

Building Resilience With Nature: Ecosystem-based Adaptation in National Adaptation Plan Processes

An analysis



AUTHORS

Anika Tertton and Julie Greenwalt

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.

CONTACT INFORMATION

NAP Global Network Secretariat

c/o International Institute for Sustainable Development (IISD)

111 Lombard Avenue, Suite 325

Winnipeg, Manitoba, Canada R3B 0T4

Phone: +1 (204) 958-7700

Email: info@napglobalnetwork.org

CREATIVE COMMONS LICENSE

This report is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/). This publication may be freely quoted and reproduced provided that i) the source is acknowledged, ii) the material is not used for commercial purposes, and iii) any adaptations of the material are distributed under the same licence.

© 2020 International Institute for Sustainable Development (IISD)

Cover photo: [Ikhlasul Amal \(CC BY-NC 2.0\)](#)

All images remain the sole property of their source and may not be used for any purpose without the written permission of the source.

Building Resilience With Nature: Ecosystem-based Adaptation in National Adaptation Plan Processes

An analysis

November 2020

Executive Summary

Loss and degradation of ecosystems and their services due to climate change and other stressors directly affect peoples' livelihoods and well-being while further increasing their vulnerability to climate change (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019). If conserved and managed in a way that allows them to adapt, ecosystems and the services they perform can play a vital role in helping people adapt to climate change. Ecosystems can mitigate the impacts of natural hazards and make a valuable contribution to human resilience (Sudmeier-Rieux et al., 2006). Specifically, ecosystem-based adaptation (EbA) is a means of protecting, restoring, and enhancing ecosystem services to reduce climate change risks and impacts while improving communities' resilience. EbA can generate economic returns and provide multiple benefits—including improved health, biodiversity protection, food security, and alternative livelihood opportunities, all of which can build resilience to climate change.

Simultaneously, the National Adaptation Plan (NAP) process enables countries to coherently 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 (United Nations Framework Convention on Climate Change [UNFCCC], 2012). EbA should therefore be a critical part of national adaptation priorities. Accordingly, the NAP Global Network has sought to better understand the extent to which EbA as a tool for adaptation has been taken up in NAP processes.

To understand the extent to which countries have integrated ecosystems and EbA solutions as a tool for adaptation, the following review was undertaken on the 19 NAPs¹ submitted by national governments to the UNFCCC from 2014 to March 2020. The review included six countries from Latin America, seven from Africa and the Middle East, two from the Pacific, one from Asia, and three from the Caribbean.

It is important to note that the aim of the review is not to assess the overall quality of NAP documents or the quality of EbA measures but to identify gaps, trends, and opportunities in countries' approaches to integrating EbA measures and draw out lessons for future adaptation planning.

The analysis highlights the extent of integration and identification of ecosystems and EbA into NAPs, trends in how EbA was incorporated, and aspects that were limited in scope. **Key findings related to the uptake and progress of EbA in NAPs are:**

- **All NAP documents submitted made efforts to integrate considerations of ecosystems and identified ecosystem services.** However, the **explicit, direct, or**

¹ The Least Developed Countries Expert Group (LEG) is actively supporting least developed countries to facilitate the formulation of NAPs before the end of 2020 (UNFCCC, 2019b).

indirect contributions and societal benefits for people were mainly implied or discussed in generic terms.

- **The vulnerabilities of the natural environment and ecosystems to climate change** (and sometimes other causes of degradation) and the impact on services they provide **were well covered in all NAPs.**
- **All countries emphasized the importance of incorporating climate information into planning processes,** which is reflected in the detailed information regarding vulnerabilities of ecosystems.
- **Most countries included EbA measures to reduce the threats to—and vulnerabilities of—ecosystems** they identified in their NAP.
- **Efforts to monitor EbA outcomes are limited** to a few countries. Some countries have identified partial or full time-bound measurable targets for their EbA measures.
- The **identification of financial resources for EbA and/or ecosystems and engagement of the private sector** on these actions were **not widespread in NAPs.**
- **Urban EbA and grey/green hybrid options were under-represented** in the NAPs despite increased attention to these aspects internationally and in recent publications and guidelines.
- **NAPs tended to identify people and groups that are particularly vulnerable** to climate change and may benefit from adaptation actions, but **only a handful made a direct connection to ecosystem-based actions.**
- **Latin American countries have much stronger treatment of ecosystem services and EbA** and connected their NAPs to a national biodiversity strategy.
- Within NAP documents, **forests, freshwater and coastal/marine were the ecosystems most identified as vulnerable to climate change, and they also had the most corresponding EbA measures** related to those ecosystems.
- There is evidence that **countries are starting to link the NAP process and ecosystems to other relevant national strategies** and global agendas.
- **Countries recognized the co-benefits EbA measures have for sustainable development,** in particular for climate change mitigation in the form of carbon sequestration.

