

# Making EbA an effective part of balanced adaptation strategies: Introducing the UNEP EbA briefing notes

Adaptation to climate change is about helping people and economies thrive in the face of a changing climate. As adaptation solutions can often be found in nature, this has given rise to the concept of ecosystem-based adaptation (EbA). EbA has grown in profile and importance since it was officially defined by the Convention on Biological Diversity (CBD) in 2009. The concept has been embraced by intergovernmental and non-governmental organisations across the globe, and EbA projects have proliferated: a 2015 mapping exercise of EbA projects implemented by just three institutions identified over 150 initiatives.<sup>1</sup> EbA also figures highly on the agendas of national and international policy makers<sup>2</sup> and donors.<sup>3</sup>

Building on this momentum to increase the use and positive impacts of EbA requires a consistent understanding of what EbA is, its potential benefits and limitations, and how it can fit into the wider context of climate change adaptation and mitigation, biodiversity conservation, human development and sectoral plans.

This briefing note serves as an introduction to the series, with a focus on creating conceptual clarity on EbA and its relation to other related approaches, as well as how EbA is key to achieving a much needed paradigm shift. The briefing note series aims to help its readers (especially the United Nations Environment Programme staff, project teams and consultants) to make best use of EbA as part of a balanced approach to addressing climate change adaptation. The briefing notes aim to foster a common understanding of key concepts, issues and considerations to help design, plan and implement successful EbA initiatives. They highlight issues that need to be addressed and potential trade-offs and tensions that need to be resolved to enable EbA to form part of – and contribute to – the wider landscape of climate change adaptation in the context of sustainable development.

Besides academic and grey literature on EbA criteria, standards, principles, best practice and effectiveness, the briefing notes are informed by a review of UNEP's Climate Change Adaptation Unit (CCAU) portfolio of Global Environment Facility (GEF) and Adaptation Fund EbA projects. This review assessed 46 EbA projects systematically using an analytical framework designed to gather information on their alignment with best practice for EbA design, planning, implementation and effectiveness criteria and to identify common practice and examples from the CCAU EbA portfolio.

The series comprises seven briefing notes, starting with this introduction (1) and covering: (2) navigating the adaptation challenge; (3) EbA measures in different ecosystem contexts; (4) selecting complementary adaptation measures; (5) developing the economic case for EbA; (6) integrating EbA into national planning; and (7) identifying UNEP's role in supporting EbA work.

All of the notes emphasise policy relevance and considerations for monitoring and evaluation (M&E) – both crucial for ensuring effectiveness, upscaling and long-term sustainability.

# Gaining conceptual clarity: defining and understanding EbA

As defined by the CBD, EbA is 'the use of biodiversity and ecosystem services as part of an overall strategy to help people adapt to the adverse effects of climate change.' This encompasses 4 core elements:

1. The use of biodiversity and ecosystem services
2. To help people
3. Adapt to climate change
4. As part of an overall adaptation strategy

All of these are essential to effective EbA (Box 1).

