaster risk reduction*.

In this brochure, the main findings and key messages of the synthesis report and workshop are presented. The full report is available at: www.cbd.int/doc/publications/cbd-ts-85-en.pdf.

Main Findings and Key Messages

What are EbA and Eco-DRR?

1. Ecosystem-based adaptation (EbA) is 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. EbA aims to maintain and increase the resilience and reduce the vulnerability of people and the ecosystems they rely upon in the face of the adverse effects of climate change. The ecosystem-based approach has been recognized as an important strategy for disaster risk reduction (Eco-DRR), defined as "sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development".
2. EbA and Eco-DRR enable people to adapt to the impacts of climate change and disasters by using opportunities created by sustainably managing, conserving and restoring ecosystems to provide ecosystem goods and services. EbA and Eco-DRR further aim to maintain and increase resilience and reduce vulnerability of ecosystems and people to adverse effects of climate change, and should therefore be integrated into broader adaptation and development strategies.
3. EbA and Eco-DRR overlap in practice, and both build upon and use approaches that already exist in the practices of biodiversity and ecosystem conservation, climate change adaptation and livelihood development. Examples include implementing forest and grasslands conservation to protect communities and settlements from erosion and sandstorms, or integrating vegetation into urban spaces such as in green walls and green roofs, to reduce the urban heat island effect and improve air quality.

Why Use EbA and Eco-DRR?

4. EbA and Eco-DRR can deliver multiple benefits beyond adaptation and reducing disaster risk. Examples include the restoration and conservation of coastal vegetated ecosystems such as mangroves for protection from storm surges, which also enhances carbon sequestration as well as community engagement and livelihood opportunities. Many other examples and case studies are provided in the synthesis report.
5. Other benefits include the potential cost-effectiveness of EbA and Eco-DRR approaches, and their contribution to sustainable livelihoods by maintaining the ecosystem services that provide clean water, food and fibre; supporting poverty reduction; heritage conservation; and preservation of local identities.
6. Quantifying the economic benefits of EbA and Eco-DRR may be difficult given the nascent implementation stage of programmes and activities, and given that non-monetary benefits, such as cultural, spiritual, research or educational benefits, can be difficult to quantify. However, economic valuation has been shown in several cases to effectively demonstrate costs and benefits of EbA and Eco-DRR measures, and should be part of a suite of measures and incentives to encourage the implementation of ecosystem-based approaches when appropriate.
7. Costs and benefits may also not be distributed equally among stakeholders or sectors of society, creating incentives for some to implement EbA, but not for others. Methodologies for understanding how the benefits and costs of EbA are distributed are therefore essential for evaluating EbA benefits.
8. Communicating the benefits of EbA and Eco-DRR requires a planned, systematic approach to understanding the interests of stakeholders and beneficiaries, and approaches need to be tailor-made to the local context, culture and traditions.

Trade-offs and Thresholds of EbA and Eco-DRR

9. The consideration of trade-offs or unintended consequences when implementing EbA and Eco-DRR should be present throughout the risk assessment, scenario planning, and adaptive management approaches for EbA and Eco-DRR implementation. In addition to monitoring the short-term provisions of services, managers should also monitor the long-term evolution of slowly changing variables.
10. There may be limitations to using ecosystem-based approaches for adaptation to climate change or disaster risk reduction. Ecosystems are subject to climate change impacts, and therefore ecosystem-based approaches can also be vulnerable to climate change. EbA and Eco-DRR should also be considered within overall integrated adaptation or disaster risk reduction (DRR) strategies.

Implementing, Monitoring and Evaluation

11. Project implementation can be hampered by different understandings of concepts and different values regarding ecosystems and biodiversity. In achieving adaptation and DRR objectives, it is important to be tolerant and flexible with different terminologies, and strive for maximum implementation on the ground.