In response and as a follow-up to this analysis, the NAP Global Network developed a guidance note that presents “why” and “how” the NAP process can be used as a key mechanism and driver to mainstream and upscale EbA. It identifies guiding principles and actions along the steps of the NAP process to integrate along with links to useful tools and resources related to the recommended actions.

Table of Contents

- 1** Rationale for Analysis1
- 2** Scope and Methodology 2
- 3** Key Findings 4
- 4** Conclusions 12
- References..... 15

1

Rationale for Analysis

The role of nature and ecosystems in addressing the climate and biodiversity crises and achieve societal resilience is gaining important momentum. Healthy and resilient ecosystems are recognized in various international bodies and agendas, including the Paris Agreement, the Sustainable Development Goals (SDGs), the Sendai Framework for Disaster Risk Reduction, Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification. Specifically, ecosystem-based adaptation (EbA) as a nature-based solution² is gaining importance since it recognizes that ecosystem services help reduce communities' vulnerability to climate change (see Box 1) (CBD, 2009). Its main rationale is that restoring and maintaining ecosystems will be fundamental to ensuring their good functioning and providing ecosystem services that support adaptation to climate change.

Experiences from EbA projects demonstrate that, in order to scale up and sustain these approaches over time, it is critical that an enabling environment be created that integrates EbA into overall adaptation policies and planning processes (Bertram et al., 2017). National Adaptation Plan (NAP) processes present a strategic opportunity to raise the profile of EbA approaches, providing a framework—and, potentially, financial resources—for implementation at scale.

Based on the above, the NAP Global Network identified the need to better understand the extent to which EbA, as a tool for adaptation, has been taken up in NAP processes and potentially identify next steps and opportunities to strengthen its profile and quality.

Box 1

EbA was officially defined by the CBD as: “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).

² In 2016, nature-based solutions were defined by the International Union for Conservation of Nature (IUCN) as “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.” (Cohen-Shacham et al., 2016). For this analysis, ecosystem-based adaptation (EbA) is the term used as opposed to nature-based solutions (NbS). EbA is a well-established concept, embraced by both the UNFCCC and 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 EbA solutions are always NbSs, but not all NbSs are EbA.

2

Scope and Methodology

The review aimed to identify the role of ecosystems in countries' adaptation priorities and the uptake of EbA measures in response to climate risks and vulnerabilities to enhance adaptive capacity and strengthen the resilience of ecosystems and people, as presented in NAP documents. It is based on a review of the 19 NAPs submitted by national governments to the United Nations Framework Convention on Climate Change (UNFCCC) before March 2020. The review included six countries from Latin America, seven from Africa and the Middle East, two from the Pacific, one from Asia, and three from the Caribbean. The time of submission ranges from 2014 to 2019.

The CBD's definition of EbA underscores that restoring and maintaining ecosystems are instrumental to ensure that ecosystems can provide services that contribute to people's adaptation to climate change (CBD, 2009). Further, EbA should be integrated into existing policy frameworks rather than being implemented in short-term and stand-alone efforts (Friends of EbA, 2017). Based on this understanding, a content analysis was performed using a subset of questions and a systematic search of keywords associated with the concept of EbA. The review was aimed to provide insights related to the following five key issues:

- The **inclusion of ecosystems and biodiversity (either as a stand-alone sector or consideration within other NAP sectors) as part of an overall adaptation strategy/ plan.**
- The use of biodiversity and ecosystem services to address **identified, observed, and projected climatic hazards and vulnerabilities and help people adapt** to the adverse effects of climate change.
- The extent to which NAPs emphasize managing anticipated climate risk to ecosystems to **support ecosystem functionality and resilience to climate change.**
- The **recognition of multiple social, economic, and cultural co-benefits** for communities that support climate change adaptation and sustainable livelihoods.
- The **identification of vulnerable people** who will benefit from EbA measures.