### Box 1. True and effective EbA encompasses all elements of the EbA definition:

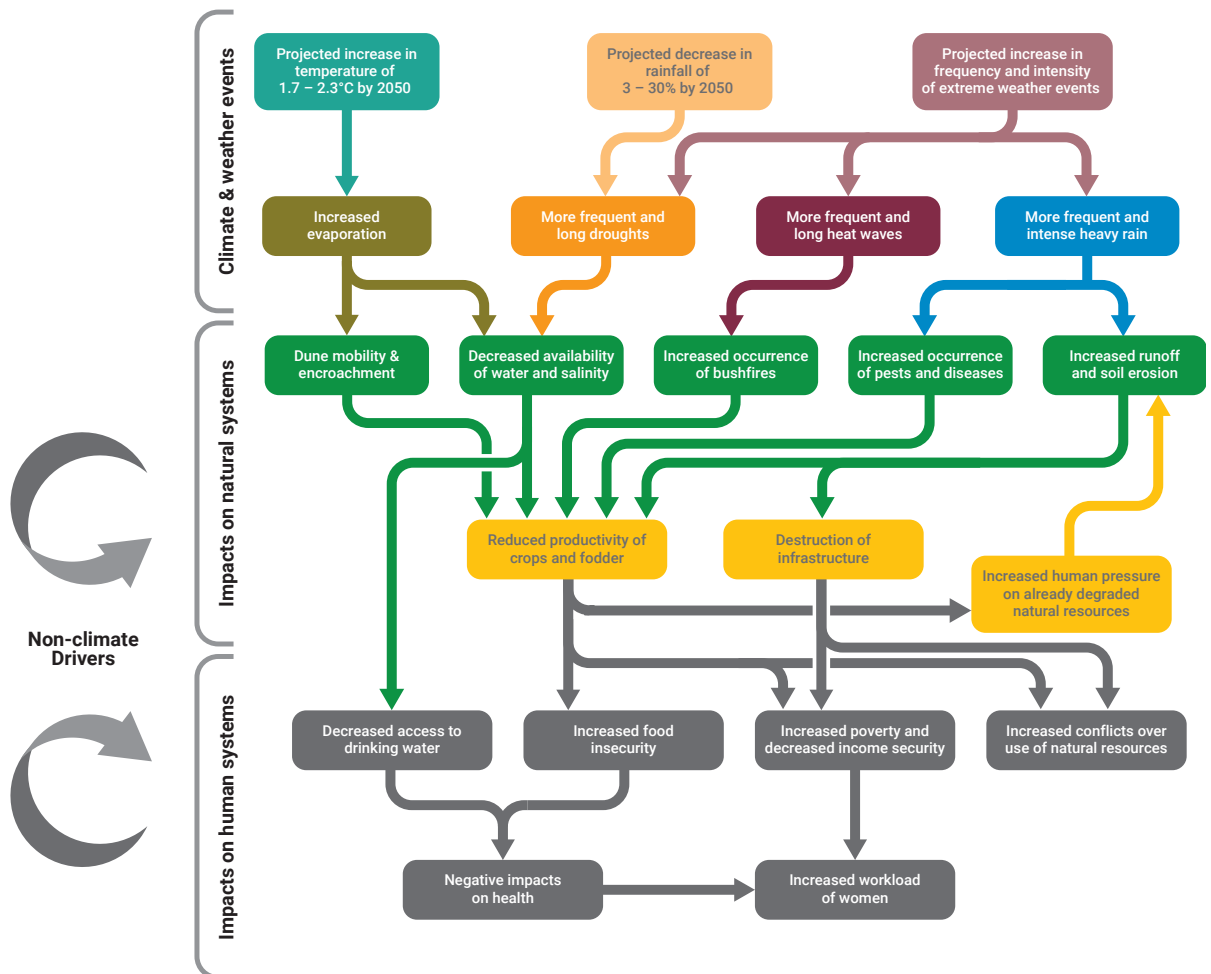
*'Leave out #1 (nature) and you aren't using the tools available for an ecosystem-based approach, so it's not EbA. Leave out #2 (people) and you are missing the point of EbA entirely. And what about #3? If you are just repackaging your old work without considering climate change, you aren't helping anyone adapt. And finally, #4. EbA was never meant to be a stand-alone activity. It is only effective when combined with other measures that help people adapt to change.'*<sup>4</sup>

As humans depend directly on ecosystems and their goods and services for their well-being, ecosystems play a critical role in helping people adapt to climate change.

Healthy ecosystems provide a range of ecosystem services, including buffering human populations from

direct climate impacts (e.g. storm surges), providing vital services amidst changing climatic conditions and supporting existing and new livelihood activities (see Briefing Note 2). Maintaining the full spectrum of ecosystem services can be an important challenge. Often, provisioning services such as crop production and fuel wood production come at the expense of degradation in other ecosystem services such as flood regulation (regulating services) and soil fertility (supporting services). Designing effective adaptation interventions that can help manage resilience in the long term depends fundamentally on a thorough understanding both of the dependencies and interlinkages within a social-ecological system and of the interactions of climatic and non-climatic degradation processes (see Briefing Notes 2 and 3). Climate change is an additional stressor to social-ecological systems – its effects can be understood by first using a climate impacts pathway approach and then adding to it non-climate drivers of vulnerability (Figure 1).

