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International environmental policy and governance issues

Information on the implementation of resolution 5/5 on nature-based solutions for supporting sustainable development

Note by the secretariat

I. Introduction

1. The present report provides an update on progress made in the implementation of resolution 5/5 of the United Nations Environment Assembly of the United Nations Environment Programme (UNEP) on nature-based solutions for supporting sustainable development. The resolution provides the first multilaterally agreed definition of nature-based solutions, as “actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits”.

2. In the resolution, the Environment Assembly requested the Executive Director of UNEP, subject to the availability of resources and to further support the implementation of nature-based solutions, as defined in the resolution, to convene intergovernmental consultations in a transparent, inclusive, regionally balanced manner, striving for gender balance, in order to:

(a) Compile examples of best practice in nature-based solutions, based on the best available science;

(b) Assess existing and discuss potential new proposals, criteria, standards and guidelines to address divergences, with a view to achieving a common understanding among Member States for the implementation of nature-based solutions, including to support Member States in designing, implementing and evaluating nature-based solutions, building on existing work, initiatives and platforms, as appropriate, and without prejudice to existing efforts and initiatives of and new proposals from individual Member States;

(c) Identify options for supporting sustainable investment in nature-based solutions and share information on bilateral and multilateral sources of finance to enable developing countries to develop and deploy nature-based solutions.

3. In October 2022, Leila Benali, President of the Environment Assembly, appointed Giovanna Valverde Stark, Ambassador and Permanent Representative of Costa Rica to UNEP and UN-Habitat, and Sikeade Egbuwalo, Senior Forest Officer, Federal Ministry of Environment of Nigeria and

* UNEP/EA.6/1.

Nigerian national focal point for the Convention on Biological Diversity, as Co-Chairs of the intergovernmental consultations on nature-based solutions. The secretariat supporting the Co-Chairs in this process is hosted at the headquarters of UNEP in Nairobi.

II. Progress in the implementation of resolution 5/5

4. Funding was generously provided by the European Commission (\$749,000), Canada (\$145,000) and France (\$75,000) to conduct the consultations requested in the resolution, and was supplemented by allocations from the UNEP Environment Fund (\$100,000) and the UNEP living in harmony with nature thematic fund (\$200,000).
5. The Co-Chairs, with the support of the secretariat, convened consultations from May to October 2023. In line with the request in the resolution for the consultations to be convened in a “transparent, inclusive, regionally balanced manner, striving for gender balance” (para. 5), both global and regional consultations were held. The process began with an online global consultation on 16 May 2023, which was followed by a series of online regional consultations held in June and July for the African, Asia-Pacific, Eastern European, Latin American and Caribbean, and Western European and other States regional groups. A final round of in-person consultations was held at the UNEP headquarters in Nairobi from 9 to 13 October 2023.
6. Representatives of Member States, intergovernmental organizations, multilateral environmental agreements, and major groups and stakeholders were invited to participate in the consultations.
7. To ensure inclusivity and regional and gender balance, UNEP sponsored the attendance of one delegate from each developing country plus 20 stakeholder representatives for the in-person consultations, and it encouraged Member States and stakeholder organizations to consider nominating female delegates. The consultations achieved near-gender parity with regard to participants, and nearly 400 participants were welcomed to the final consultations in Nairobi.
8. The first global and regional consultations revealed three topics of common interest in addition to the three tasks set out in the resolution, which were added to the agenda for the final round of consultations:
 - (a) Measuring costs and benefits of nature-based solutions;
 - (b) Opportunities and obstacles of nature-based solutions for climate mitigation;
 - (c) Policy for nature-based solutions.
9. The annexed document demonstrates how the consultations addressed these tasks and issues. The annex consists of the Co-Chairs’ summary of the consultation process and two appendices:
 - (a) The Co-Chairs’ recommendations, drawn from the consultation process;
 - (b) A guide to resources on nature-based solutions, which builds on the background paper prepared by UNEP prior to the first consultation and includes many resources presented during the consultations, providing a concrete tool for each of the tasks and issues discussed during the consultations.

III. Lessons learned

10. It was very helpful to hold three rounds of consultations over a short period (five months). Holding them in close succession ensured continuity and gave momentum to the tasks of the consultations.
11. The longer, in-person consultations in Nairobi complemented the virtual consultations well and enabled deep exchanges on critical issues.

IV. Recommendations and suggested actions

12. Member States may wish to:
 - (a) Take note of the Co-Chairs’ summary annexed to the present note, which summarizes the full series of consultations convened in support of the implementation of resolution 5/5, and its two appendices:
 - (i) The Co-Chairs’ recommendations to support the implementation of nature-based solutions for sustainable development;

- (ii) The resource guide for nature-based solutions: an output from the intergovernmental consultations on nature-based solutions.
- (b) Invite Governments, the private sector, foundations, and other entities to support the implementation of the Co-Chairs' recommendations and the wider implementation of nature-based solutions through voluntary financial contributions. The annex and its appendices are presented without formal editing.

Annex*

Intergovernmental Consultations on Nature-based Solutions

Co-Chairs' Summary

**Ambassador Giovanna Valverde (Costa Rica)
& Ms Sikeade Egbuwalo (Nigeria)**

November 2023

* The annex has not been formally edited.

Contents

Introduction.....	6
Best Practices.....	7
Standards and criteria.....	10
Measuring Benefits and Costs.....	12
Finance for Nature-based Solutions.....	14
Nature based solutions for climate mitigation.....	16
Policy for Nature-based Solutions.....	18
APPENDIX 1: Co-Chairs' recommendations to support the implementation of nature-based solutions for Sustainable Development.....	25
APPENDIX 2: Resource Guide for Nature-based Solutions.....	27

Introduction

This document summarizes all of the intergovernmental consultations held to date for UNEA Resolution 5/5 *Nature-based solutions for supporting sustainable development*. The summary has been prepared by the Co-Chairs of the consultations, Ambassador Giovanna Valverde (Costa Rica) and Ms Sikeade Egbuwalo (Nigeria). The consultations consisted of the following meetings:

- First Global Consultation (virtual): 16-17th May 2023
- First Regional Consultations (all virtual)
 - Latin America and Caribbean: 22nd & 23rd June 2023
 - Western Europe and other States: 27th and 28th June 2023
 - Africa: 10th & 11th July 2023
 - Eastern Europe: 18th & 19th July 2023
 - Asia-Pacific: 25th & 26th July 2023
- Nairobi consultations: regional and global consultations (in person): 9-13th October 2023

Prior to the First Global Consultation and the Nairobi consultations the Co-Chairs circulated notes to all participants explaining how they intended to chair the meetings and subsequently followed up with summaries of each meeting. Together these two sets of documents were intended to inform participants on what to expect in the consultations and to make them aware of how the Co-Chairs understood the contributions that had been made as the consultations progressed.

The Co-Chairs also invited written submissions from participants. These can be found on the consultations website: <https://www.unep.org/about-un-environment/intergovernmental-consultations-nbs>. Over the course of the consultation period, we received submissions from nine Member States, four Intergovernmental Organizations, ten Stakeholder Organizations, two UN entities and one Multilateral Environmental Agreement.

Summaries of the second round of regional consultations that took place in Nairobi were prepared by the Co-facilitators from each region. These summaries were not negotiated nor developed with full consensus and thus do not necessarily represent the consensus views of individual Member States. Nevertheless, they provide a very useful resource for understanding perspectives from the regions. These summaries can be found at: <https://www.unep.org/events/working-group/final-intergovernmental-consultations-nature-based-solutions>.