Because NAP processes are country driven and do not follow a prescribed framework or set of instructions, neither do the resultant documents: they differ in terms of sections, level of specificity, and format. This represented a challenge to this review and analysis. Simultaneously, the detail of identified adaptation measures ranges from comprehensive to relatively vague, which resulted in some challenges in classifying measures as EbA. For the purpose of this review, a

broad approach was taken in identifying EbA measures. Actions involving any type of the following measures were counted as EbA:

1. **Restoration:** Strengthening and assisting the recovery of ecosystems that have been degraded, damaged, or destroyed.
2. **Protection:** Strategies to conserve the function, structure, and species composition of ecosystems.
3. **Sustainable management and natural resources management practices (including forests, water, and agricultural systems):** Managing resources in ways that promote the long-term sustainability of ecosystems and ongoing delivery of essential ecosystem services.
4. **Ecosystem-related policies, studies, assessments, monitoring, and guidelines:** Measures that are aimed at strengthening regulations to protect and manage ecosystems and increase understanding of ecosystem functionality under a changing climate.

By virtue of their inclusion in the NAP, they are presumed to be adaptation measures, even if in many cases the connections to specific climatic hazards were not explicit. While the review included a systematic search for keywords to identify EbA measures, the review did not assess each intervention against the attributes of effective EbA (e.g., intends to strengthen ecosystem resilience to climate change; addresses observed or projected climate risk; delivers climate change adaptation outcomes and/or the delivery of co-benefits for people).

It is important to note that the review aims not to assess the overall quality of NAP documents or the quality of EbA measures but to identify gaps, trends, and opportunities in countries' approaches to integrating EbA measures and draw out lessons for future adaptation planning. It must be noted that many NAPs are overarching frameworks and strategies, with many countries indicating separate monitoring or financial strategies to be developed in the future.

It has also been recognized that the sample size for the review (19 NAP documents) is small, as relatively few countries had submitted their NAP when this analysis was conducted. Despite these challenges, the analysis provides useful insights into the uptake of EbA in NAP processes and draws out important lessons that are relevant to supporting learning and improving practice as countries advance their NAP processes.

3

Key Findings

All the countries that have submitted a NAP have attempted to integrate considerations of ecosystems into it.

There is broad recognition of ecosystems and the services they provide in the form of the natural resources that people/livelihoods depend on and as buffers to natural disasters. The majority of NAPs identified ecosystems as a stand-alone sector, although sometimes this was a specific ecosystem (i.e., forests or coastal/marine areas), and many NAPs included ecosystem-based measures in other sectors (e.g., agriculture, water) which points to the cross-sectoral nature of ecosystems. However, only two of the NAPs explicitly identified ecosystems as cross-sectoral.

Almost all NAPs identify ecosystem services, but the explicit, direct, or indirect contributions and societal benefits for people were mainly implied or discussed in generic terms.

The fact that ecosystem services are recognized and integrated is very positive; however, it is often not clear exactly how the use of ecosystem goods and services will help people adapt to the observed (and projected) shocks and risks associated with climate change identified in NAPs. Instead, benefits are often implied in the negative impacts on ecosystems and people due to climate change. They are frequently discussed in generic terms or in the form of natural resources to sustain livelihoods. Only one NAP identified health benefits derived from ecosystems. Several countries approached ecosystems and their services from a purely economic productivity point of view that focused largely on resource management. Limited documentation and explanations exist regarding the role of ecosystem services in climate adaptation in NAPs. It should be noted that although the concept of EbA has gained important momentum in recent years, there was no evidence that the quality of information related to ecosystems, ecosystem services, and EbA actions was more noticeable in recently published NAPs. This is a potential limitation to the understanding of how ecosystem services contribute to a country's adaptation and subsequently make it difficult to scale up EbA.

The vulnerabilities of the natural environment and ecosystems to climate change (and sometimes other causes of degradation) and the impact on the services they provide are well covered in all the NAPs.

While countries point out that more research is needed to fully understand how ecosystems are affected by a changing climate, the effort to assess ecological vulnerabilities is a standard feature of NAPs. Countries do recognize the economic and social losses resulting from environmental degradation, emphasizing the non-climatic drivers that affect the resilience of ecosystems and their potential to amplify climatic impacts. However,

NAPs put a larger focus on the ongoing and anticipated degradation of ecosystems rather than their role as an adaptation option, although both are equally important. This may be due to a limited understanding of the links between ecosystems, their structures and processes, and the adaptation-relevant services they provide for reducing climate risks. Further, the dominant approach to addressing risks posed by extreme weather events and natural disasters has been engineered interventions.