Understanding climate impact pathways helps identify the solutions that can 'break' the impact pathway and protect people from climate change impacts. This will help to select EbA measures based on their ability to reduce the effects of identified climate impacts. Importantly, the EbA measures should in themselves be able to withstand changing climatic conditions over time.



**Figure 1.** Mapping climate impact pathways, as in this example for Mauritania, helps to target EbA and other adaptation measures to address specific climate impacts and contribute to long-term resilience.

As ecosystem health alone cannot always guarantee human resilience, EbA needs to be implemented as an integrated element of a broader adaptation strategy to maximise the effectiveness of adaptation outcomes. In each context, EbA should be considered as one option among engineered and hybrid approaches, as well as social and institutional measures (see Briefing Note 4). The costs and benefits of any adaptation option need to be assessed, and resulting values and trade-offs compared over space and time, both to select feasible options and to ensure equity among stakeholders (see Briefing Note 5). Such information is also key to supporting a case for the integration of EbA into wider adaptation strategies and other sectoral policies and plans (see Briefing Note 6). Political support for EbA can be promoted through investing in the evidence base that underpins adaptation planning, such as climate risk assessments and economic valuation, as well as in training and institutional development.



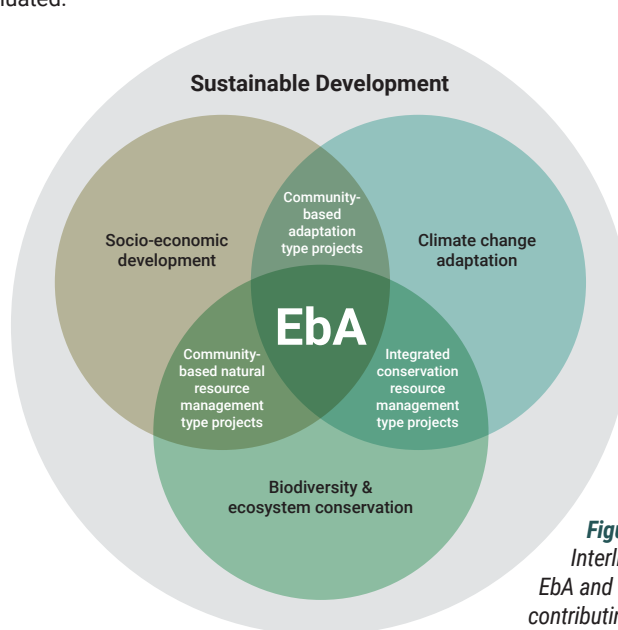
## Situating EbA among related approaches and concepts

While EbA links traditional biodiversity and ecosystem conservation approaches with sustainable socio-economic development, it is not simply a continuation of conservation or development 'business-as-usual'. EbA is distinct from the former in its focus on helping people adapt to climate change and from the latter through its use of nature to facilitate adaptation.

EbA has much in common with other concepts and approaches that link subsets of conservation, development and adaptation (Figure 2), such as community-based adaptation or ecosystem-based disaster risk reduction (Eco-DRR).<sup>5</sup> Clarity over definitions is important for several reasons. First, it will enable design and implementation of interventions with clear objectives linked to climate change and the role of nature in helping people adapt. This will help ensure that appropriate timeframes are considered and M&E systems are established that can track change in relation to those objectives over

time. Secondly, it enables clear communication with implementers of other approaches about EbA and its role, facilitating coherence and collaboration among initiatives. Finally, it helps to identify how other approaches can be a vehicle for EbA. Indeed, the many convergences between EbA and other approaches provide an opportunity for learning and sharing of lessons, including best-practice principles and guidelines.

A useful resource for helping to resolve any lingering confusion around these issues is the Friends of EbA (FEBA)<sup>7</sup> framework for defining qualification criteria and quality standards for EbA.<sup>8</sup> It sets out a number of qualifiers to help identify which projects can indeed be considered EbA, and it provides criteria against which the quality of EbA interventions can be evaluated.



