Building Resilience With Nature

Maximizing ecosystem-based adaptation through National Adaptation Plan processes

GUIDANCE NOTE







AUTHORS

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ABOUT THE NAP GLOBAL NETWORK

The NAP Global Network was created in 2014 to support developing countries in advancing their NAP processes and help accelerate adaptation efforts around the world. To achieve this, the Network facilitates sustained South–South peer learning and exchange, supports national-level action on NAP development and implementation, and enhances bilateral support for adaptation and climate-sensitive sectors through donor coordination. Financial support for the Network has been provided by Austria, Canada, Germany, and the United States. The Secretariat is hosted by the International Institute for Sustainable Development (IISD). For more information, visit www.napglobalnetwork.org.

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Key Messages

- Climate change directly affects biodiversity, altering the composition and function of ecosystems at an unprecedented speed and thus threatening the services that ecosystems provide. At the same time, ecosystems and biodiversity play a critical role in supporting efforts to reduce the negative effects of climate change.
- Ecosystems and ecosystem services are climate-sensitive themselves and must remain within safe biophysical limits to provide effective mitigation and adaptation as well as socioeconomic development benefits.
- Ecosystem-based adaptation (EbA) is widely recognized as a pillar of nature-based solutions (NbS). EbA is a people-centric approach that is intentionally designed to deliver adaptation outcomes and socioeconomic benefits for people. When well designed and implemented, EbA solutions provide multiple adaptation benefits and can be more cost effective than traditional engineered adaptation solutions.
- The NAP process provides a framework for the purpose of mainstreaming, mandating, and scaling up EbA across national, subnational, and budgetary planning processes. It provides an opportunity to link ecosystems and adaptation planning and prioritize EbA solutions across sectors as part of an overall strategy to help people adapt to climate change.
- The NAP process enables countries to advance the protection of biodiversity with climate adaptation objectives and meet multiple international obligations, reduce vulnerability to the impacts of climate change, and facilitate the integration of climate change adaptation concerns in biodiversity policies, programs, and activities.
- To ensure that EbA solutions are in fact designed to help people adapt and build the resilience of ecosystems, they must address climate hazards, generate adaptation benefits for vulnerable groups, build the resilience of ecosystems, and make sustainable use of biodiversity.

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Acronyms and Abbreviations

ALivE	Adaptation Livelihoods and Ecosystems Planning Tool
CBD	Convention on Biological Diversity
DRR	disaster risk reduction
EbA	ecosystem-based adaptation
FEBA	Friends of Ecosystem-based Adaptation
GCF	Green Climate Fund
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IUCN	International Union for Conservation of Nature
M&E	monitoring and evaluation
NAP	National Adaptation Plan
NbS	nature-based solutions
NDC	Nationally Determined Contributions
SDG	Sustainable Development Goals
UN	United Nations
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change

1 Introduction

Climate change and biodiversity loss are increasingly recognized as major risks affecting ecosystems' ability to provide the services that support our economies and societal wellbeing. Biodiversity underpins ecosystem processes and functions that provide other critical ecosystem services (Convention on Biological Diversity [CBD], 2019). Climate change directly affects biodiversity, consequently altering the composition and function of ecosystems at an unprecedented speed and thus threatening the services ecosystems provide, particularly those that regulate climate and disease control (Dasgupta, 2020). Importantly, ecosystems and biodiversity play a critical role in supporting efforts to reduce the negative effects of climate change. They store and remove carbon from the atmosphere and provide important natural buffers to hazardous events, and thus the effectiveness of most ecosystem services (Kapos et al., 2019), as they are themselves climate-sensitive and must remain within safe biophysical limits (Seddon et al., 2020).

With this in mind, nature-based solutions (NbS) are promoted as "the best way to achieve human well-being, tackle climate change and protect our living planet" (United Nations Environment Program [UNEP], 2020a). The increasing political recognition of the climate change and biodiversity crises and the need to protect and enhance nature's multiple benefits have never seemed more critical, with 2020 being widely referred to as the "Super Year for Nature" (UNEP, 2020b). The COVID-19 pandemic further stresses how human impacts on natural habitats, biodiversity loss, and ecosystem degradation are making "virus spillover" events much more likely (Johnson et al., 2020) and require us to rethink our relationship with nature.

As an umbrella term, NbS comprise various ecosystem-based approaches, such as ecosystembased adaptation (EbA), ecosystem-based disaster risk reduction (DRR), and ecosystem-based mitigation. Specifically, EbA¹ is a means to protect, restore, and enhance ecosystem services to reduce climate change risks and impacts and improve the resilience of people. EbA has the potential to generate economic returns and provide multiple benefits, such as improved health, biodiversity protection, food security, and alternative livelihood opportunities, all of which can build

¹ For the purpose of this paper, ecosystem-based adaptation is the main term used as a sub-category of naturebased solutions. EbA is a well-established, known concept, embraced by the United Nations Framework Convention on Climate Change (UNFCCC) and the CBD. NbS, a more recent concept, is broad in definition and scope. The conceptual difference between EbA and NbS is that NbS is used as an all-encompassing umbrella term for ecosystem-based approaches and EbA is a pillar of the broader NbS concept. This means that EbA solutions are always NbS, but not all NbS are EbA. For more information, see Box 1 in Section 2.

resilience to climate change. With over 10 years of application in global and local contexts,² EbA has emerged as an essential approach to adaptation that is effective in building ecological, social, and economic resilience.

To fully maximize and deliver EbA at the scale and pace needed, it must be put at the heart of countries' national development and climate strategies. The National Adaptation Plan (NAP) process³ provides an opening to do just this. By enabling countries to strategically integrate adaptation into their decision making, planning, and budgeting, the NAP process strives to make adaptation part of standard development practice. The United Nations (UN) reports that 120 countries have initiated and/or are undertaking activities related to the NAP process⁴ (UNFCCC, 2019a), providing an important opportunity to scale up EbA, demonstrate a strong commitment to nature, and address the biodiversity crisis.