All countries emphasize the importance of incorporating climate information into planning processes, which is reflected in the detailed information regarding the vulnerabilities of ecosystems. Though all NAPs stress the use of climate information, this is not necessarily reflected in the EbA options, as many NAPs include several business-as-usual conservation and natural resource management measures. Out of 19 NAPs, 14 have been led and prepared by environmental ministries;³ this emphasis on conservation and natural resource management may reflect synergies with other programs and projects within the ministry on biodiversity conservation and sustainable forest and/or land management. However, while conservation projects may result in positive ecological and socioeconomic benefits, the question arises of how effectively these measures address adaptation to climate change risks and vulnerabilities if they do not explicitly focus on adaptation needs and incorporate adaptive management principles.

Most countries included EbA measures to reduce the threats to—and vulnerabilities of—ecosystems and people they identified in their NAP. However, it was often not made explicit how the individual measures described are linked to (or expected to address) climate-related hazards and risks and deliver measurable adaptation outcomes. For example, risk of habitat or biodiversity loss might be clearly identified as a vulnerability to climate change, but corresponding EbA measures were not explicit enough to reveal how exactly this climate risk would be addressed, at times making it challenging to categorize them as adaptation versus business-as-usual conservation measures. However, given that they are part of the NAP process, the assumption is that the country regards these as adaptation measures. This suggests the need for a more nuanced understanding of the development and prioritization of adaptation options in relation to ecosystems to enable their use as effective adaptation tools.

Efforts to monitor EbA outcomes are limited to a few countries. Some countries have identified partial or fully time-bound measurable targets for their EbA measures. Chile, for example, identified the timeline, scope, and a measurable goal or expected results for each specific project along with the responsible actors. Brazil identified specific indicators for each goal and the initiatives related to it. Similarly, Cameroon included a specific process and plan for monitoring and evaluation that lays out responsible actors, a timeline, and project-related indicators to achieve results. However, the number of countries that identified measurable goals and indicators

³ Others were published by the government or the Ministry of Agriculture and Ministry of Planning.

to monitor and evaluate is still very low—amplifying again the need for stronger ecosystem and biodiversity monitoring to facilitate the upscaling of EbA.

The identification of financial resources for EbA and/or ecosystems and the engagement of the private sector on these actions were not widespread in the NAPs.

Although many NAPs had sections about financial resources, the connection between these aspects and ecosystems and/or EbA was limited. For financial resources, a few countries across regions—Cameroon, Chile, Kiribati, St Vincent and Grenadines, Togo, and Uruguay—explicitly identified these for EbA or activities planned for ecosystems. Guatemala referred to a debt swap related to nature that could be tapped into. Fiji's was the only NAP to explicitly mention the important role the private sector can play in EbA and that awareness about ecosystem services must be raised among the private sector.

Urban EbA and grey/green hybrid options were under-represented in the NAPs despite increased attention to these aspects internationally and in publications and guidelines recently.

Because of the density (and often vulnerable location) of urban areas, risks arising from climate change and the underlying vulnerabilities that increase them tend to affect a lot more people and ecosystems. While NAPs recognize the vulnerability of urban areas, only a few countries referenced urban EbA or greening solutions. Notable exceptions were Brazil, Colombia, and St Lucia. This may be the result of EbA being more closely linked to specific ecosystems and productive landscapes than as a measure for reducing risk or vulnerability—or it may reflect a lack of a more general urban focus in many NAPs. In the same vein, many countries identified infrastructure as a key sector for adaptation: only Fiji and Guatemala identified the potential



Axel Fassio/CIFOR (CC BY-NC-ND 2.0)

for grey/green or hybrid solutions. Another country (Kiribati) was the only one to acknowledge potential trade-offs or negative impacts from hard adaptation solutions on ecosystems.

NAPs tend to identify people and groups that are particularly vulnerable to climate change and may benefit from adaptation actions, but only a handful make a direct connection to ecosystem-based actions. EbA reduces the vulnerabilities of people, especially those who directly depend on or use natural resources and are particularly vulnerable to climate change. Hence, considering social diversity by recognizing particularly vulnerable groups is critical to generating benefits for the most vulnerable social groups and addressing barriers to adaptation. The identification of vulnerable people and specific groups in relation to ecosystem or EbA measures was not made explicit in the majority of NAPs. Out of all NAPs, nine (most commonly in Latin America) explicitly identify multiple specific vulnerable groups as beneficiaries of EbA. Farmers and pastoralists were the groups most commonly identified, followed by rural populations and women, followed by Indigenous Peoples—the latter in only three NAPs.