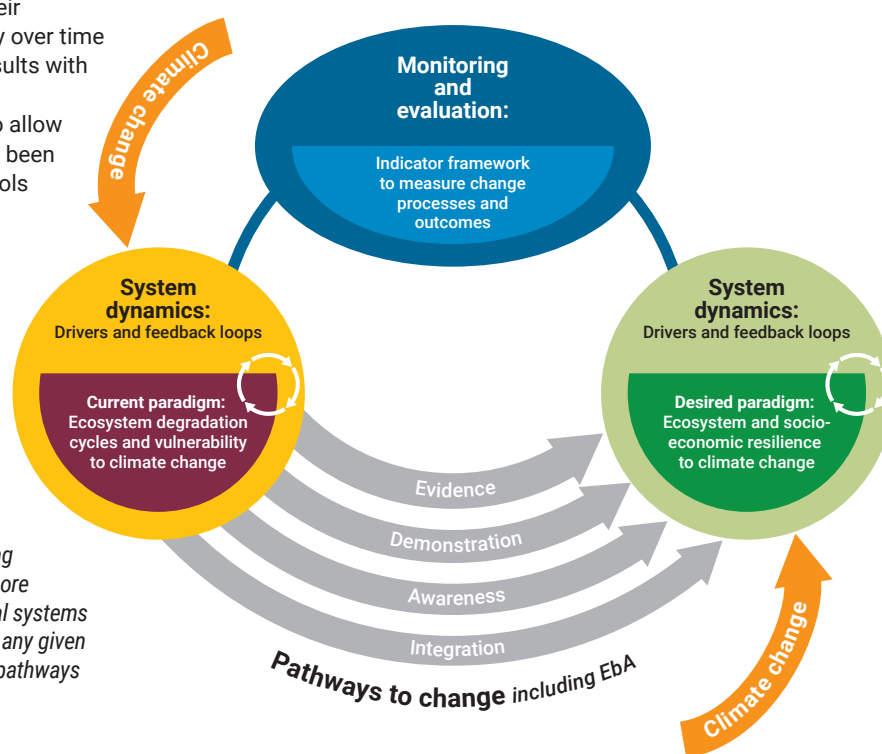
**Figure 2.** Interlinkages between EbA and other approaches contributing to sustainable development (adapted).<sup>6</sup>

# Ensuring quality and achieving effectiveness

Assessing the quality and effectiveness of EbA measures is key to better understanding and deploying EbA, enhancing its benefits and minimising its limitations. While EbA is increasingly being implemented and promoted by many groups as a preferred approach to climate change adaptation, the evidence base remains limited both on its effectiveness in meeting adaptation goals and on its cost-effectiveness (see Briefing Note 5). This knowledge gap needs to be addressed so that solid predictions can be made about the likely performance of EbA measures under different circumstances and how adaptation benefits can be maximised locally. Improved evidence on both aspects of EbA effectiveness will also support the case for increasing donor investment in EbA and help to convince governments to integrate EbA across relevant ministries and budget lines.

Projects need to monitor and evaluate their outcomes and impacts more consistently over time (see Briefing Note 3), as well as share results with the adaptation community so that our understanding of EbA can be improved to allow for truly robust decisions. Initiatives have been set up to build the evidence base,<sup>9</sup> and tools exist to help practitioners assess the effectiveness of their projects.<sup>10</sup>

Ultimately, a paradigm shift is needed – the world must move from the cycles of degradation driven by unsustainable development to making best use of ecosystem services to support resilient societies and economies (Figure 3). Effective EbA can be a key tool for achieving this paradigm shift. UNEP has an important role to play in enhancing uptake and effectiveness of EbA through helping countries set clear adaptation objectives and facilitating progress through evidence generation, demonstration, awareness raising and integration of EbA into policy and budgetary processes. This series of briefing notes aims to provide conceptual frameworks, and highlight tools and methods with which to design EbA projects that contribute to balanced adaptation strategies.