The starting point for all consultations was the three tasks set out in UNEA Resolution 5/5:

1. To compile examples of best practices
2. To assess and discuss potential new proposals, criteria, standards and guidelines
3. To identify options for supporting sustainable investment in nature-based solutions.

During the first global and regional consultations, additional issues came to the fore and informed Nairobi consultations. In particular, three issues were prominent:

- Measuring benefits and costs of NbS
- Policy for NbS
- Obstacles and opportunities: NbS for climate mitigation

The first two issues emerged because many participants thought that measuring the benefits and costs of NbS and developing appropriate policy for NbS were important for the scaling up of NbS. The third issue became prominent because it was a topic where there were significant divergences between participants. The Co-Chairs note that UNEA Resolution 5/5 encouraged the consultations ‘to address divergences’.

The summary below is divided into sections to address each of the six issues. The summary includes points made in the panel discussions, both by panelists and by participants from the floor. Overall, the aim of this summary is to reflect the broad range of views that were presented, noting areas where there are convergence and divergence.

Two appendices are included in this summary document to assist member states. First, *the Co-Chairs' recommendations to support the implementation of nature-based solutions for Sustainable Development*, which were presented and discussed on the final day of the Nairobi consultations (Appendix 1). In addition, the Secretariat compiled a technical *Resource Guide for Nature-based Solutions* (Appendix 2).

Key Takeaways from Consultations

Overall, the following key points emerged with a significant degree of consensus amongst participants:

- A high level of support for nature-based solutions and for increasing the scale of implementation.
- Commitment to the language of the resolution, including both Operative Paragraph 1, which contains the definition of NbS and subsequent Operative Paragraphs, that elaborate on the concept.
- Widespread agreement that the overriding aim of nature-based solutions is to support sustainable development and its three pillars: environmental, social and economic.
- Concern that NbS is still not sufficiently well understood at different levels. There was a clear desire to distinguish between what is and what is not NbS. Most participants held that standards and criteria can play a key role in addressing this problem, although differences were evident on the best way forward.
- Recognition of the importance of measuring both the benefits and costs of NbS, looking beyond only financial costs and benefits, and ensuring equity in distribution of such benefits and costs.
- Agreement that NbS had a role to play in contributing to climate mitigation, but there were some differences on the nature of that role. Furthermore, it was commonly understood that NbS for climate mitigation does not replace the need for a rapid, sustained and large reduction in greenhouse gas emissions from fossil fuels.
- Recognition and action by many Member States to create policy for NbS, whether through adopting an explicit policy on NbS or by mainstreaming NbS across existing policies. There was also a strong recognition of the need and advantages of aligning NbS policy with existing national commitments and policies, especially related to the Rio Conventions, e.g. NBSAPs, NDCs, NAPs.
- Agreement that there is a need to increase the volume of finance for NbS, that such finance will come from a range of sources and needs to be more accessible to actors at the local level. While there was recognition of the challenges in scaling up finance for NbS there was also a constructive set of suggestions of how to do this.

Best Practices

Agreed Elements

There was general agreement among participants during the regional and global consultations on many points concerning best practice. This section lays out the major points of agreement, followed by supplementary points expanding on that theme, which might have been made by one or more participants. There was common agreement that:

- Considerations of best practices are closely linked to the question of criteria and standards, as a clear metric is needed against which to evaluate the quality of an example.

- Several participants agreed that the definition of NbS agreed in UNEA Resolution 5/5 provides a framework for determining best practices.
- There were calls to establish the fundamental criteria of both best practices and bad practices.
- One participant suggested that establishing criteria for best practices would support the business case for investing in NbS.
- One participant pointed out that much of the guidance on safeguards relating to ecosystem-based adaptation for disaster risk reduction are applicable to NbS and proposed that taking advantage of this synergy could be an efficient way to establish a best practices metric for NbS.
- One organisation submitted a list of metrics and evidence to evaluate whether NbS interventions are of high quality and integrity.
- Best practices should not only focus on the technical and financial issues associated with implementation, but also on institutional, local governance, training and communication matters. These support increased understanding and uptake of NbS and facilitate high quality NbS interventions.
- The creation of a shared understanding of NbS are key to its success adoption at scale.
 - It was said that some Member States and organisations are still unclear on the meaning of NbS and that a clear understanding of its meaning is a prerequisite to discussions of best practices. For example, one participant was unclear on the difference between NbS and sustainable development.
- Three foundational pillars make up the core of NbS and should be the foundation for all good practices: environmental, economic and social.
- There is no one-size-fits-all approach; it is critical to ensure that NbS interventions are adapted to the specific features of the local context.
 - It was recognised that there is a tension between the fact that best practices must be specific and adapted to each individual ecological, geographical and social context, and the need the concept of best practices to be broad enough to be widely or universally applicable.
- It is important to share both best practices and bad practices examples. Reasons given for the importance of this included:
 - To showcase NbS, to show that they can be scaled up, and to inspire people that we can tackle multiple challenges together through NbS.
 - To amplify and raise awareness of the topic, and to share knowledge and experiences.
 - To avoid repeating past mistakes.
 - One participant suggested that repositories of NbS examples could provide a platform to facilitate and maintain learning communities.
 - It was suggested that an open-access database with many examples of NbS best practices could attract the academic community, and that the basis for defining best practices would organically emerge from this.
- Participants requested UNEP to compile all examples submitted during this consultation process.
 - Participants broadly agreed that this compilation of examples should not duplicate work which has already been done to compile NbS examples and should instead build on existing compilations and add value to what already exists.
 - Several Member States agreed that further to compiling all submitted examples, it would be beneficial for UNEP to curate a small set of examples showcasing excellent or exemplary practices for each type of NbS.
 - One participant suggested that UNEP could compile a list of submitted NbS examples which meet all the criteria set out in the resolution, as a first step to creating a set of best practices examples.
- Cross-sectoral and multi-stakeholder collaboration are key to NbS best practices.

- Multi-stakeholder participation is key throughout all stages of the NbS project process (from design to implementation to monitoring, evaluation and project reporting). It is especially critical to ensure and facilitate the participation of Indigenous Peoples and of the communities local to where NbS projects are implemented. Women, youth and farmers also important stakeholders. Multi-level participation is also key, including national and local government and local people.
- A critical element of best practices is the recognition of and respect for the importance of indigenous knowledge, participation and rights, and local ownership of projects.
 - One participant drew attention to the elements of the Kunming-Montreal Global Biodiversity Framework which recognize that promoting Indigenous-led action ultimately leads to more holistic, nuanced, sustainable approaches which embrace harmonized conceptions of the coexistence of humans and nature.
 - Likewise, the importance of safeguards and equitable benefit sharing are key to best practices.
- Other essential characteristics of best practices NbS interventions include robust monitoring and evaluation and ensuring that they are science-based.
 - One participant suggested that best practices examples should be accompanied by data to demonstrate their effectiveness.
- It is important to analyze the benefits and costs of NbS across different timeframes and scales to avoid or mitigate trade-offs and conflicts.
 - It was noted that best practices design of NbS should avoid conflict over land and resources with or between communities, especially regarding agriculture and Indigenous Peoples.
 - There is often a high upfront investment cost for NbS interventions. This needs to be managed carefully.
 - All impacts of NbS interventions should be considered. As an example, the potential impact that replacing chemical fertiliser with a nature-based alternative could have on food security should be considered.
 - The design of NbS interventions should consider the root causes of the challenge they are trying to tackle and, where possible, seek to address the underlying drivers so that the problem does not continue while the NbS intervention addresses only the symptoms.
 - It was noted that scalability is a feature of best practices NbS actions, as it was frequently observed that existing NbS actions need to be scaled up.
- Efforts to protect and conserve ecosystems should be prioritised as the first solution; restoration actions and other types of NbS should be implemented in cases where this has not been possible.
- NbS should contribute to multiple challenges, not just climate change or biodiversity loss. They must enhance ecosystems and biodiversity while achieving other goals.
- Collaboration across climate and biodiversity spheres, including between the UNFCCC and the CBD, is important.