Latin American countries have much stronger treatment of ecosystem services and EbA and connected their NAPs to a national biodiversity strategy. This is likely due to the region's long history and experience with ecosystem services—including both EbA and payment for ecosystem services—and the resultant expertise and perspective. This, too, was emphasized by a review of the number of ecosystem-based projects via the Panorama Platform⁴ across countries that have submitted a NAP. While there are six NAPs from Latin America and six NAPs from Africa, there are three times as many EbA projects from these Latin American countries registered on the Panorama Platform.⁵ Brazil, Costa Rica, Chile, Colombia, and Guatemala combined registered a total of 63 ongoing or completed ecosystem-based projects, with Uruguay recording one project. This could be interpreted as an indication that the large number of EbA projects in Latin American countries has led to instigating policy change along with stronger recognition and commitment to EbA in the NAP process. In comparison, there were only 21 ecosystem-based projects registered in African countries that have submitted their NAP, with an average of 1 or 2 projects per country aside from Kenya, which had 11 projects listed. However, Kenya's NAP did not show a strong emphasis on EbA.

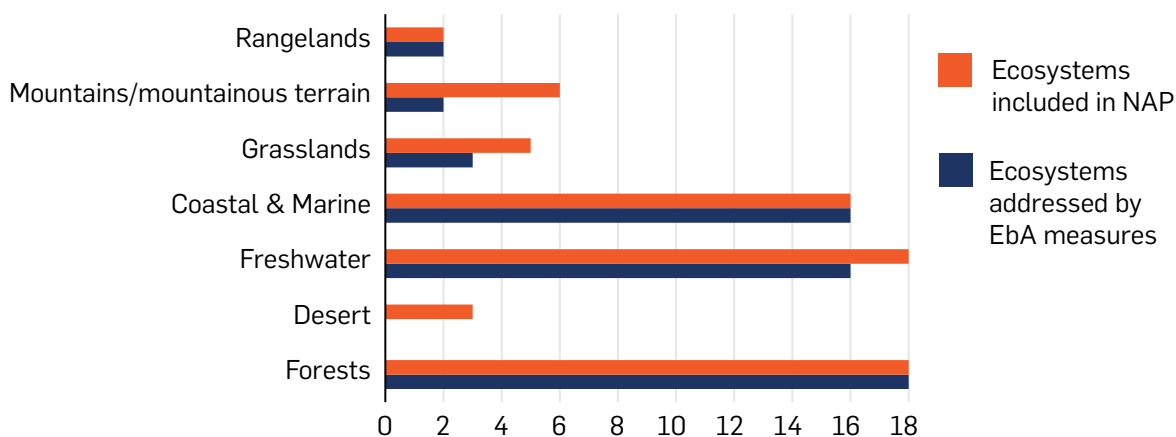
Within NAP documents, forest, freshwater, and coastal/marine ecosystems were most identified as vulnerable to climate change. They also had the most corresponding EbA measures related to those ecosystems. Marine/coastal and forestry were often

⁴ The [Panorama online platform](#) is a tool that documents and allows users to find examples and case studies of environmental solutions across different regions and countries. Search and classification functionalities allow users to find relevant solutions across themes relevant to EbA. The projects identified for this review were all included under the theme "adaptation."

⁵ It should be noted that there may be other explanatory factors connected to the prominence of EbA projects from Latin America, such as a stronger regional interest in outreach and dissemination and/or better developed use of EbA.

highlighted as their own stand-alone sectors or as specific subsectors within a larger ecosystem/environment sector. Forestry was more likely to be identified as a stand-alone sector, especially in Africa. Measures within the forestry sector focused more on sustainable delivery of goods and services rather than reducing explicit climate risks. Both the water and agriculture sectors had EbA measures explicitly highlighted in many countries; however, in addition to those, several NAPs referenced sustainable water management and climate-resilient agriculture as having the potential to offer EbA. While it can be difficult to classify these as EbA, following the methodology and classification of EbA measures, these were included. Mountains/highlands, grasslands and deserts or arid regions were mentioned when characterizing a country's vulnerability context rather than in reference to specific adaptation actions for these ecosystems. This may indicate a lack of awareness or opportunities for EbA measures focusing on those regions.

Figure 1. Identified ecosystems in NAPs vs. ecosystems being addressed by EbA measures*



* The analysis compared ecosystems identified as vulnerable in NAP documents with EbA measures related to those ecosystems.