**Figure 3.** The critically important paradigm shift that EbA can help to achieve. We need to shift from vicious cycles of degradation (exacerbated by climate change, and increasing vulnerability to it; see Briefing Note 3) to the more virtuous dynamics of resilient social-ecological systems (Briefing Note 2). The adaptation objective for any given ecosystem must guide this transition and the pathways taken to achieve change.

## Key action points

- Consider the full range of ecosystem services relevant for adaptation.
- Use a climate impact pathways approach to strengthen the climate rationale for projects.
- Design EbA measures that are themselves resilient to climate change.
- Build political support for EbA through building the evidence base, training and institutional development to create the needed paradigm shift.

## References

<sup>1</sup> Osti, M., Woronicki, S., Mant, R. and Munroe, R. (2015) *UNEP's portfolio of ecosystem-based adaptation (EbA) projects around the world – internal summary report*. Cambridge: UNEP-WCMC; Raza Rizvi, A. (2014) *Nature based solutions for human resilience – a mapping analysis of IUCN's ecosystem based adaptation projects*. Washington, D.C.: IUCN; UNDP (2015) *Ecosystem-based adaptation mapping analysis report*. New York: UNDP.

<sup>2</sup> Seddon, N., Hou-Jones, X., Pye, T., Reid, H., Roe, D., Mountain, D. and Rizvi, A.R. (2016) *Ecosystem-based adaptation: a win-win formula for sustainability in a warming world?* IIED Briefing. London: International Institute for Environment and Development.

<sup>3</sup> For example, funding for EbA by the International Climate Initiative (IKI) passed EUR 150 million mark in 2017. In the 2017 round of IKI funding, EbA figured in the top two most frequently submitted proposal areas (FEBA members meeting, November 2017).

<sup>4</sup> Martin, S. (2016) *EBA Revisited, Part 1: disentangling misconceptions about nature and adaptation. Adaptation stories from around the world*. Adaptation Stories. WWF ClimatePrep (available at: <http://www.climateprep.org/stories/2016/6/14/eba-revisited-part-1-disentangling-misconceptions-about-nature-and-adaptation>)

<sup>5</sup> Ecosystem-based approaches to disaster risk reduction (Eco-DRR) has been defined as "the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim of achieving sustainable and resilience development". Estrella, M. and Saalimaa, N. (2013) *Ecosystem-based disaster risk reduction (Eco-DRR): an overview*. In: Renaud, F.G., Sudmeier-Rieux, K., Estrella, M. (eds) *The role of ecosystems in disaster risk reduction*. Tokyo: UNU Press.

<sup>6</sup> FEBA (2017) *Making ecosystem-based adaptation effective. A framework for defining qualification criteria and quality standards*. FEBA Technical Paper for UNFCCC SBSTA 46; Midgley, G.F., Marais, S., Barnett, M. and Wägsæther, K. (2012) *Biodiversity, Climate Change and Sustainable Development – Harnessing Synergies and Celebrating Successes*. The World Bank, Cape Town.

<sup>7</sup> FEBA is an informal network of over 50 organisations interested in promoting collaboration and knowledge-sharing on EbA.

<sup>8</sup> FEBA (2017) *Making ecosystem-based adaptation effective. A framework for defining qualification criteria and quality standards*. FEBA Technical Paper for UNFCCC SBSTA 46.

<sup>9</sup> IIED, IUCN, UNEP-WCMC project *Ecosystem-based approaches to adaptation: strengthening the evidence and informing policy* (available at: <https://www.iied.org/ecosystem-based-approaches-climate-change-adaptation>); FEBA (2017) *Making ecosystem-based adaptation effective. A framework for defining qualification criteria and quality standards*. FEBA Technical Paper for UNFCCC SBSTA 46.

<sup>10</sup> Reid, H., Seddon, N., Barrow, E., Hicks, C., Hou-Jones, X., Kapos, V., Rizvi, A.R., Roe, D. and Wicander, S. (2017) *Ecosystem-based adaptation: question-based guidance for assessing effectiveness*. IIED, London.