Based on the above, members of the NAP Global Network identified the need to better understand and identify concrete entry points and opportunities to strengthen the integration of EbA into adaptation planning. The following guidance note presents "why" and "how" the NAP process can be utilized as a key mechanism and driver to mainstream and upscale EbA. It is based on a <u>recent analysis of 19 completed NAP documents</u> that reviewed the inclusion of ecosystems and uptake of EbA measures (Terton & Greenwalt, 2020). The document builds on the lessons learned from the review and identifies guiding principles and actions accordingly. Following the introduction, Section 2 provides an overview of ecosystems, ecosystem services and their role in adaptation, and how managing their transformation under a changing climate can contribute to reducing climate risks and impacts for both people and ecosystems. It further

² See, for example, International Institute for Environment and Development. (n.d.). *Ecosystem-based approaches to climate change adaptation*. <u>https://www.iied.org/ecosystem-based-approaches-climate-change-adaptation</u>; International Union for Conservation of Nature (IUCN). (n.d.). *Adaptation-based approaches to climate adaptation*. <u>https://www.iucn.org/theme/ecosystem-management/our-work/ecosystem-based-approaches-climate-change-adaptation</u>; Conservation International. (2020). *Ecosystem-based adaptation*. <u>https://www.conservation.org/projects/nature-helps-people-adapt-to-climate-change#:~:text=One%20promising%20 approach%20is%20called,impacts%20on%20people%20and%20livelihoods; OroVerde. (2020). *Green watersheds*. <u>https://www.regenwald-schuetzen.org/english/greenwatersheds/;</u> World Wildlife Fund. (2020). *Operationalizing ecosystem based adaptation in the Greater Mekong sub-region*. <u>https://greatermekong.panda.org/our_solutions/ecosystem_based_adaptation/#:~:text=Ecosystem%20based%20adaptation%20(EbA)%20 presents,for%20biodiversity%20and%20human%20communities; Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). *Ecosystem-based adaptation to climate change in high mountainous regions of Central Asia*. <u>https://www.giz.de/en/worldwide/40944.html;</u> International Institute for Environment and Development (IIED) (2019). *Perceptions and lessons learned from 13 project sites*. <u>https://pubs.iied.org/pdfs/17651IIED.pdf</u></u></u>

³ The NAP process is a strategic process that enables countries to integrate climate change adaptation into relevant new and existing policies, programs, and activities—in particular, development planning processes and strategies—within all relevant sectors and at different levels, as appropriate (UNFCCC, 2012b).

⁴ The Least Developed Countries Expert Group is actively supporting least-developed countries in facilitating the formulation of NAPs before the end of 2020 (UNFCCC, 2019b).

provides guidance on effectiveness criteria for EbA solutions. Section 3 lays out the rationale of why the NAP process is the most appropriate strategic planning tool to mainstream and upscale EbA. The remainder of the document focuses on guiding principles and recommended actions along the steps of the NAP process⁵ to integrate and enhance EbA. Finally, the brief links to useful tools and resources related to the recommended actions.

The guidance will be useful for NAPs, Nationally Determined Contributions (NDCs) and biodiversity focal points, and country-level teams engaged in the planning and implementation of NAP processes, as well as support programs that engage in NAP elaboration and financing.

⁵ Based on the elements outlined in the UNFCCC Technical Guidelines for the NAP Process produced by the Least Developed Countries Expert Group (UNFCCC, 2012a).

2 Ecosystems and Their Role in Adaptation to Climate Change

All humans and economic activities are highly dependent on functioning ecosystems. Ecosystems provide important contributions in the form of food production, water supply, and the regulation of climate, water, and nutrient cycling (Millennium Ecosystem Assessment, 2005). Approximately 2.5 billion people depend directly on agriculture as their livelihood and largest source of income (CBD, 2016a), and 1.2 billion jobs are directly linked to natural resources and ecosystem services (International Labour Organization, 2018). Loss and degradation of ecosystems and their services due to climate change and other stressors directly affect people's livelihoods and human wellbeing, and further increase their vulnerability to climate change (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019; Quinney, 2020). If protected and managed in a way that ecosystems themselves are able to adapt, their services can play a vital role in helping people to adapt to climate change. They can mitigate the impacts of natural hazards and make a valuable contribution to human resilience (International Institute for Sustainable Development, 2003; Sudmeier-Rieux et al., 2006).

Ecosystem services are defined as the benefits that humans derive from ecosystems (Millennium Ecosystem Assessment, 2005). As laid out in Figure 1, healthy ecosystems are critical for adaptation benefits because of the services they provide. They can be grouped into four different types, each of which plays a role in adaptation and each of which is affected by climate change.

- Provisioning services provide the goods and products people obtain from ecosystems, including resources such as the food, raw materials, energy, and fresh water that people need to build resilient livelihoods.
- **Cultural services** provide the non-material benefits obtained from ecosystems that can provide alternative livelihood opportunities such as ecotourism but also well-being and spiritual values.
- **Regulating services** provide important benefits from an ecosystem's natural processes, such as slope stabilization and regulating water flow to reduce flooding, which are critical to reducing exposure and impacts from the immediate effects of climate change.
- Most importantly, **supporting services** generate and maintain all other ecosystem services through biodiversity, primary production, and soil formation.

Figure 1. The role of ecosystems in adaptation

Healthy Ecosystems

Mountains



Grasslands

Fresh water



Forests



Marine



Wetlands

Services

Provisioning services:

- Food
- Fresh waterMedicinal

resources

Ecosystem

- Raw materials •
- ₩ ₩

Cultural services:

- Mental and physical health
- Outdoor recreation
- Spiritual values



Regulating services:

- Local climate
 and air quality
 regulation
- Carbon sequestration and storage
- extreme eventsWastewater treatment

Moderation of

- Pollination
- Soil fertility

Ø

Supporting services:

- Habitats for species
- Maintenance of genetic diversity

Adaptation Benefits



Increased availability of resources that people need to build climateresilient livelihoods



Improved human health and wellbeing to climate stressors (e.g., heat)



A physical buffer against the impacts of weather extremes, disasters, and changes in climate

Actions that protect, manage, and restore ecosystems for improved functioning provision of services and increased resilience to climate change.

Source: Adapted from the ALivE Planning Tool (Terton & Dazé, 2018).

An ecosystem's ability to function can be significantly compromised directly and indirectly by the increasing frequency and intensity of climate change disturbances (Seddon et al., 2020). This reinforces the importance of strong and adaptive management approaches to maintain functionality within a climate change context. Failing to do so will undermine and reduce ecosystem services that are essential to helping societies adapt to a changing climate.