The term “nature-based solutions” (NbSs) does not appear in any of the NAPs. NbS, a more recent concept, is broad in definition and scope, and while it is rooted in climate change mitigation and adaptation, it serves as an umbrella concept for various ecosystem-related approaches beyond just addressing climate change. EbA focuses primarily on climate change adaptation while being more limited in scope. It is therefore considered an NbS for adaptation. All ecosystem-based measures within NAP documents can easily fall under the concept of NbS but not necessarily under EbA, as they often lack an explicit link to climate risks. Both concepts should be considered complementary and mutually reinforcing rather than competing; ecosystem-based measures included in NAPs need to operationalize core principles such as clearly addressing current and future climate risks and improve peoples' adaptive capacity to climate change.

There is evidence that countries are starting to link the NAP process and ecosystems to other relevant national strategies and global agendas. Because resilient ecosystems are

a central concept of other global agendas and subsequent policy processes, referencing linkages in the NAP can identify synergies, avoid the duplication of efforts, and magnify impacts. All the NAP documents published from 2017 onwards, aside from Kiribati, have included a link or direct reference to the SDGs, although not all of them link ecosystems and/or EbA measures directly to them. All Latin American countries connected their NAP to a national biodiversity strategy, which was not as prevalent in other regions. In comparison, out of the six African countries that submitted their NAP, only Cameroon linked to a national biodiversity strategy. With the upcoming new biodiversity framework that intends to emphasize stronger links between climate change and biodiversity, more prominence needs to be placed on making these strategic links between relevant national strategies. Many of the more recent NAPs also link to the Sendai Framework for Disaster Risk Reduction. This is more common in Latin America, the Caribbean, and the Pacific: none of the African countries referenced the framework. However, all African countries mentioned or included links to disaster risk reduction and/or management, even if they did not make an explicit link to the Sendai Framework. Although the direct link to EbA measures is tenuous, it is a positive indication that countries acknowledge the overlap and synergies between adaptation to climate change, biodiversity, disaster risk reduction, and the SDGs in their NAPs, given that many adaptation measure (including ecosystem-based ones) will likely yield multiple benefits that meet the objectives of multiple global agendas.

Countries recognize the co-benefits EbA measures have for sustainable development, in particular for climate change mitigation in the form of carbon sequestration.

Mitigation co-benefits of EbA measures were explored by about half of the countries. In particular, Latin American and African countries are considering or are paying additional attention to the synergies between mitigation and adaptation and the benefits of sequestering carbon emissions that EbA measures may offer. Within the African region, mitigation benefits resulting from identified ecosystem-based measures were almost exclusively focused on the forestry sector. Other NAPs exhibited limited identification of synergies between adaptation and mitigation, in line with the most common approach of countries separating mitigation and adaptation. This may lead to lost opportunities for maximizing synergies in developing countries.

Table 1 provides a synthesized visual overview of the review and its results, organized by geographical region and country. It provides an overview of the extent to which ecosystems, ecosystem services, and resulting EbA measures have been included and the degree of discussion in NAP documents. It further provides information regarding linkages to other climate-relevant strategies, the monitoring and evaluation of measures, and financial resources allocated for EbA.

Table 1. Overview of Ecosystem-Based Adaptation in National Adaptation Plan (NAP) Processes

		Year of NAP	Human Development Index	NAP refers to Sustainable Development Goals	NAP refers to Sendai Framework	Refers to National Biodiversity Strategy	Role of ecosystems in helping people to adapt	Refers to nature-based solutions	Refers to ecosystem-based adaptation	Refers to eco-disaster risk reduction	Refers to ecosystem management	Other	Ecosystems identified as stand-alone sector	Ecosystems identified as cross-sectoral	Includes conceptual framework of EbA	Ecosystems included in vulnerability assessment	NAP mentions ecosystem services	NAP identifies ecosystem services as essential for livelihoods and people	NAP identifies EbA measures	EbA measures identify vulnerable people who will benefit	Mentions mitigation co-benefits of EbA measures	Identifies specific, measurable, and time-bound targets (goals) for EbA measures	Identifies financial resources for EbA	
Latin America	Brazil	2016	79																					
	Costa Rica	2018	68																					
	Chile	2014	42																					
	Guatemala	2018	126																					
	Uruguay*	2019	57																					
	Colombia	2016	79																					
	Africa & Middle East	Burkina Faso	2015	182	●																			
Cameroon		2015	150																					
Ethiopia		2019	173																					
Kenya		2016	147																					
Togo		2018	167																					
Sudan		2016	186																					
Palestine		2016	119																					
Pacific	Fiji	2018	98																					
	Kiribati	2019	132																					
Asia	Sri Lanka	2016	71																					
Caribbean	St. Lucia	2018	89																					
	St. Vincent and the Grenadines	2019	94																					
	Grenada	2017	78																					

* Agriculture NAP

● Mentions MDGs

¹ Clearly states that ecosystems help people adapt, increase adaptive capacity and/or build resilience to climate change.