Questions and Concerns

Despite general agreement on the value of sharing best practices examples, some questions and concerns were raised by participants:

- There is a persistent question around how to categorise and share examples of best practices. It was noted that there are multiple ways to do this for multiple purposes, and the intended audience and use of the compilation should always be borne in mind when deciding which one.
 - Categorising by type of challenge is often helpful.
 - Categorising by ecosystem type can also be useful.
 - Some participants suggested that examples could best be categorised along the two dimensions of challenge addressed and ecosystem type.

- One participant suggested that it could be helpful to compile a list of the best types of NbS action to address each challenge.
- It was also proposed that examples could be categorized along the dimensions of the six issues addressed in the final consultations, e.g. best practices for finance, best practices for policy etc, and that best practices for inclusiveness could also be added.

Best Practices Examples on the NbS Consultations webpages

The examples of NbS activities mentioned or submitted by participants in the consultations can be found at this webpage: <https://www.unep.org/about-un-environment/intergovernmental-consultations-nbs/nbs-examples-submitted-participants>. It was noted by many participants that, in the absence of agreed criteria, standards and guidelines, these examples cannot be classified as “best practices”.

Standards and criteria

There was broad consensus that standards and criteria are important and can contribute significantly to building a common understanding of NbS, can assist in determining how to apply the theory to practice, and are required in order to determine what best or good practice is in NbS.

In the first round of global and regional consultations, a number of interventions emphasized that criteria, standards and guidelines are important for the following reasons:

- to clarify the concept of NbS and to help identify what counts as best practices
- having standards and criteria helps determine what does not count as NbS, and so helps avoid abuse of the term (eg; “greenwashing”)
- they can promote a common understanding of NbS
- by including social and environmental safeguards, standards and criteria can ensure mainstreaming of these across NbS.

The above points were further emphasized in the final regional and global consultations where the topic of standards, criteria and guidance stimulated a great deal of discussion.

Criteria, standards and guidelines were noted as a means to:

- differentiate NbS from other similar and traditional approaches
- support capacity building: by applying the standards and criteria to specific cases, it is a way of “learning by doing”
- institutionalise NbS in national contexts
- assess the benefits and impacts of NbS.

Several regions and many individual Member States emphasized that it is important that standards and criteria are aligned with the definition of nature-based solutions found in Operative Paragraph 1 of UNEA Resolution 5/5. It was also emphasised that any standards and criteria should be consistent with sustainable development and the SDGs.

The following points were considered important in addressing the issue of standards and criteria:

- Inclusive development and application of criteria and standards, taking into account member states, stakeholders, gender, youth, indigenous peoples
- Integration of social and environmental safeguards into standards and criteria
- Consideration of national contexts, needs and priorities

- Standards and criteria should consider the Rio principles and the decisions adopted under the three Rio conventions as well as other relevant Multilateral Environmental Agreements
- Standards and criteria must be science-based and supported by evidence
- Simplification of standards and criteria is required in order to facilitate the adoption of NBS by all relevant actors including local communities

There were different views regarding how to respond to the need for standards and criteria, with two main ways of doing so emerging from the consultations: to make use of existing standards and criteria, or to develop new ones.

1. To use existing standards and criteria

- A number of interventions noted that it is unnecessary to reinvent the wheel.
 - It was suggested that the IUCN Global Standard for Nature-based Solutions is an important resource. It was noted that while these were launched in July 2020, these will be revised in 2024. However, some Member States pointed out that the Global Standard was developed before UNEA Resolution 5/5. Thus, it is not applicable to NbS as defined in that resolution. Further, it was felt that as not all Member States are members of IUCN, thus the Global Standard cannot be adopted by all Member States.
 - It was highlighted that some guidelines that do not refer directly to nature-based solutions may still be relevant and could be applied to NbS. For example, CBD Decision 14/5, which includes voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction was mentioned in this regard.
 - FAO reported that they have created a sector-specific framework for conceptualising NbS options in agricultural landscapes and are developing practical tools to support the design and monitoring of NbS.

2. To develop new standards and criteria

- Some participants felt that there is a need for Member States to agree on a new, global set of standards and criteria to serve as a tool to guide the application of NbS and to govern all NbS activities.
- The Africa group put forward the view that a new multilateral process is required to develop standards and criteria. This process should be country driven, taking into consideration the work that is done under the Convention on Biological Diversity and other relevant fora and entities.
- Another suggestion was that Member States should be responsible for developing their own, context specific standards and criteria.
- The issue of flexibility and diversity was raised in some interventions: some felt that having a common standard would make the application of the concept inflexible and not sufficiently take into account local contexts. One intervention stated that a global or even regional standard goes against the very diversity of NbS and caution must be taken in trying to globalize methodologies or guidelines.
- In the first Global Consultations, the International Standards Organization communicated their interest in developing a standard for nature-based solutions.

The following proposal is not a distinct option from the first two and could be used in conjunction with either of them.

To conduct a systematic assessment of criteria, standards and guidelines:

- Interventions proposed that there should be an analysis of existing criteria, standards and guidance produced by multilateral forums, such as the Rio Conventions, and by other international sources such as IUCN. These are relevant to the implementation of NbS and have a considerable track record of successful application. A key purpose of this analysis would be to identify convergence of existing criteria and common factors relevant to the successful implementation of NbS.
- It was proposed that the process could involve analyzing existing criteria and standards with an emphasis on identifying commonalities and convergence with other environmental conventions. This could set the stage for a harmonized and effective approach.
- Interventions were made saying that building upon these established criteria allows for consistency in the implementation of NBS projects. It was highlighted that a deeper exploration of these standards, their integration, and their adaptation to each region's unique circumstances is, however, needed.
- A recommendation was made that UNEP should compile existing guidelines, assess where they overlapped and converged, and initiate a process in which Member States could reflect on them.

A further suggestion was made, that was not a direct alternative to any of the options mentioned above, but that could be done in conjunction with any of those options:

Make use of the text of the resolution, which captures a number of factors essential for the successful implementation of NbS, to formulate simple standards and criteria:

The following points were made in interventions:

- UNEA Resolution 5/5 provides a strong framework for determining whether an action counts as NbS or not.
- UNEA Resolution 5/5 both in the definition and in the subsequent paragraphs provides the foundational, multilaterally agreed understanding of what factors are essential for the successful implementation of NbS.

Measuring Benefits and Costs

All regions concurred that it is important to measure the benefits and costs of NbS and that this should include both economic and non-economic benefits and costs.

Interventions in the consultations emphasized that, measuring the benefits and costs of nature-based solutions is important for:

- 'making the case' for nature-based solutions,
- guiding decision-makers, and
- accessing finance.

Key considerations that were raised by participants in the regional meetings as well as in the global consultations included:

NbS have multiple benefits and costs across different sectors

- Benefits from NbS encompass economic gains, environmental benefits and social advantages.