As shown in Figure 1, there are strong linkages between healthy ecosystems, the provision of services, and adaptation benefits. Consequently, due to increased recognition of the multiple environmental and socioeconomic benefits they provide, the concept of using ecosystems to adapt to climate change (EbA) has emerged as a well-developed and tested approach ready to be scaled up.

EbA is widely recognized as a pillar of NbS, and the term has been officially defined by the CBD (2009) (see Box 1). The CBD definition underscores the rationale that restoring and maintaining ecosystems are instrumental in ensuring the good functioning of ecosystems and ultimately to provide ecosystem services that contribute to people's adaptation to climate change.

Many EbA solutions are not necessarily new ones, but often represent well-known approaches, including integrated management of watersheds, sustainable land, forests, or coastal zones that can be applied in the climate change context. **EbA solutions can be categorized into three main types** (Terton & Dazé, 2018):

- **Restoration:** The process of assisting the recovery and transformation of an ecosystem that has been degraded, damaged, or destroyed by human activities.
- **Protection:** Strategies to protect the function, structure, processes, and species composition of an ecosystem, recognizing that all components are interrelated and will have to adapt to climate change itself.
- **Management:** Managing resources in ways that promote the long-term sustainability of ecosystems and the ongoing delivery of essential ecosystem services to society in a changing climate.

Box 1. The conceptual difference between EbA and NbS

NbS is an umbrella concept for various ecosystem-related approaches. It covers actions to protect, sustainably manage, and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. NbS aim to achieve society's development goals and safeguard human well-being in ways that reflect cultural and societal values and enhance the resilience of ecosystems, their capacity for renewal, and the provision of services (Cohen-Shacham et al., 2016). NbS can be utilized to describe adaptation and mitigation actions.

EbA is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change. It aims to maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change (CBD, 2009).

The conceptual difference between EbA and NbS is that NbS is used as an all-encompassing umbrella term for ecosystem-based approaches, and EbA is a pillar of the broader NbS concept. Hence, EbA should be presented as part of a "large family" of approaches that do not want to compete with each other, but instead complement each other and offer a demand-oriented range of possibilities that can be stand-alone technical concepts or applied in combination with each other.

Although the actions taken will often resemble traditional conservation or natural resource management approaches, the EbA approach differs in that it is purposely designed to address climate change impacts on ecosystems themselves and to increase people's adaptive capacity. First, EbA is a people-centric approach that is **intentionally designed to deliver adaptation outcomes and socioeconomic benefits for people.** Second, EbA directly addresses current and future climate risks; and third, it **ensures ecosystem health and long-term effectiveness.** When well designed and implemented, EbA solutions provide multiple adaptation benefits that are usually more cost effective than traditional engineered adaptation solutions.

To ensure EbA solutions are, in fact, designed to help people adapt and build the resilience of ecosystems, following five common effectiveness criteria⁶ during the design and appraisal stage of adaptation options is a useful tool.

⁶ The effectiveness criteria have been primarily based on the Friends of Ecosystem-based Adaptation (FEBA, 2017) framework of defining criteria and standards.

Ensure EbA solutions...



Directly address associated current and future climate hazards or risks identified in the vulnerability assessment.



Generate adaptation benefits and improve adaptive capacity for people.



Improve and build the resilience of ecosystems to current and future climate hazards and change.



Prioritize the needs of vulnerable groups, such as poor, elderly and children, and enhance gender equality.



Make sustainable use of biodiversity and ecosystem services.

3 What Is Limiting Large-Scale Implementation of EbA?

Despite manifold pilot projects, widespread recognition of the risks of climate change and biodiversity loss, and the need to protect ecosystems and valuable natural resources, EbA has not been mainstreamed and remains underused. The wider adoption of EbA is constrained by some common and interlinked challenges, including:

- **Current political economies and economic paradigms:** Governments do not always recognize dependencies on, or the economic contribution of, ecosystems. Ecosystems and their services continue to be treated as commodities but are simultaneously given insufficient economic and social value to ensure their sustainable and efficient use. Changing these entrenched attitudes and norms around ecosystems will require what is often called the "Great Mindshift."⁷
- **Political will and high-level buy-in:** Climate change and biodiversity often remain priorities only within ministries that have the direct mandate to address them, such as the Ministry of Environment. However, they may not be able to influence ministries in charge of finance, economic development, or planning. To facilitate large-scale implementation, ecosystem-based solutions must be embraced and advocated for by the highest level of government as well as by the international community.
- **Integrated and landscape planning:** There is a need for more integrated and aligned planning processes and strategies to consider the multiple goals, as well as opposing views and objectives for conservation and development among stakeholders. This includes an enabling regulatory environment and the facilitation of planning at a larger scale (e.g., at the landscape and ecosystem levels) to understand synergies and the consequences of different actions and policies.
- **Trade-offs:** EbA is often promoted as a win–win solution. However, EbA may lead to uncomfortable trade-offs that need to be addressed. This includes restricted access to and allocation of natural resources and the need to strike a balance between the protection of important ecosystems and other uses, like agriculture and industry. More emphasis is needed to ensure that EbA solutions provide sufficient local economic benefits to increase their uptake among communities that rely on natural resources for their livelihoods.
- **Finance:** Financing is a key challenge for implementing both adaptation and biodiversity measures. Combining these areas of focus and their benefits through EbA has not led to more funding for its implementation. To date, EbA has largely been funded by multilateral donors, national governments, and international non-governmental organizations, often as stand-alone local projects. The lack of financing is aggravated by the limited financial literacy

⁷ The "Great Mindshift" encompasses key aspect and emerging mind shifts that have the power to create a new economic paradigm to achieve the sustainable transformation (Göpel, 2016).

of adaptation actors and limited understanding of or interest in adaptation—let alone EbA by finance actors. Further, there is a need to realign fossil fuel subsidies, tax incentives, and policies away from harmful activities to increase financing for NbS.

• **Technical capacities:** This relates to the design and implementation of EbA, especially in non-environmental sectors where the lack of skills and knowledge required for its implementation can limit the attractiveness of these solutions. Often, engineering and planning professions do not involve ecosystem-based approaches as part of the training. Related to capacity is the ability to develop bankable and compelling adaptation projects, which continues to be challenging for many countries.