12. Increased engagement is needed between the scientific and development communities, and project executors, in developing and implementing EbA and Eco-DRR policies and activities, making use of available guidance to ensure optimal and appropriate use of ecosystems for adaptation and DRR.
13. Eco-DRR and EbA are cross-disciplinary fields and require effective engagement and coordination of multiple stakeholders such as engineers, academics, local and indigenous communities, civil society and the private sector. EbA and Eco-DRR would benefit from effective mechanisms for promoting co-production of knowledge between stakeholders and channeling this knowledge into decision-making.
14. Guidelines on implementing EbA and Eco-DRR at the local and sectoral levels can aid in the increased use of ecosystem-based approaches and effective implementation of policy.

Assessing Vulnerabilities, Impacts, Hazards & Risks

15. EbA and Eco-DRR options should be selected and implemented based on guidance from vulnerability assessments that take into consideration the underlying drivers of change, existing policies, and community perceptions. For example, drivers of vulnerabilities may include limited access to land or land tenure, poor land-use planning, and unsustainable practices by communities and land users.
16. Limits to be EbA and Eco-DRR must be recognized in addressing adaptation and disaster risk reduction. Ecosystems can only support adaptation if they maintain functionality under a changing climate; thus it is important to analyse potential vulnerabilities of the EbA options themselves to climate change impacts.
17. In promoting adaptation to climate change, it is important to consider unifying frameworks and concepts that recognize the linkages between people and ecosystems as integrated socioecological systems, rather than viewing adaptation through only a social or human lens.
18. Care is needed to avoid conflating two strongly and closely related processes: 1) the identification of vulnerable ecosystems which need to be protected and managed for biodiversity conservation; and 2) the identification of ecosystems, whether they are vulnerable or not, that can support people as they adapt – in the latter case, it is important to also assess people's vulnerability to climate change.

Integrating EbA and Eco-DRR into Planning and Policy

19. The international policy arena supports and promotes ecosystem-based approaches to adaptation and disaster risk reduction, including the Sustainable Development Goals (SDGs) recently adopted by the UN General Assembly. The SDGs include making cities inclusive, safe, resilient to disasters and sustainable (SDG 11), taking urgent action to combat climate change and its impacts (SDG 13), conserve and sustainably use oceans, seas and marine resources for sustainable development (SDG 14), and sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss (SDG 15), in addition to a number of other proposed goals related to sustainable development, poverty reduction, biodiversity conservation and sustainable use.
20. EbA and Eco-DRR can be scaled up through effective mainstreaming into policy and practice. This needs to take place at multiple levels of policymaking, planning, programming, budgeting, and implementation. Embedding EbA and Eco-DRR into all relevant sectors, ministries and national plans can provide an enabling framework and direct funding towards implementation.
21. Mainstreaming of EbA and Eco-DRR is most effective when top-down and bottom-up approaches converge. It is important to engage indigenous peoples and local communities as well as practitioners in policymaking processes, and ensure that knowledge, lessons and experience feed into policymaking processes.
22. Many countries have mainstreamed EbA and Eco-DRR into national plans, strategies and targets, including national biodiversity strategies and action plans (NBSAPs) under the Convention on Biological Diversity (CBD), national adaptation programmes of action (NAPAs) under the United Nations Framework Convention on Climate Change (UNFCCC), disaster management plans, development policy, and drought relief policy. Case studies of mainstreaming EbA and Eco-DRR through these national plans, strategies and targets are provided in this report.
23. Institutional arrangements and structures to enhance coordination across sectors are critical. EbA and Eco-DRR are cross-sectoral and therefore can be best led by a government body that has coordinating powers over sectoral ministries.
24. Capacity-building for Eco-DRR/EbA for different stakeholders at different levels is needed in order to support mainstreaming efforts. Awareness among national and sectoral policymakers and decision makers could be further enhanced, and technical skills need to be developed in many countries to enable more effective implementation of Eco-DRR and EbA approaches.