- The financial costs associated with NBS can be seen as investments in NbS interventions rather than as expenses, with long term non-financial benefits such as, for example, reduced soil erosion and climate resilience.
- Some NBS projects demand substantial initial financial investments. However, the long-term maintenance costs and other associated expenses may favour NBS when compared to other approaches. One participant noted that examples of NbS that address coastal erosion and flood control illustrate their cost-effectiveness. Moreover, the adoption of NBS at an individual and community level was seen as crucial for comprehensive climate adaptation.

Evaluations of benefits and costs must be undertaken and metrics to do so are needed

- Any evaluation needs to include environmental, social and economic benefits and costs.
- Such evaluations should be carried out at the different stages of NBS implementation.
- Evaluations should be multidisciplinary, and science-based.
- There is a need for guidelines and indicators to assess the benefits and costs, as well as a question of who would develop such guidelines and indicators.
- Efforts to showcase the value of NBS projects were deemed essential.
- Technical assistance for measuring benefits and costs was identified as a supportive measure to promote NBS implementation effectively.
- Some participants asserted that NbS practitioners do not need to start from scratch. They can build on measurement frameworks used by other processes and institutions.
- Monitoring biodiversity is an issue where progress is needed. It was noted that it may be difficult to quantify the value of nature, which has an intrinsic value.
- It was also stated that methods of assessing NbS in the short and long term must be improved and the value of ecosystem services needs to be assessed in a more holistic way if we are to have a realistic reflection of cost and benefits. For example, how do you quantify mental health benefits that may arise from urban green infrastructure? UNEP may be well positioned to lead work on developing a framework to measure the costs and benefits of NbS in a holistic way.
- The viability of NBS must be evaluated thoroughly, particularly in terms of benefits and costs. A comprehensive strategy was proposed, encompassing economic and non-economic elements and community involvement.
- Multiple country interventions noted the difficulty in measuring the overall benefits and costs of NbS as there are no standardized metrics to quantify the outcomes.
- Participants also highlighted that it is important to explore how to improve transparency and make the contributions of NbS to climate and other action clearer. On climate action, it may be helpful to engage with the UNFCCC when developing tracking and promoting transparency. This could make it easier to value the benefits of NBS and help to make the case for NBS.

Distribution of benefits and costs must be understood

- Stakeholders who are benefiting from NBS or bearing the costs are not always the ones implementing and managing the interventions.
- We need to work on understanding how NBS benefits and costs are distributed, how it can be made more fair, and how to develop relevant policies.
- Trade-offs must be identified and considered from the design phase onwards.
- It was also noted by some participants that it is important to have a differentiated approach. The impact on women and on Indigenous Peoples must be considered as factors when designing and financing NbS interventions and assessing their benefits and costs.

Finance for Nature-based Solutions

The consultations on finance covered five main issues: the need for additional finance for NbS; the different sources of finance; access to finance; the challenges associated with finance for NbS; and policies, measures and other actions that can assist with financing.

Need for finance

The need for additional finance for NbS was recognized by almost all participants. The following specific points were also made:

- Finance for NbS needs to be sustainable.
- There is a need for a robust financing mechanism, especially for developing countries.
- Finance should be agile and avoid cumbersome administrative procedures.
- Future funding for NbS should be new, predictable and additional, while ensuring that the process will not alter existing obligations of parties under Multilateral Environmental Agreements.
- Nature-based solutions can be more expensive than other options because they often tackle more than one social, economic or environmental challenge.
- Countries are in different stages with regard to securing finance. Some have made more progress in developing financing options than others.

Sources of finance

The consideration of the sources of finance emphasized the wide range of potential sources. The following points were made:

- Finance is needed from a diversity of different sources. These include public and private sources (the latter including commercial banks), national and international sources as well as impact investors, venture capitalists and philanthropists.
- The importance of innovative sources of finance was mentioned by a significant number of participants. Innovative finance was understood to include: green bonds, debt swaps, carbon credits and biodiversity credits.
- It was noted that debt-swap mechanisms can begin to compensate for the environmental deterioration that has been mainly brought about by developed countries. It is an historic responsibility that must be honored.
- A number of participants emphasized the importance of increasing the volume of private investment in NbS. It was also noted that because NbS often promotes public goods, from which it can be difficult to generate a private return on investment, increasing the amount of private investment in NbS can be difficult and will require the development of supportive policy and regulatory frameworks.

Access to finance

A number of participants raised the issue of access to finance, emphasizing that there are important groups and constituencies who do or could implement NbS, but find it difficult to access finance to support their efforts.

- It was noted that the following groups and constituencies find it difficult to gain access to finance for NbS:
 - Local actors, including local enterprises
 - Indigenous Peoples
 - Women
 - Youth

- It was proposed that action is needed to facilitate access to finance for the above groups, from existing and new sources.

Challenges

A number of challenges in the provision of finance for NbS were identified. These included:

- Difficulties in accessing multilateral funds, including the Green Climate Fund and the Global Environmental Facility because of the administrative complexity of the application processes.
- The lack of understanding of NbS amongst financial institutions.
- The existence of significant subsidies for environmentally harmful practices, that mean there is not a level playing field for nature-based solutions.

Policies, measures and other actions that could facilitate finance for NbS

A range of different types of action were proposed for facilitating finance for NbS, including: lobbying and promotion; the communication of appropriate information, analyses and models; and structural changes in policy. The specific proposals included:

Lobbying and promotion

- Build on organizational and political commitments, including: the commitment of Multilateral Development Banks on NbS made at UNFCCC COP-26; and the Leaders Pledge for Nature which includes a commitment to incentivize the financial system to promote biodiversity conservation, ecosystem restoration and sustainable use, as well as an explicit commitment to scale up support for biodiversity from all sources, including through NbS.
- Encourage private and philanthropic contributions to the Global Biodiversity Fund, including Targets 8 & 11 of the Kunming-Montreal Global Biodiversity Framework.
- Promote innovative financial mechanisms, noting that the Kunming-Montreal Global Biodiversity Framework Target 19(d) identifies potential pathways, such as biodiversity credits.

Information provision

- Develop a list of available funding options, including but not limited to multilateral and bilateral sources of finance for NbS.
- Facilitate the communication of information from Indigenous Peoples and local communities about the many NbS activities they are undertaking. Currently, this is not always well understood by national governments and other external organizations. Facilitating this information flow will need resources and partnerships with national governments. It will help make the case for increasing the availability of finance to Indigenous Peoples and other local actors.
- Provide capacity building on finance issues for NbS stakeholders.

Analysis

- Develop a small list of examples of where private sector finance models for NbS have been successful, including an analysis of the conditions of success.
- Analyze how much funding from multilateral, bilateral and other sources counts as NbS (even if it is not labelled as such) and assess to what extent the siloed character of multilateral funds is hampering funding of NbS because some of the co-benefits are not considered (since they are not the objectives of that specific fund).
- Make a strong business case for NbS. This requires emphasizing what the opportunities are and demonstrating the relative cost-efficiency *vis á vis* grey infrastructure and the multiple benefits of individual NbS interventions. It is important that the conversation on NbS can reach beyond the environmental niche.
- Making the business case for NbS will involve assessing the benefits and costs of NbS.

Allocation of finance

- There is a need to re-allocate existing public funds from grey infrastructure to NbS.
- In operationalizing Targets 15 & 18 of the Kunming-Montreal Global Biodiversity Framework consideration needs to be given as to how to better stimulate private sector demand for NbS and eliminate, phase out or reform incentives including subsidies that are harmful for biodiversity.
- A small number of participants proposed the establishment of a dedicated NbS fund.