² Other include: improve ecosystem functionality, conservation of ecosystems, enhance ecosystem resiliency, natural resource management.

DEGREE OF DISCUSSION

□ No mention or discussion

■ Implied/some mention/limited discussion/discussed in generic terms

■ Clearly mentioned and/or discussed in detail and/or designated section

■ Country identified one ecosystem as stand-alone sector (e.g. forests)

■ One ecosystem identified as cross-sectoral

4

Conclusions

This review of the existing NAP documents reveals that ecosystems—in their own vulnerability to climate change and through the services that they provide to people to adapt to climate change—are critical to adaptation priorities in many countries. Beyond the 19 completed NAPs, 120 countries have initiated and/or are undertaking activities related to the NAP process (UNFCCC, 2019), providing an important opportunity to support countries in their efforts to enhance and upscale adaptation broadly and related to ecosystems specifically.

While the review was conducted on the completed NAP documents and did not analyze the related NAP process, the findings from this review provide insights into ongoing NAP processes for integrating ecosystems and EbA into the process as well as resultant documents. Recognizing the importance of country-specific context and priorities in the NAP process, there are several key areas where countries may benefit from strengthening their approach to ecosystems and EbA solutions to further enable the adaptive capacity of ecosystems and people, especially the most vulnerable of both. These include:

- **Adopt the notion that our economies and well-being are embedded in and rely on healthy ecosystems:** Countries are already recognizing the degradation and vulnerabilities of ecosystems due to climate change and the importance of being climate resilient. To accelerate the sustainable transition, NAPs must emphasize and communicate the important role of the provision of ecosystem services on which economies and livelihoods rely. This includes the acknowledgement that the total demand on ecosystem services exceeds their ability to sustainably supply goods and services and the trade-offs required to address this imbalance.
- **Use the NAP process to advance protection of biodiversity with climate adaptation goals:** The NAP process provides an opportunity to better reflect the urgency of the biodiversity crises and further embrace the interdependence between climate change and biodiversity loss. Currently, countries are asked to prepare voluntary national commitments for biodiversity and update their National Biodiversity Strategy and Action Plans (NBSAPs) to inform the new post-2020 Framework. This provides an important opportunity to strengthen synergies and linkages between NBSAPs and NAPs and facilitate the integration of climate change adaptation concerns into biodiversity policies, programs, and activities. Similarly, countries are encouraged to strengthen the prominence of ecosystem-based approaches

when updating their Nationally Determined Contributions (NDCs) emphasizing synergies between adaptation and mitigation.

- **Consider and integrate EbA solutions across all sectors, in particular non-conservation sectors:** EbA solutions have the potential to bring tangible outcomes across many sectors, including productive sectors that are important for economic growth. The resilience of non-traditional conservation sectors like infrastructure, urban settings, health, and energy can greatly benefit from cultivating EbA solutions that can deliver multiple benefits.
- **Apply effectiveness criteria to ensure EbA solutions deliver intended outcomes:** To ensure EbA solutions are in fact designed to help people adapt (as well as build resilience of ecosystems), they must address an identified current or future climate hazard, generate adaptation benefits for vulnerable groups, build the resilience of ecosystems, and make sustainable use of biodiversity. Following common effectiveness criteria during the design and appraisal stage of adaptation options is a useful way to ensure that identified vulnerabilities and adaptation needs are addressed.
- **Strengthening measurable and time-bound targets for EbA solutions:** Setting targets that are specific, measurable, attainable, relevant, and time-bound (SMART) as part of an overall NAP monitoring and evaluation system will ensure the benefits from investment into EbA solutions are captured and inform the evidence base. Countries should also consider how monitoring could capture the impacts related not only to climate change



CIAT/GeorginaSmith (CC BY-NC-SA 2.0)

adaptation but also ecosystem health and the well-being and/or development impacts for people, especially the most vulnerable. Learning from the information and data collected is essential to adjust solutions accordingly to increase the likelihood that adaptation goals and priorities are achieved.