By being participatory, fully transparent, and inclusive, the NAP process provides an opportunity to address some of the above challenges and mainstream EbA across sectors and levels of government. EbA works best when delivered across whole landscapes at a large scale (e.g., ecosystem, region, city). The NAP process and its strategic focus on integrating climate resilience into development planning can provide the important coordinated, cross-sectoral dialogue needed to build consensus, address trade-offs, and considerably scale up and sustain EbA. Through the NAP process, EbA can be integrated into relevant national, subnational, and budgetary planning processes underpinned by a strong national mandate that places EbA at the centre of climate adaptation.

4 Why Mainstream and Upscale EbA Into the NAP Process?

To fully maximize the benefits and uptake of EbA and move beyond small-scale projects, it is essential that it be integrated into an overall adaptation strategy (FEBA, 2017). The NAP is a strategic process that ultimately aims to make people, places, ecosystems, and economies more resilient to the impacts of climate change. It involves analyzing current and future climatic change and assessing vulnerability to its impacts, looking at who and what are vulnerable to which impacts. This provides a basis for identifying and prioritizing adaptation options, such as EbA, implementing these options into planning and budgeting processes at the national level, and tracking progress and results (Hammill et al., 2020).

Specific guidance for the NAP process is provided through the UNFCCC Technical Guidelines, which emphasize that the NAP process is to be inclusive of vulnerable groups, communities, and ecosystems and recognize the need to protect and build the resilience of ecosystems. It must be multi-sectoral and establish links to lower levels of government (UNFCCC, 2012a). If used deliberately, the NAP process can play an essential role in strengthening and scaling up EbA.

The main reasons to upscale and mainstream EbA into the NAP process include:

- NAPs provide a strategic framework for mainstreaming, mandating, and scaling up **EbA.** They offer an opportunity to link ecosystems and adaptation planning and prioritize EbA solutions across sectors as part of a comprehensive strategy to help people adapt to climate change. Successful EbA is part of an overall adaptation strategy along with other cross-cutting themes, such as gender, multi-level governance, and private sector engagement (FEBA, 2017).
- The NAP process can be a means of operationalizing the ecosystem-related adaptation commitments and objectives outlined in NDCs (see Box 2). A recently published analysis of countries' NDC submissions (Seddon et al., 2019) revealed that 104 NDCs acknowledge that ecosystems and biodiversity are vulnerable to climate change, and 76 countries point to the conservation of ecosystems as an important motivation for adaptation planning.
- Given the importance of ecosystem services in other global agendas, positioning EbA and its co-benefits as a vital part of the NAP process provides opportunities to link adaptation explicitly to these agendas, including through climate mitigation, biodiversity, and agriculture, making adaptation more visible and operational in multiple sectors.
- NAPs are developed with input and commitments from multiple sectors. They offer an important entry point to provide evidence to decision-makers across sectors and ensure that ecosystem services are considered as a potential solution to reducing human vulnerability. They also ensure that biodiversity and ecosystem impacts associated with each adaptation option are taken into account.
- The NAP process is nationally driven but aims to establish and maintain linkages with the subnational level, as implementing adaptation actions will inevitably involve actors such as

local authorities. This provides an **important opportunity to raise awareness about EbA and integrate it into subnational and local planning scales.** This is especially important in relation to local adaptation plans for cities.

- Monitoring and evaluation (M&E) is an important element of the NAP process and can help to define measurable outcomes and targets for EbA as part of a national M&E system. It also builds the evidence base for EbA that facilitates access to climate finance.
- **Financial support** has been made available through sources such as the Green Climate Fund (GCF), the International Climate Initiative, and others **for the formulation and implementation of NAPs**, which can lead to more support for EbA. For example, developing countries can access up to USD 3 million from the GCF for national adaptation planning and other adaptation planning processes. Further, private sector engagement is considered a key part of countries' overall efforts to adapt to the impacts of climate change. Strategic and well-informed inclusion of the private sector provides important opportunities to upscale EbA.

Box 2. How is the NAP process linked to the NDC?

NDCs are the signature vehicle of the Paris Agreement, and although not mandatory, many countries have chosen to include information on adaptation in their NDCs in addition to their mitigation commitments (132 of the 180 countries that submitted NDCs included adaptation information). At the same time, the NAP process provides a domestic planning process that can set out how adaptation goals are implemented. A country that already has a NAP process underway can draw from it to define the adaptation targets and actions to be included in an NDC. Equally, the NAP process offers a vehicle for implementing adaptation commitments included in an NDC. A country that does not yet have a NAP process underway may choose to include a commitment to launch one as part of its NDC, along with an overarching vision and framework for adaptation. As NDCs are international pledges, the adaptation component of NDCs may help to raise the profile and garner further support for the NAP process (Price-Kelly & Hammill, 2016).

Ideally, the NAP process and the adaptation component of NDCs will be aligned so that they articulate the same objectives, are informed by the same datasets and analyses, and are tracked using the same metrics.

While NbS have been prominently included as mitigation and adaptation tools in NDCs, major opportunities remain to scale up NbS and emphasize synergies between adaptation and mitigation. According to a recent study by the IUCN and Oxford University, at least 130 countries included NbS in some form in their NDCs—104 as an adaptation tool and 27 as a mitigation tool (Seddon et al., 2019).

Countries are encouraged to pledge more ambitious goals on climate change by updating their NDCs. This provides an important opportunity to strengthen the prominence of NbS to address both the causes and consequences of climate change and emphasize synergies between adaptation and mitigation through the inclusion of such measures. WWF (2020) has developed <u>guidance and simple</u> recommendations for integrating NbS for climate in revised NDCs.

Box 3. Other relevant international commitments: Sustainable Development Goals (SDGs), Aichi Biodiversity Targets, and the Sendai Framework

The importance of ecosystems—and the potential role they play in achieving meeting international commitments—is embedded across major international conventions, providing important policy leverage. Moreover, integrating EbA into NAP processes can create operational linkages between the climate policy agenda and the CBD, SDGs, and the Sendai Framework, allowing for more optimal use of resources to meet multiple policy objectives.