Policy measures

- NbS can provide cross-sectoral solutions and they may need structural change at the policy level because funding is often provided on a sector-specific basis. There is a need to break this silo framework. The recognition of the cross-sectoral nature of many NbS could increase the amount of finance available.
- Subsidies for environmentally harmful actions prevent the emergence of a level playing field for NbS.
- Several participants emphasized that there is a need to take account of all the Rio principles – including the principle of Common but Differentiated Responsibilities.
- Finally, it was noted by several participants that in addition to increased finance, there is also a need for support for other means of implementation, including capacity building and technical support.

Nature based solutions for climate mitigation

The consultations on NbS for climate mitigation covered a number of different issues and the points made have been clustered under seven different headings below.

NbS for mitigation and other types of NbS

Several points were made about the place of NbS for climate mitigation in relation to other types of NbS and to the broader Sustainable Development agenda.

- Some participants questioned the focus on NbS for climate mitigation, arguing that NbS can make important contributions to other types of climate action, including adaptation and building resilience. It was noted that for many developing countries NbS for adaptation is more important than NbS for mitigation.
- It was also emphasized that NbS are not focused only on climate action but can also contribute to a wide range of other social, economic and environmental challenges.
- There was wide agreement about the importance of ensuring that NbS are placed in the broader context of their contribution to sustainable development, as indicated in the title of UNEA Resolution 5/5.
- A few participants questioned whether the Co-Chairs had the mandate to include NbS for climate mitigation as one of the six main issues for discussion at the Nairobi meeting. The Co-Chairs responded that it was within the scope of their responsibilities to note the issues raised by participants and to structure the consultations accordingly.

The contribution of NbS to climate mitigation

- There was widespread agreement that NbS can contribute to climate mitigation and some participants emphasized that NbS can make a significant contribution to mitigation goals.
- It was noted that some forms of NbS that have a primary goal of addressing another challenge can also contribute to climate mitigation as a co-benefit, particularly where they involve the restoration of ecosystems or the conservation of ecosystems that are being degraded.

- Some participants emphasized the importance of transparency about the size of the contribution that NbS can make to mitigation. Scepticism was expressed about whether the contribution was as large as some have claimed.
- There was widespread agreement that NbS for climate mitigation does not replace the need for a rapid, sustained and large reduction in greenhouse gas emissions from fossil fuels.
- Some participants noted that NbS for mitigation provides an important link between the climate and biodiversity agendas and several also encouraged further exchange on the nexus between biodiversity and climate action and the role of NbS in this. It was said that such exchanges can help cross-fertilise discussions and overcome existing silos.

Indigenous peoples and NbS for climate mitigation

- Many participants emphasized how important it is that NbS for mitigation respects the rights and knowledge of Indigenous Peoples as well as local communities.
- It was reiterated that the implementation of NbS must involve the Free, Prior and Informed Consent of Indigenous Peoples and local communities.

The role of NbS offsets

- Some participants urged that if NbS is used for offsetting emissions from elsewhere there must be strong adherence to social and environmental safeguards.
- Others were more sceptical about the use of offsets at all, suggesting that the market will not help to address climate change.
- One participant noted that it was important to distinguish between NbS projects that are offset-based and those that are not. The latter can provide direct benefits for the planet in a way that the former do not.

Lack of legal and regulatory frameworks for NbS for mitigation

- Some participants were critical of the lack of legal and regulatory frameworks for NbS for mitigation.
- It was said that many stakeholders do not have a good understanding of NbS for mitigation and capacity building is needed.
- It was also pointed out that the understanding of safeguards and their role in NbS for mitigation is not as well advanced as it needs to be.
- It was suggested that it would be worthwhile to identify the obstacles to NbS for mitigation with its co-benefits, and to seek ways to overcome them.

NbS for mitigation and multilateral environmental agreements

A number of different points were made about the relation between NbS for mitigation and multilateral environmental agreements. The points made included:

- There is scope for Targets 8 and 11 of the Kunming-Montreal Global Biodiversity Framework to reflect the value of NbS for climate mitigation and the need to foster positive impacts of climate action on biodiversity. It was also held that NbS are very relevant to Article 5 of the Paris Agreement.
- Any discussion of the role in NbS in contributing to climate action needs to be undertaken within the framework of the UNFCCC.
- NbS is an important tool to reach both global biodiversity and climate goals.
- It would be worthwhile to examine how NbS is being incorporated into National Biodiversity Strategies and Action Plans (under the CBD) and Nationally Determined Contributions (under the UNFCCC).

Policy for Nature-based Solutions

Policy Requirements

This section summarises the points that were made regarding: the importance of policy for NbS; challenges and considerations for creating NbS policy; what such policies should include or address; and ideas on how to do so. It is followed by a section summarising the NbS policies which were mentioned or presented in the consultations.

- Participants agreed that it is important to include NbS in policy at the global, regional, national and local levels, and that NbS needs to be made a political priority.
 - The need was raised for NbS policy to be made and delivered at different levels, ensuring alignment between them. This is to ensure appropriate application and approval processes, without slowing down policy action.
 - There was support, especially in the Africa regional consultation, for the development of regional policy and strategy (e.g. through the African Union and the African Ministerial Conference on the Environment) which could then inform country policy-making by building awareness, capacity and cooperation.
- It was also noted that strategies need to be in place to ensure that environment ministers can convince the government of the merits of and need for NbS, especially as an alternative to grey infrastructure.
- It was widely noted that NbS policies should be flexible and adaptable to changing needs. However, policies often take a long time to be developed, adopted and amended, and therefore this presents a challenge.
- It was also noted that many measures implemented at the national level respond to emergencies, and take a short-term approach. As such, the importance of medium- and long-term strategies which can survive changes in government was highlighted.
- There was discussion of the relative advantages and disadvantages of creating specific policies for NbS as compared to integrating NbS into existing sectoral policies. It was also noted that these do not need to be mutually exclusive.
 - Some Member States reported having specific NbS policy; others reported having integrated NbS into existing policies. Some are in the process of identifying national and sub-national policies into which they could integrate NbS and some are in the process of drafting NbS legislation.
 - It was pointed out that creating entirely new policies is a lengthy process, so incorporating NbS into existing policies is generally a faster process.
 - One participant suggested that a proposal be made at UNEA 6 to convene regional and sub-regional organisations to support the development of dedicated NbS policies.
 - Another participant suggested that the consultations should give guidance on mainstreaming NbS into national policies to participants, as well as into CBD processes and the UNFCCC Global Stocktake.
 - Another participant suggested that UNEP explore the creation of a technical mechanism to support countries to mainstream and implement NbS, considering national contexts.
- Many participants noted the importance of aligning NbS policy with existing national commitments, such as to the Kunming-Montreal Global Biodiversity Framework, and other instruments, such as Nationally Determined Contributions, National Adaptation Plans and National Biodiversity Strategies and Action Plans.
 - Two participants requested that UNEP collaborate with other relevant organisations, e.g. IPBES, IPCC and IRP, to analyze updated NDCs, NBSAPs and NAPs to produce a synthesis report to see how NbS (and harmonised approaches) are used and draw lessons learned from these policy instruments.