- **Identify potential financial resources and collaboration with the private sector:** Identification of secured or potential finances that can be dedicated to EbA solutions can be useful for initiating implementation faster and scaling up such actions. This includes exploring potential international funding opportunities to bilateral donor opportunities as well as national or local financing and budgeting cycles. Assessing the financial resources piece of the puzzle during the planning phase of the NAP process is an essential step to ensure implementation. In addition, engaging and identifying which private sector activities, such as utilities, agriculture, and forestry (and what types of EbA solutions are related to their industry) could support increased engagement.
- **Highlight and identify vulnerable people and groups:** Making direct linkages between vulnerable groups and the impact of further ecosystem degradation and loss of goods and services is vital to demonstrate the importance of EbA solutions. Highlighting vulnerable groups that would benefit most from EbA solutions helps identify economic and social benefits and desired impacts. Whether this includes smallholder farmers and EbA focused on agriculture (or slum residents and urban coastal EbA), identifying the beneficiaries associated with interventions is key not only for stakeholder engagement, planning, and local ownership but also to ensure that the positive impacts are documented in those communities.

This review clearly shows that the vulnerability of people and ecosystems is a serious concern, and many countries are striving for adaptation actions that will protect both in a changing climate. It further illustrates the importance of ecosystems and EbA in the adaptation strategies of countries that have submitted and finalized their NAPs while highlighting key areas that countries currently undertaking the NAP process may wish to consider.

In response and as a follow-up to this analysis, the NAP Global Network developed a **guidance note** that presents “why” and “how” the NAP process can be utilized as a key mechanism and driver to mainstream and upscale EbA. It identifies guiding principles and actions along the steps of the NAP process to integrate and links to useful tools and resources related to the recommended actions.

References

- Convention on Biological Diversity (CBD). (2009). *Connecting biodiversity and climate change mitigation and adaptation: Key Messages from the Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change*. Montreal: Secretariat of the CBD. <https://www.cbd.int/doc/publications/ahteg-brochure-en.pdf>
- Cohen-Shacham, E., Walters, G., Janzen, C. & Maginnis, S. (Eds.) (2016). *Nature-based solutions to address global societal challenges*. IUCN. <http://dx.doi.org/10.2305/IUCN.CH.2016.13.en>
- Friends of EbA. (2017). *Making ecosystem-based adaptation effective: A framework for defining qualification criteria and quality standards* (FEBA technical paper developed for UNFCCC-SBSTA 46). Bertram, M., Barrow, E., Blackwood, K., Rizvi, A.R., Reid, H. & von Scheliha-Dawid, S (authors). Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), International Institute for Environment and Development (IIED), International Union for Conservation of Nature (IUCN). https://www.iucn.org/sites/dev/files/feba_eba_qualification_and_quality_criteria_final_en.pdf
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2019). *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, & C. N. Zayas (Eds.). IPBES secretariat. https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf
- Seddon, N., Chausson, A., Berry, P., Girardin, C., Smith, A., & Turner, B. (2020). Understanding the value and limits of nature-based solutions to climate change and other global challenges. *Philosophical Transactions of the Royal Society B*, 375(1794). <https://royalsocietypublishing.org/doi/10.1098/rstb.2019.0120>
- Sudmeier-Rieux, K., Masundire, H., Rizvi, A., CARE/International, & IUCN Commission on Ecosystem Management. (2006). *Ecosystems, livelihoods and disasters: An integrated approach to disaster risk management*. IUCN. https://www.researchgate.net/publication/282808279_Ecosystems_Livelihoods_and_Disasters_An_Integrated_Approach_to_Disaster_Risk_Management

United Nations Framework Convention on Climate Change (UNFCCC). (2012). *The national adaptation plan process: A brief overview*. Least Developed Country Expert Group. https://unfccc.int/files/adaptation/application/pdf/nap_overview.pdf

United Nations Framework Convention on Climate Change. (2019a). *The 36th meeting of the Least Developed Countries Expert Group. Item 11 of the provisional agenda: Matters relating to the least developed countries*. Subsidiary Body for Implementation. https://unfccc.int/sites/default/files/resource/sbi2019_16E.pdf

United Nations Framework Convention on Climate Change. (2019b). *Progress in the process to formulate and implement national adaptation plans*. Subsidiary Body for Implementation. https://unfccc.int/sites/default/files/resource/sbi2019_INF.15.pdf



Coordinating Climate-Resilient Development

www.napglobalnetwork.org

info@napglobalnetwork.org

 [@NAP_Network](https://twitter.com/NAP_Network)

 [@NAPGlobalNetwork](https://www.facebook.com/NAPGlobalNetwork)

This guidance note is a product of the Support Project for the Implementation of the Paris Agreement (SPA), which is funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) under its International Climate Initiative. It was produced jointly by IISD, the GIZ SPA Project and the GIZ Global Project Mainstreaming Ecosystem-based Adaptation (EbA).

On behalf of:



of the Federal Republic of Germany