- Within the 2030 Agenda for Sustainable Development (United Nations, 2015), ecosystems and EbA are directly relevant for achieving three SDGs: 13 (Climate Action), 14 (Life Below Water), and 15 (Life on Land). In addition, EbA could be a solution for targets related to hunger (SDG 2) and clean water and sanitation (SDG 6) or contribute to attaining gender equality (SDG 5) and reducing inequalities (SDG 10). M&E is an integral part of the NAP process, and countries could utilize a NAP's M&E system to capture progress and successes related to these SDGs to inform their voluntary national reviews.
- The Aichi Biodiversity Targets (Convention on Biological Diversity, 2010) are set to be revised as part of the post-2020 Biodiversity Framework under the CBD. EbA and ecosystem management for mitigation and adaptation sit squarely at this nexus of biodiversity and climate change and have the potential for countries to address commitments under both agendas concurrently. Countries are asked to prepare voluntary national commitments for biodiversity and update their National Biodiversity Strategy and Action Plans to inform the new post-2020 Biodiversity Framework. This provides an important opportunity to strengthen synergies and linkages between national biodiversity strategies and action plans and NAPs that will enable countries to meet multiple international obligations, reduce vulnerability to the impacts of climate change by building adaptive capacity and resilience through biodiversity conservation, and facilitate the integration of climate change adaptation concerns into biodiversity policies, programs, and activities.
- The **Sendai Framework for Disaster Risk Reduction** (United Nations Office for Disaster Risk Reduction, 2015), strongly recognizes the role of ecosystems and the environment as a crosscutting issue in DRR and emphasizes that ecosystems should be integrated into risk assessments, risk governance, and investing in resilience. Likewise, it recognizes climate change as a driver of disaster risk and sees addressing climate change as an opportunity to reduce it. Many NAPs already explicitly consider DRR; therefore, including ecosystems in vulnerability assessments and mainstreaming EbA across sectors through a NAP process can help countries to achieve the goals of the Sendai Framework.

Strong consideration of ecosystems and EbA in NAP processes can also help meet other international commitments, including the Bonn Challenge on forest and landscape restoration, the United Nations Convention to Combat Desertification targets on Land Degradation Neutrality, and the New Urban Agenda.

5 Integrating Ecosystems and EbA Solutions Into NAP Processes

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The NAP process comprises three broad phases—planning, implementation, and M&E— each of which provides important opportunities to apply an ecosystem lens and integrate EbA solutions. During the planning phase, climate-related vulnerabilities and risks are assessed, options for managing these risks are identified and prioritized, and strategies for their implementation are developed. During the implementation phase, these strategies are fleshed out in greater detail, financing is secured, and necessary technical and human resources are procured and deployed. Progress, results, and lessons from implementing the strategies are tracked and reported as part of M&E (Hammill et al., 2020). If used strategically, the different phases of the NAP process can play an essential role in strengthening ecosystems and scaling up EbA.

The review of NAP documents highlighted that the NAP process provides a strategic mechanism to upscale and mainstream EbA solutions at the national level and across sectors. Many organizations and institutions have developed principles and recommendations that are helpful to guide the integration of EbA into the NAP process. The NAP Global Network reviewed current guidance and took into consideration important observations from the review of existing NAP documents (Terton & Greenwalt, 2020) to summarize the following **guiding principles** for integrating ecosystems and EbA solutions in the NAP process.

For each guiding principle, recommended actions and helpful resources are identified.

Where the actions are linked to specific steps in the NAP technical guidelines, this is indicated in brackets—see Figure 2 for an overview of the steps in the UNFCCC NAP Technical Guidelines. Regardless of where a country is in the NAP process, there are opportunities to initiate or integrate EbA at each of the phases of the process.

Following these guiding principles throughout the NAP process will help countries to effectively use ecosystems and ecosystem services to help people adapt to climate change and minimize negative impacts on ecosystems.



Figure 2. Overview of the steps in the UNFCCC NAP Technical Guidelines

Guiding Principle 1: Emphasize the role of ecosystems in vulnerability reduction for people, their livelihoods, and socioeconomic development.

There are clear challenges to attributing causality between the EbA intervention and intended social and ecological benefits, as well as actual risk reduction from climate impacts. To understand the importance of ecosystem services for human vulnerability to climate change, NAP teams should clearly depict the causal impact chain from ecosystem services on people's livelihoods and subsequently the impacts of climate change on these services (e.g., raw materials, food, water supply). This will ensure that EbA solutions are designed to deliver adaptation benefits for people and livelihoods.

Practical steps to put this principle into action	 Acknowledge and prioritize the role and use of nature to address climate change as a strategic goal of the NAP process. (<i>Steps A1, B3, B4, B5</i>) Identify and clearly articulate how the loss of ecosystem services exacerbates people's vulnerabilities to climate change. (<i>Steps A4, B1, B2, B3</i>) Apply participatory and inclusive approaches for communities and people who utilize ecosystem services or have an individual connection to them to identify adaptation benefits. (<i>Steps A2, B1, B2, B3</i>) Ensure solutions are designed intentionally to address climate risk and
	reduce human vulnerabilities. <i>(Steps B2, B3)</i>
Useful resources and guidance	Key tool #1: <u>Adaptation, Livelihoods and Ecosystem Planning Tool (ALivE)</u> . ALivE is a computer-based EbA planning tool that can be used to understand and analyze the linkages among ecosystems, livelihoods, and climate change and plan effective EbA solutions (Terton & Dazé, 2018).
	Key tool #2: <u>Tool for Integration of Ecosystems Into Climate Change Adaptation</u> <u>Planning Processes</u> . The core objective of the tool is to help facilitate an efficient process for consideration of ecosystems within the NAP planning process (Conservation International 2015)

Guiding Principle 2: Take an ecosystem-level approach to assessing vulnerability and risks using the best available science, as well as Indigenous and Traditional Knowledge.

Climate change vulnerability assessments and scenarios are fundamental to designing adaptation priorities and solutions. Understanding how ecosystems are impacted by climate change provides the basis for identifying EbA solutions. NAP teams should analyze current and future climate scenarios to evaluate and assess impacts on ecosystems and ecosystem services. It is critical that NAP teams acknowledge that climate risks threaten the long-term viability of ecosystems, which requires identifying adaptation options to protect ecosystems and their services from the impacts of climate change. If available, NAP teams should build on existing ecosystem vulnerability assessments. This information should promote and guide the development of EbA solutions to help people adapt to climate change as well as enhance ecosystem functionality.