- It was also highlighted that it is critical to ensure that policymakers fully understand NbS.
- Many participants highlighted the need for NbS policy to be centred on the social/human dimension and include social safeguards, especially for vulnerable and marginalised groups including Indigenous Peoples, women, youth and children, including enshrining Free, Prior and Informed Consent. Non-governmental organizations should also be included in the process of NbS policymaking.
 - One participant highlighted that NbS policy should intentionally aim to redress social inequities in vulnerability and access to nature's benefits.
 - Many participants noted that NbS policy should ensure fair and equitable benefit sharing.
 - It was noted that NbS policy should align with and support sustainable development, especially in developing countries.
- It was emphasised by many participants that NbS policy should be based on robust monitoring and evaluation, informed by both scientific and Indigenous knowledge, and should evolve in line with new research on NbS.
- It was highlighted that legal aspects which might affect NbS implementation, such as land ownership and property rights, are critical to bear in mind during NbS policy design to ensure alignment with policy objectives.
- The following characteristics of policies were said to be important for achieving transformational impact:
 - Policy should be people-centric, include and respect local needs, and encourage local community buy-in.
 - Policies should be updated frequently, in line with developments in science, research and best practices.
 - NbS policy should take a long-term view and balance short- and long-term benefits and costs.
 - Funding and institutional capacity and processes should be conducive to ensuring that policies are implemented and monitored.
 - The benefits of NbS should be reflected in national accounting practices.
 - Training and capacity building of the NbS workforce are needed to support effective implementation of NbS policies and to contribute to a just transition.
 - Cross-sectoral collaboration is needed, especially between labour, academia and technical specialists, and different levels of government.
 - International and/or regional cooperation is also necessary where an ecosystem, species or issue transcends national boundaries.
 - Supporting legislation, such as for protected areas is needed for the implementation of certain NbS policies. Perverse incentives must be removed.
 - Mainstream the challenges faced, e.g. climate change, biodiversity loss and sustainability, into development plans across sectors. NbS policy can be an opportunity to bring coherence between environmental and development agendas.
 - Communication and awareness-raising is needed to inform and educate the public on what NbS is and on its benefits.
- One participant noted that community action often precedes and paves the way for policy, and that policy sometimes responds to, rather than leads action.
- One participant noted that all ecosystem types should be included in NbS policies and suggested that this should be done along the lines of the main ecosystem types identified in the UN Decade for Ecosystem Restoration, building on Ramsar Resolution 14/7.

Examples of Policies

This section collates the policies, strategies and plans that were referenced by participants – largely by Member States – during the final round of consultations. It is divided into two sub-sections: the first lists policies which have been specifically created on the subject of NbS to support its uptake and implementation. The second sub-section lists policies which were mentioned as including, incorporating and/or supporting NbS, but have a wider remit than NbS alone.

Specific NbS Policies

Mexico:

- National Strategy for Blue Carbon
 - Integrates environmental, social, economic, cultural and ecosystem protection dimensions.
- Protected Areas
 - Sustainably managed by the local communities.
- ‘Sembrando Vida’ (‘Growing Life’) Programme
 - A reforestation programme intending to plant 1.15 billion fruit and wood trees across more than a million hectares, involving 446 farmers. It aims to contribute to the social wellbeing of growers by supporting food sovereignty through productive agroforestry systems.

USA:

- Biden Executive Order Earth Day 2022 (EO 14072)
 - Recognised the importance of forests and other nature-based solutions to tackle the climate crisis and strengthen communities and local economies.
- NbS Roadmap & report
 - New inter-agency funding commitments of over \$25 billion on NbS are aligned with Roadmap.
 - Outlines 5 strategic areas of focus now being tackled: the need to update policies; unlocking funding; leading with federal facilities & agencies; training the NbS workforce; and prioritisation of knowledge, adaptive learning and research to advance NbS.

China:

- Master Plan for key ecosystem protection and restoration projects to 2035.
- Guidelines for mountain, river, forest, lake and grassland restoration to enhance resilience.
- Specialised legislation on grasslands, watershed protection, forests, flood control, water resources, marine environment, and wildlife protection supported by comprehensive administrative policy from top-level design to implementation, including strategic planning, action plans, complementary management regulations, and fiscal and taxation policies.
- Policies for information transparency and informatisation to conduct large-scale assessments to establish monitoring platforms and systems to enhance progress-tracking capacities.
- Policies for advocacy and stakeholder engagement.
- Grain for Green Program, also known as Conversion of Cropland to Forest Program
 - This Payment for Ecosystems (PES) program pays farmers to plant trees on their land and provides degraded land to rural families to restore.

Dominican Republic

- Draft law on the use of NbS for the recovery and preservation of hydrological basins/watersheds.

Costa Rica

- Payment for Ecosystem Services
 - Supporting communities to protect ecosystems and biodiversity and contributing to livelihoods.

Chile

- Legal statute for NbS.
- Ministry of Environment working on guidelines for NbS.
- Promoting inter-sectoral policy that can be implemented at all levels.

Germany

- Federal Action Plan on Nature-based Solutions for Climate and Biodiversity
 - Contains 69 measures, ranging from marine conservation and healthy, near-natural forests to floodplain restoration and wilderness area management. The Federal Environment Ministry will provide 4 billion euros up to 2026 to finance these measures from the new Climate and Transformation Fund.
- National Centre for Nature-based Solutions
 - Created under the Action Plan

Canada

- Nature-smart Climate Solutions Fund
 - A \$4.7 billion fund created by the Government of Canada to address climate change and biodiversity loss by investing in:
 - The 2 Billion Trees Program
 - Nature-Smart Climate Solutions
 - Agricultural Climate Solutions

NbS Integrated into Existing Policies

China:

- Climate Adaptation Strategy
- Updated NBSAP
- Policies on Major Projects (102 Major Projects covering 2006 individual projects), many of which are aligned with NbS, addressing ecosystem restoration, biodiversity conservation and environment-related issues.
 - Investigates ecological functions, socio-economic conditions, and problem drivers, and proposes hierarchical target system that prioritises different levels of implementation and combines both mandatory and guidance-oriented measures. Also specifies spatial distribution and timing of project implementation and selects optimal measures according to local conditions.
- Chinese Ministry of Biology and Environment is collaborating with IUCN to set up an NbS capacity building centre.

Nepal:

- National Strategic Framework for Sustainable Development 2015 – 2030

Nigeria:

- National Climate Change Act – this led to the establishment of the National Council on Climate Change, and is the first standalone comprehensive climate change policy in West Africa. This aims to:
 - Foster low-carbon, high-growth development plans and build a resilient society.
 - Strengthen national capacity to adapt to climate change and improve climate-related science and technology, allowing the country to better participate in international cooperation on climate change.

- Increase public awareness and engage the private sector in facing the challenges of climate change.
- Strengthen national institutions and mechanisms to establish suitable and functional frameworks for climate change governance.
- Updated NDC
- National Forest Policy
- Great Green Wall Act
- NBSAP

Dominican Republic

- The Dominican Republic has identified these as national policies into which NbS could be integrated:
 - NDC
 - NAP
 - Ley de Ordenamiento Territorial (Land Code Law)

European Union

- The EU Green Deal is a regional policy framework which aims to set the EU on a path to a green transition. The cornerstones are doing no harm and leaving no one behind.
 - Within this framework, many laws and policies have been passed, with NbS being a cross-cutting theme.

Canada

- National Adaptation Strategy
 - Aims to accelerate the use of nature-based solutions to increase resilience and maximize co-benefits.

Costa Rica

- National Strategy for Circular Economy
- National Biodiversity Strategy 2016-2025
- National Decarbonisation Plan 2018-2050
- National Blue Carbon Strategy

São Tomé and Príncipe

- Adaptation and Resilience Policy for Health

Chile

- Framework Law on Climate Change
- Long-term Strategy for Climate Change
- National Urban Parks Policy
- National Landscape Restoration Plan (2021-2030)
- Laws: 20600, 20507
- National Policy for Land Code

Africa (regional)

- African Biodiversity Strategy (May 2023)
 - This regional strategy has sub-regional sub-strategies, e.g. for West Africa, East Africa, Southern Africa, Central Africa and North Africa, could provide a framework to encourage and guide NbS commitments and actions across the continent.