Synergies and Cooperation

25. Conserving, restoring and sustainably managing ecosystems can deliver on a number of national, regional and international development priorities and obligations, including enhancing people's resilience to climate change and disasters, supporting biodiversity, and protecting food, water and livelihood security, especially of vulnerable populations.
26. Cooperation among ecosystems/biodiversity, adaptation, development and disaster reduction communities results in a greater ability to design interventions that deliver multiple benefits.
27. Strong coordination between focal points for multilateral environmental agreements (MEAs) such as the Ramsar Convention, United Nations Convention to Combat Desertification (UNCCD), UNFCCC, and CBD can help to ensure synergies between MEAs are harnessed.
28. Knowledge-sharing should be scaled up at the local, national, regional and global levels between and across different disciplines, and there should be continued use of knowledge-sharing platforms such as the Nairobi work programme under the UNFCCC, or the Paris Committee on Capacity-building established at the twenty-first session of the Conference of the Parties to UNFCCC (UNFCCC COP21).
29. Designing interventions for multiple benefits can be supported by creating space and incentives for collaboration and dialogue about trade-offs, establishing political commitment to integrated approaches, clarifying roles and responsibilities of various institutions, and encouraging financial support to integrated action.

Monitoring and Evaluation

30. Monitoring and evaluation are important policy instruments that can enable review of policies and plans based on progress made and challenges encountered. It is important to consider both risk-informed decision-making and opportunity-informed decision-making.
31. A variety of innovative tools for monitoring and evaluation have been developed; for example, the CBD and the Biodiversity Indicator Partnership have developed a series of factsheets and potential indicators to assist with national implementation of activities.

Opportunities and Entry-points for EbA and Eco-DRR Implementation

32. Coastal vegetation restoration and conservation can provide carbon sequestration benefits, being important opportunities for implementation of EbA and Eco-DRR.
33. Disasters can provide an opportunity to "build back better", and to incorporate opportunities provided by nature and ecosystems to reduce disaster risk, such as mangrove conservation initiatives.
34. Opportunities to cooperate with the private sector exist and can be enhanced, such as through initiatives that engage the insurance sector in providing support for policy reform, land-use planning, capacity-building and technology transfer.
35. Multidisciplinary collaborations to enhance health and conservation initiatives can provide impetus for implementation of EbA and Eco-DRR measures to contribute to increasing resilience of communities in terms of health and well-being.

Contribution of Indigenous Peoples and Local Communities

36. Indigenous peoples and local communities (IPLCs) have long managed variability, uncertainty and change through multigenerational histories of interaction with the environment.
37. Traditional knowledge is an important part of the ecosystem approach, can complement science, and bridge gaps in information. Indigenous, traditional and local knowledge systems – and forms of analysis and documentation such as community mapping – can play a significant role in identifying and monitoring climatic, weather and biodiversity changes and impending natural hazards, similar to early warning systems.
38. Effective EbA and Eco-DRR should consider the kind of support that communities need for adaptation and DRR (e.g. through needs assessments). Taking into account the differentiated needs of indigenous peoples and local communities (IPLCs) is necessary since interventions that do not consider needs, roles, aspirations, etc. can be detrimental to IPLCs' livelihoods and cultures. Processes should ensure prior and informed consent and government and other institutional support, including resource mobilization, promotion for community-led initiatives, and respect for local forms of governance.
39. Further awareness and protocols are needed regarding the processes of consultation and community engagement throughout all steps of the project, including inception and planning. Involving communities creates ownership of processes that in turn can ensure the sustainability of the project in the long run.

Gender Mainstreaming

40. Different genders use and value ecosystems differently, which is an essential consideration for EbA and Eco-DRR activities, when assessing vulnerabilities to climate change, and associated risks.
41. Gender mainstreaming should thus be a significant aspect of adaptation and disaster risk reduction planning and implementation processes in order to ensure success and sustainability of policies, programmes and projects.
42. The inclusion of all segments of society – men, women, children, minorities and ethnic groups – is important at all stages of decision-making.
43. There is a need for capacity-building to understand gender issues for effective implementation of EbA and Eco-DRR initiatives, for monitoring and evaluation of the impacts of gender mainstreaming, and for associated budgeting/resource mobilization for these activities.

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