Practical steps to put this principle into action	 Take stock of past relevant ecosystem vulnerability and risk assessments and past/ongoing EbA-related projects and information. (<i>Step A2</i>) Assess current and future climate impacts and vulnerabilities on ecosystems and biodiversity based on the best available science (applying an ecosystem/landscape approach). (<i>Steps A4, B1, B2</i>) 	
	 Acknowledge and advance the interdependencies between climate change and biodiversity protection, in particular, climate risks and non-climatic stressors threatening the long-term viability of ecosystems, requiring adaptation options to protect ecosystems and their services. (<i>Steps A4, B1, B2, C1</i>) Involve conservation and biodiversity experts in the formulation of the NAP process. (<i>Steps A2, A3, B1, B2, B3, C3, C4, D1, D3</i>) 	
	• Coordinate and align the NAP process with the country's national biodiversity assessment and vice versa to support biodiversity conservation and the need to help nature adapt to climate change. (<i>Steps A2, B1, B2, B3, C4, D1</i>)	
Useful resources and guidance	 Key tool #1: <u>Climate Risk Assessment for Ecosystem-based Adaptation</u>. This guidebook provides guidance on how to systematically consider ecosystem-based solutions in the context of climate risk assessments (GIZ et al., 2018). Key tool #2: <u>The Vulnerability Sourcebook</u>. This sourcebook offers a practical and scientifically sound methodological approach to vulnerability assessments and their application for the M&E of adaptation (GIZ, 2014). 	
	Key resource #3: <i>Voluntary Guidelines for the Design and Effective Implementation of</i> <i>Ecosystem-Based Approaches to Climate Change Adaptation and Disaster Risk Reduction</i> <i>and Supplementary Information.</i> These guidelines offer concise information for policy- makers on why integrating ecosystem-based approaches into policy frameworks matters. They provide practical steps for planners and practitioners to design and implement effective strategies for EbA and DRR, as well as how to reach out to key sectors, such as planning, finance, agriculture, infrastructure, water, and forestry (CBD. 2019).	

Guiding Principle 3: Adopt an integrated approach that considers ecosystems across all sectors in the NAP process.

Ecosystems underpin economies and societies and therefore are relevant for almost all sectors. An integrated and cross-sectoral approach for EbA can maximize synergies and ensure one sector does not undermine the goals of another. Important ecosystems or species are in direct competition with other uses like agriculture, tourism, industry, and urban development, while policies in sectors such as transport, energy, and buildings may constrain efforts to upscale EbA. The NAP process has a role to play in bringing about these cross-sectoral dialogues and involving multiple stakeholders from different sectors early in the process to increase buy-in and ascertain competing priorities and trade-offs. Similarly, when identifying appropriate adaptation solutions, EbA should be considered as default adaptation solutions in the design and prioritization process.

Practical steps	•	Consider
to put this		services a
principle into		grasslands
action		drylands a

- **Consider all natural ecosystems present** in the country when identifying services and climate adaptation benefits, including mountains, forests, grasslands, agricultural lands, urban landscapes, marine and coastal, fresh water, drylands and desert, etc. (*Steps A2, A4, B1, B2, B3*)
- When assessing individual sectors' vulnerabilities, consider the **relationship between that sector's performance and its dependency on healthy ecosystems.** (*Steps A2, A4, B1, B2, B3*)
- Closely collaborate and coordinate with sectors across government on the design and implementation of relevant EbA solutions. (Steps A2, A3, B2, B3, B5, C1, C2, C3)
- Consider ecosystems as a stand-alone sector and mainstream EbA solutions across all sectors. (*Steps A1, A2, A4, B3*)
- Promote **EbA** and hybrid solutions (e.g., green roofs) as the default adaptation solution before engineered solutions across all sectors, highlighting the cost effectiveness of EbA solutions where possible. (*Steps B2, B3, B4*)
- Ensure that the ecosystem impacts of other adaptation options are considered, following environmental safeguards, and appraise EbA solutions against effectiveness criteria (see Section 2). (*Steps B2, B3*)
- Consider factors like vulnerability, biodiversity value, and the priorities of stakeholders to assess trade-offs; promote honest dialogues among them; and enhance desirable synergies. (Steps A3, A4, B2, B3, B4, C4)

Useful resources and guidance

Key resource #1: <u>Making Ecosystem-based Adaptation Effective: A Framework for</u>

Defining Qualification Criteria and Quality Standards.

This paper outlines key elements, principles, criteria, and indicators for defining EbA and for strengthening its integration into policy frameworks and implementation measures at different levels (FEBA, 2017).

Key resource #2: <u>EnhaNCA: Enhance Natural Capital Accounting Policy Uptake and</u> <u>Relevance</u>.

The Enhance Natural Capital Accounting Policy Uptake and Relevance (EnhaNCA) project aims to provide materials to increase policymakers' understanding of applications of natural capital accounting (NCA) according to the System of Environmental-Economic Accounting (SEEA) (UN, 2020).

Key tool #3: <u>Emerging Lessons For Mainstreaming Ecosystem-Based Adaptation:</u> <u>Strategic Entry Points and Processes</u>.

This report assesses entry points for EbA mainstreaming and governance aspects in five partner countries. It offers insights and lessons learned, and presents concepts and case studies (GIZ, 2019).

Key tool #4: <u>Ecosystem-based Adaptation: Question-Based Guidance for Assessing</u> <u>Effectiveness</u>.

This booklet describes a process based on asking a detailed set of questions that can be used by project managers and researchers to shape project design, assess the progress of an ongoing project, or draw conclusions about the effectiveness of a project that has ended (Reid et al., 2018).

Key tool #5: <u>Economic Approaches for Assessing Climate Change Adaptation</u> <u>Options Under Uncertainty: Excel Tools for Cost-Benefit and Multi-Criteria Analysis</u>.

This document highlights methods and tools for the economic assessment of climate change adaptation options. Special emphasis is placed on the issue of including uncertainty in the economic assessment and respective approaches (Noleppa, 2013).

Key tool #6: InVEST: Integrated Valuation of Environmental Services and Tradeoffs.

InVEST provides open-source software models for mapping and valuing the ecosystem services provided by land and seascapes. It is designed to inform decisions about natural resource management (Sharp et al., 2019).

Key tool #7: Opportunity Mapping.

The Opportunity Mapping tool offers a cross-mapping tool of ecosystem distribution and human exposure to hazards at a global scale. It highlights geographic locations where either ecosystem restoration or protection is particularly appropriate for reducing the impact of certain hazards. Datasets can be uploaded to create your own maps (PEDRR, n.d.).

Guiding Principle 4: Embrace global policy alignment by considering synergies with other relevant international commitments that EbA solutions contribute to.