Cameroon

- National Development Strategy 2030
 - Environmental protection is enshrined as a pillar of Cameroon’s development policies.
 - For example, the national forest protection policy includes the 3 dimensions of sustainable development: environmental, economic and social, with parts of the forest reserved for local communities.

Bangladesh

- Biodiversity Paper

Sri Lanka

- NbS is included in Sri Lanka’s climate change policies

United Arab Emirates

- National Adaptation Plan 2050

Pakistan

- National Adaptation Plan
- National Climate Change Policy 2021

Cuba

- Decree 86 on facing climate change.

Argentina

- NbS is incorporated into Argentina’s forest policy, biodiversity protection policy and climate change policy.

Bolivia

- Law 300 – Mother Earth Law
 - Bolivia believes that the concept of Madre Tierra (Mother Earth) enshrined in this law is more advanced than the concept of NbS. Therefore, while there are aspects common to both NbS and Mother Earth in this law, NbS is not explicitly included in this law.

Brazil

- Brasil sem Fome (Brazil without Hunger)
 - A programme aiming to end hunger in Brazil through 3 pillars of action: access to income, adequate and healthy nutrition, and mobility.
- Ecological Transition Plan of the Ministry of Finance
 - Will help Brazil to meet its emissions reduction commitments, based on sustainable finance, circular economy, technological intensification, bioeconomy, energy transition and climate mitigation and adaptation.
- Reactivating National Commission for the Sustainable Development Goals

New Zealand

- NbS is included in New Zealand’s domestic adaptation policy.

Bulgaria

- National Framework for Priority Actions for Natura 2000
- National Development Programme of Bulgaria 2030

- These envisage reforms and measures aimed at improving the management of the network and Natura 2000 sites through legislative changes. The aim is to protect and restore at least 30% of the natural habitats and species subject to conservation in the Natura 2000 network.
- Programme Environment 2021-2027
 - Financing green infrastructure projects, including protection and improvement of existing green areas in cities and suburban environments and flood risk reduction.
- National Recovery and Resilience Plan of Bulgaria
 - A 913 million EUR Green Transition plan of investment in environmental activities including integrating the ecosystem approach and implementing NbS, ecosystem restoration, and water and sanitation actions.
- 3 Billion Additional Trees Pledge
 - A national afforestation plan which aims to plant 100 million trees between 2022 and 2030, in full respect of ecological principles, to increase the resilience of forests and their role in reversing biodiversity loss and supporting climate mitigation and adaptation.

APPENDIX 1: Co-Chairs' recommendations to support the implementation of nature-based solutions for Sustainable Development

In line with the overall aim of the consultations, we, as the Co-Chairs, have developed a limited number of recommendations for supporting the implementation of nature-based solutions. The starting point for these recommendations is the text of UNEA Resolution 5/5, *Nature-based solutions for sustainable development*. These recommendations are put forward in the name of the Co-Chairs. While they build on what we have heard during the consultations, they are not a negotiated outcome from the consultations. The recommendations focus on further actions that would facilitate the implementation of nature-based solutions and address all three pillars of sustainable development. They are focused on issues such as undertaking analyses and provision of technical support and finance.

We invite UNEP, in close collaboration with interested member states, stakeholders, local communities and Indigenous Peoples, and subject to the availability of resources, to take the lead in furthering these recommendations.

The Co-Chairs recommend that consideration be given to:

Best practices

1. Creation of a repository of NbS good practice examples.

Explanation: The development of this repository will require a clear set of criteria, based on best available science, against which examples of NbS can be assessed to determine whether they qualify as good practice and are aligned with the UNEA 5/5 definition of NbS. The repository should include examples across different ecosystem types, and which address a range of social, economic and environmental challenges, while conforming to social and environmental safeguards. It should not duplicate existing repositories. It should include learning and adaptive management examples.

In the interim, UNEP will post on the consultation's website the examples of NbS practice that have been submitted by participants in the consultations. UNEP will continue to accept such submissions until UNEA 6.

2. Establishment of an accessible and easy-to-use database of national policy instruments focused on nature-based solutions.

Explanation: The number of countries that are incorporating nature-based solutions into existing policy instruments or developing new policy instruments focused on NbS is increasing. The database will provide a useful resource for researchers and for countries that are considering developing their own policies on NbS or incorporating NbS into existing policies and commitments such as NBSAPs, NDCs and other relevant instruments. Such a database could be regional or global in scope and build on existing sector-specific sites.

Standards and criteria

3. Analysis of technical tools available to support nature-based solutions.

Explanation: There is an increasing number of technical and technological tools of various sorts being developed to support the implementation of NbS. The analysis would identify the purpose of the tools and their practical value in supporting implementation, including, in particular, social and cultural contexts.

This work will include an analysis of existing standards and criteria for NbS, building on what is found within UNEA Resolution 5/5. This analysis will be undertaken without prejudice to the further question of whether a multilateral process should be initiated to develop new standards and criteria for NbS.

4. Examination of existing methods for measuring benefits and costs of NbS

Explanation: Measuring the benefits and costs of nature-based solutions can guide decision-makers in the design, implementation, monitoring and evaluation of NbS. This examination would identify existing

methods to assess the costs and benefits of NbS, including non-economic costs and benefits, as well as looking at the distribution of costs and benefits.

5. Preparation of an accessible guide to terms related to nature-based solutions

Explanation: There are many related terms in use, such as ecosystem-based approaches, ecosystem-based adaptation, green infrastructure, agroforestry, etc. Some of them have their own definitions, and some of them have been developed in specific institutional or organizational contexts. A simple introductory guide would be helpful.

Finance for nature-based solutions

6. Production of a guide to sources of finance for nature-based solutions

Explanation: The lack of finance is one of the main barriers to the implementation of nature-based solutions, particularly in developing countries. A practical, easy-to-use guide would address issues such as: the sources of finance; the types of interventions funded; how to access the finance; and which entities can access it. The issue of whether small and local entities can access finance is important. Such a guide would need to be updated regularly.

Capacity building, awareness and information

7. Establishment of regional or national information hubs on nature-based solutions.

Explanation: A lack of awareness and understanding of nature-based solutions is a barrier to their adoption. By organizing such hubs at a regional or national level, information can be tailored to national or regional needs and circumstances. The hubs will benefit from developing mechanisms to incorporate information from the local level. They should build on existing initiatives and hubs and avoid duplication. In some cases, it may be appropriate for such hubs to take on additional tasks such as provision of technical support and advice on access to finance.

Coordination with MEAs

8. Coordination amongst Multilateral Environmental Agreements on how they approach NbS

Explanation: Such coordination would help to promote a common understanding of NbS, and could help synergize efforts being taken under different MEAs, while supporting consistent implementation of NbS.

APPENDIX 2: Resource Guide for Nature-based Solutions

An output from the Intergovernmental Consultations on Nature-based Solutions

Contents

1. **Introduction**
2. **Compilations of examples of nature-based solutions**
3. **Proposals, criteria, standards and guidelines for the implementation of nature-based solutions**
4. **Financing for nature-based solutions**
5. **References**

Introduction

This Resource Guide is a product of the intergovernmental consultations on nature-based solutions, which were requested in Resolution 5/5 *Nature-based solutions for supporting sustainable development*, adopted by the United Nations Environment Assembly on 2 March 2022. Resolution 5/5 identified three specific tasks that the consultations were intended to tackle: (i) to compile examples of best practices in nature-based solutions; (ii) to assess proposals, criteria, standards and guidelines; and (iii) to identify options for supporting sustainable investment in nature-based solutions. This Resource Guide brings together the resources that were brought to light as these three tasks were addressed during the course of the consultation process. The content herein has, therefore, greatly benefited from and been enhanced by a diversity of expertise and knowledge from around the world.