Strong consideration of ecosystems and EbA in the NAP process can also serve to meet other commitments given the multiple environmental, social, and economic benefits that healthy ecosystems provide. Hence, it is useful to explore and include how proposed EbA solutions contribute to other existing national strategies and commitments (NDCs, a biodiversity strategy, a DRR strategy, and the SDGs). This can be an efficient way to identify synergies and powerful points for leveraging impacts and financial resources.

Practical steps to put this principle into action	 Take into consideration mitigation benefits and the contribution of EbA solutions. (Steps B2, B3) Identify synergies to other national strategies, international conventions, and commitments (specifically the NDC, a biodiversity strategy, DRR plans, and SDGs). (Steps B2, B3, C4) Integrate climate change considerations into biodiversity and conservation planning processes and projects. (Steps B5, C2, C3, C4)
Useful resources and guidance	 Key resource #1: Promoting Synergies in Addressing Biodiversity and Climate. Change Adaptation Issues: Linking National Adaptation Plans and National Biodiversity Strategies and Action Plans. This note aims to assist national focal points of the CBD to collaborate with their UNFCCC counterparts to strengthen synergies between the conservation and sustainable use of biodiversity and climate change adaptation at the national level through the design, review, and implementation of NAPs and national biodiversity strategies and action plans (CBD, 2016a).
	 Key resource #2: Alignment to Advance Climate-Resilient Development – Overview Brief 1. This initial brief provides an introduction to the concept of alignment as it relates to the policy processes under the 2030 Agenda for Sustainable Development, the Paris Agreement, and the Sendai Framework for Disaster Risk Reduction (Dazé et al., 2018). Key tool #3: Words into Action: Engaging for Resilience in Support of the Sendai Framework for Disaster Risk Reduction 2015-2030. These guidelines show how to incorporate NbS into a DRR strategy. This can highlight linkages with NAPs by using EbA (United Nations Office for Disaster Risk Reduction, 2020).

Guiding Principle 5: Make use of the participatory and inclusive nature of the NAP process to design the most appropriate and effective EbA solutions.

EbA solutions should be a central part of participatory planning and implementation of adaptation options to ensure transparency and buy-in from multiple stakeholders, as well as to manage trade-offs and secure a common commitment to environmental safeguards. Participatory processes must recognize that women and men, due to their gendered roles and responsibilities in society, experience the impacts of a changing climate differently and have different capacities to adapt. That means EbA solutions being developed as part of the NAP must consider gender differences and take into consideration particularly vulnerable groups (i.e., Indigenous People, the elderly, youth) in terms of benefits and losses from the implementation of EbA. This increases the likelihood that EbA investments will yield equitable benefits for people of all genders and social groups, including those who are particularly vulnerable.

Practical steps to put this principle into action	 Apply participatory and inclusive approaches to identify EbA solutions for implementation, ensuring equitable participation. (<i>Steps A2, A4, B2, B3, B5, C3, D1</i>) Recognize, value and integrate Indigenous and Traditional Knowledge (e.g., observations of changes at the local level) through participatory approaches. (<i>Steps A2, A3, A4, B1, B2</i>) Incorporate gender perspectives into EbA solutions where possible to ensure gender inequalities are not perpetuated. (<i>A4, B1, B2, C3, D1, D2</i>)
Useful resources and guidance	 Key tool #1: <u>Climate Vulnerability and Capacity Analysis Handbook</u>. The handbook presents a participatory methodology for climate vulnerability and capacity analysis (Dazé et al., 2009). Key tool #2: <u>Integrating Community and Ecosystem-Based Approaches in Climate Change Adaptation Responses</u>. This document provides a conceptual framework for an approach to adaptation, which empowers local communities to manage ecosystems under resilient governance arrangements that can provide the ecosystem services on which they depend (Girot et al., n.d.).
	Key tool #3: <u>Toolkit for a Gender-Responsive Process to Formulate and Implement</u> <u>National Adaptation Plans (NAPs)</u> . The toolkit provides guidance on addressing gender in the enabling activities that facilitate progress and increase effectiveness in the NAP process, including the establishment of institutional arrangements, capacity development, stakeholder engagement, information sharing, and securing finance (Dazé & Church, 2019).

Guiding Principle 6: Use the NAP process to engage subnational and local level governments in the design and implementation of regional and local EbA solutions.

Effective EbA works toward collaboration between multiple levels of government, institutions, and sectors. Identifying responsible institutions and actors for relevant policy and planning processes and initiating dialogues for coordination and information sharing can promote the integration of EbA across levels of government. This is especially important because ecosystems transcend jurisdictional boundaries, and regional cooperation could help maximize results for people and ecosystems. The NAP process provides an opportunity and process to bring about these multi-level governance dialogues and identify areas of where and how to provide support for vertical coordination. It involves stakeholders from different levels in the process. Cities, in particular, present important opportunities to maximize EbA solutions.

Practical steps to put this principle into action	• Undertake participatory vulnerability assessment and adaptation planning processes at the subnational and local levels , ensuring equitable participation and fostering engagement and connectivity between levels of government. (<i>Steps</i> <i>B1</i> , <i>B2</i> , <i>B3</i> , <i>B4</i> , <i>B5</i>)
	• Identify and engage subnational actors in the implementation of EbA solutions, including across transboundary ecosystems (e.g., through cost-sharing agreements and budgetary planning). (Steps B2, B3, B5, C1, C2)
	• Identify and build technical capacity needs at subnational levels to implement effective EbA solutions. (<i>Steps C3, C4, D1, D2</i>)
Useful resources and guidance	Key tool #1: <u>Vertical Integration in National Adaptation Plan (NAP) Processes:</u> <u>Guidance Note</u> . This guidance note outlines the rationale for linking national and subnational adaptation efforts, drawing on the policy framework and guidance for the process as well as experiences to date in facilitating adaptation (Dazé et al., 2016).
	Key tool #2: <u>The Governance and Politics of Nature-based Solutions</u> . This working paper aims to bring together key insights on the governance of NbS—such as green/blue spaces, infrastructure, and parks—in cities (Sekulova & Anguelovski, 2017).
	Key tool #3: <u>Transboundary Conservation: A Systematic and Integrated Approach</u> . These guidelines provide an improved understanding of transboundary conservation principles and practice, supported by examples taken from around the globe (Vasilijević et al., 2015).

Guiding Principle 7: Adopt a long-term approach and ensure sufficient resources for the implementation of EbA solutions.

To fully harvest the benefits of EbA solutions and to ensure the continued supply of ecosystem services in the face of climate change, a long-term approach is needed to enhance the durable chances of sustainability. The NAP process provides the framework for long-term planning supported by capacity development, financing, appropriate institutional arrangements, and information sharing among the different actors involved. This means putting in place technical, human and financial resources at levels of management where EbA solutions are implemented. Financing is a key challenge for implementing adaptation and biodiversity conservation measures, and, unfortunately, combining the focus and benefits has not automatically unlocked increased funding for both. Although there has been an uptake in EbA projects in many countries, the lack of financing remains a burden. It is important for NAP teams to find existing and potential sources of financing for EbA, as well as steps to engage the private sector and expand work around valuing the benefits, costs, and impacts of EbA.

Practical steps to put this principle into	• Commit to sustained investment in EbA activities as well as technical and human resources to ensure effective design and management of EbA solutions and achievement of long-term adaptation outcomes. (<i>Steps C3, C4, D1, D2</i>)
action	 Comprehensively estimate and compare the costs for EbA solutions against engineered solutions and include them in the NAP process. (Steps B3, B4)
	• Develop financing options, sufficient support, and financial resources (public, private, and international) for the implementation of EbA solutions (e.g., payment for ecosystem services, stormwater fees, tourism levies) in close collaboration with the Ministry of Finance. <i>(Steps B3, C1, C2)</i>
	• Engage the private sector in the implementation of EbA solutions (e.g., through cost-sharing agreements and incentives). (<i>Steps A3, A4, B2, B3, B4, C2, C3</i>)

UsefulKey resource #1: Finance Options and Instruments for Ecosystem-based Adaptation.resources andThis report provides a comprehensive outlook on available financing sources andguidancestipulates 10 examples for project developers and practitioners who might be keen
to learn from different finance approaches to implement and maintain EbA measures
(Hunzai et al., 2018).

Key resource #2: <u>Grow Green: Approaches to Financing Nature-based Solutions in</u> <u>Cities.</u>

This document provides an overview of financing approaches that can be used to deliver green infrastructure or NbS in urban areas (Trinomics & IUCN, 2019).

Key tool #3: <u>Toolkit for Engaging the Private Sector in National Adaptation Plans</u> (NAPs).

This toolkit is designed to support country efforts to develop strategies to systematically engage private sector actors in their NAP process, as appropriate. This includes engaging them in all phases of the NAP process (Crawford et al., 2020).

Key resource #4: <u>Governance for Ecosystem-based Adaptation: Understanding the</u> <u>Diversity of Actors and Quality of Arrangements</u>.

This study aims to provide key background information on concepts and quality aspects of governance, as well as practical examples, to better understand and make use of existing governance structures in the context of implementing and mainstreaming EbA and NbS approaches (Amend, 2019).

Guiding Principle 8: Ensure accountability and performance by building an evidence base for EbA solutions as part of an overall NAP M&E system.

Uncertainty in terms of shifting baselines, foreseen and unforeseen changes to ecosystems, and biodiversity from climate change, and other factors of degradation that affect the provision of ecosystem services can make it difficult to plan EbA solutions and accurately assess their impacts. Another issue complicating the matter is the long-term time frame, in terms of realizing both the social and ecological impacts of EbA efforts—the true scale of benefits may extend beyond the monitoring time frame. The NAP process could help provide this longer-term framework, ensuring the benefits from investment into EbA solutions are captured, inform the evidence base, and are shared across sectors and levels of government. The learning from the information and data collected is essential to adjust solutions accordingly to increase the likelihood that adaptation goals and priorities are achieved.

Practical steps to put this principle into action	 Develop time-bound and evidence-based targets for EbA solutions, including societal and economic benefits. (<i>Steps D1, D2, D3</i>) Identify key actors and their responsibilities in monitoring and evaluating EbA solutions. (<i>Steps D1, D2</i>) 	
	• Document and disseminate information to build the evidence and effectiveness of EbA. (<i>Steps D2, D3, D4</i>)	
	• Integrate new information into review cycles of the NAP process. (Step D3)	
	Based on identified synergies to other international conventions (specifically the NDC, a biodiversity strategy, DRR plans, and SDGs), consider other relevant reporting requirements that this information could be used for. (<i>Steps C4, D1, D2, D4</i>)	
	• Build capacity to undertake a systematic collection of ecological data at regular intervals and over time. (<i>Steps A3, C3, D1</i>)	
Useful resources and guidance	Key resource #1: <u>Guidebook for Monitoring and Evaluating Ecosystem-based</u> <u>Adaptation Interventions</u> . This guidebook provides an overview of the process needed for designing and implementing effective M&E for EbA (GIZ & FEBA, 2020).	
	Key resource #2: <u>Developing National Adaptation Monitoring and Evaluation</u> <u>Systems: A Guidebook</u> . This guidebook aims to guide decision making regarding the purpose, design, operationalization, and use of the results of an appropriate system for national adaptation M&E (Price-Kelly et al., 2015).	

6 Conclusion

EbA has emerged as an essential approach to adaptation that demonstrates effectiveness in building ecological, social, and economic resilience. To truly upscale and reach its full potential, EbA must be delivered across whole landscapes and at a large scale. The NAP process and its strategic focus on integrating climate resilience into development provide the important coordinated, cross-sectoral dialogue needed to build consensus, address trade-offs, and considerably scale up and sustain EbA.

Being participatory, fully transparent, and inclusive, the NAP process provides the opportunity for a long-term and integrated approach to mainstreaming EbA across sectors and levels of government, truly maximizing the potential of nature. Further, integrating EbA into NAP processes creates operational linkages between the climate and biodiversity policy agendas. This critical measure to advance the protection of biodiversity and ecosystems is in line with climate and sustainable development objectives.

At the same time, it must be recognized that ecosystems can be significantly compromised by the increasing frequency and intensity of climate change, reinforcing the importance of acknowledging and managing climate risks that threaten the long-term viability and functionality of ecosystems.

Strengthening the integration of EbA and other NbS in NAP processes and climate-related strategies (e.g., NDCs and national biodiversity strategies and action plans) signals the significance of ecosystems and their services in our economies and to societal well-being. It further demonstrates that ecosystems and the services they provide are critical to meeting the adaptation needs and priorities identified by countries.

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