The purpose of this document is to guide readers towards many of the resources that currently exist on nature-based solutions. This introduction presents the definition of nature-based solutions contained in the Resolution. In line with the Resolution (OP 5), the Resource Guide is then composed of three subsequent sections: section 2 on compilations of examples of nature-based solutions; section 3 on proposals, criteria, standards and guidelines for the implementation of nature-based solutions; and section 4 on financing for nature-based solutions. Readers may wish to read the whole document, or they can go directly to the section that is most relevant to them. For instance, those that are interested in learning more about sources of finance for nature-based solutions, can jump straight to section 4 on financing for nature-based solutions.

1.1 Definition of nature-based solutions

The UNEA resolution contains the first multilaterally agreed definition of nature-based solutions, which is cognizant of and in harmony with the concept of ecosystem-based approaches and is as follows:

“[N]ature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits, and recognizes that nature-based solutions:

- a) Respect social and environmental safeguards, in line with the three “Rio conventions” (the Convention on Biological Diversity, the United Nations Convention to Combat Desertification and the United Nations Framework Convention on Climate Change), including such safeguards for local communities and indigenous peoples;
- b) Can be implemented in accordance with local, national and regional circumstances, consistent with the 2030 Agenda for Sustainable Development, and can be managed adaptively;
- c) Are among the actions that play an essential role in the overall global effort to achieve the Sustainable Development Goals, including by effectively and efficiently addressing major social, economic and environmental challenges, such as biodiversity loss, climate change, land degradation, desertification, food security, disaster risks, urban development, water availability, poverty eradication, inequality and unemployment, as well as social development, sustainable economic development, human health and a broad range of ecosystem services;
- d) Can help to stimulate sustainable innovation and scientific research.” (Operative paragraph 1)

The definition identifies three different dimensions to nature-based solutions. First, nature-based solutions work with nature in different ways – they are actions “to protect, conserve, restore, sustainably use and manage” ecosystems. While these actions are different, a single solution may involve a combination of different types of action. For example, a solution that includes the restoration of a degraded ecosystem may also involve the conservation of elements of that system that are still healthy.

The second dimension is that nature-based solutions involve working sustainably (i.e., within the parameters of the ecosystem’s ability to be sustained) with different types of ecosystems. The resolution lists “natural or modified terrestrial, freshwater, coastal and marine ecosystems”. These are broad categories and can be further divided. For example, terrestrial ecosystems include forests, grasslands, urban and other ecosystem types.¹

Third, nature-based solutions are solution-oriented. They “address social, economic and environmental challenges”. Again, these are broad categories, and the challenges can be specified more precisely. For example, some nature-based solutions address the challenge of climate change adaptation, others address the challenge of water security and other address the challenge of land degradation.

Nature-based solutions can vary along each of these three dimensions. For example, a particular solution may involve the sustainable management of an agricultural system in order to address the challenge of climate adaptation. Another solution may involve the conservation of a forest system in order to address the challenge of water security.

1.2 Intergovernmental consultations on nature-based solutions

The first part of Operative Paragraph 5 (OP5) of UNEA Resolution 5/5:

Requests the Executive Director of the United Nations Environment Programme, subject to the availability of resources and to further support the implementation of nature-based solutions, as defined in the present resolution, to convene intergovernmental consultations...

This part of OP 5 indicates that the overall objective of the consultations is ‘to further support the implementation of nature-based solutions’. It then immediately goes on to specify that these solutions are to

¹ UN Decade on Ecosystem Restoration 2021-2030 (2023). [Types of ecosystem restoration](#).

be understood ‘as defined in the present resolution’. After specifying the way in which the consultations are to be conducted, OP 5 goes on to list three specific tasks for the consultations:

- (a) Compile examples of best practices in nature-based solutions, based on the best available science;
- (b) Assess existing and discuss potential new proposals, criteria, standards and guidelines to address divergences, with a view to achieving a common understanding among Member States for the implementation of nature-based solutions, including to support Member States in designing, implementing and evaluating nature-based solutions, building on existing work, initiatives and platforms, as appropriate, and without prejudice to existing efforts and initiatives of and new proposals from individual Member States;
- (c) Identify options for supporting sustainable investment in nature-based solutions and share information on bilateral and multilateral sources of finance to enable developing countries to develop and deploy nature-based solutions.

The sections that follow in this Resource Guide provide information on how these three tasks were addressed during the course of the consultation process.

2. Compilations of examples of nature-based solutions

There are already a number of compilations of examples of nature-based solutions. These provide a valuable resource for those seeking a better understanding of what nature-based solutions mean in practice. They also give an indication of the diversity of nature-based solutions.

Examples of “best practices”, as referred to in OP 5 of the Resolution, are often understood as examples of nature-based solutions that are implemented on the ground. While the compilations that follow mostly focus on on-the-ground interventions, compilations of other types of examples have also been included, such as those focused on nature-based solutions in policy instruments and research projects, as well as those focused specifically on financing nature-based solutions interventions. These compilations still offer tangible examples as to how countries are implementing and scaling up nature-based solutions and are included to facilitate access to a diversity of examples of “best practices” that may be useful in supporting the implementation of nature-based solutions.

There are some significant differences between these compilations. Some are explicitly described as compilations of best practices, others contain reference to good practices, and others make no reference to the quality of the examples. However, it is worthwhile to note, that without widely agreed standards and criteria upon which to track and measure the effectiveness of interventions,² it is difficult to conclusively determine which of these examples are “best” or “good” practices.

Compilations also differ in their scope. Some of them, at least in principle, cover all types of nature-based solutions. Others have a narrower focus. Of those with this narrower focus, some are focused on a particular NbS action, some are focused on solutions in particular ecosystem types, and others focus on nature-based solutions that address particular social, economic or environmental challenges. These three types of compilation thus reflect the three dimensions of nature-based solutions identified in the Introduction to this paper. Finally, some of the compilations have a geographic focus on particular regions or sub-regions.

² Commonwealth Secretariat (2021). [Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions](#).

This section intends to provide an overview of the main compilations currently in existence, starting with compilations that cover all types of nature-based solutions. Much of the compilations provided in this section directly reference nature-based solutions. Therefore, it is important to note that in collecting these resources, relevant compilations may have been missed as they did not directly use the term nature-based solutions. At the same time, this section refers to compilations on related concepts, such as ecosystem restoration, Natural Climate Solutions, and the Ecosystem Approach, among others. As such, not all compilations included are explicitly focused on nature-based solutions. For these compilations, examples should be considered on a case-by-case basis as to whether they fit with the UNEA definition of nature-based solutions.

2.1 *Compilations that include all types of nature-based solutions*

- [Integrating Gender and Social Inclusion in Nature-Based Solutions: Guidance Note, 2023.](#)³
This note includes case study examples of World Bank–financed projects and relevant projects led by other organizations. The examples presented are not exhaustive but rather demonstrate how gender and social considerations can be integrated into NbS projects.
- [Leaving no one behind: Towards inclusive nature-based solutions, 2023.](#)⁴
This NetworkNature Knowledge Brief, which includes 2 European case studies, outlines the concept of inclusion in the nature-based solutions context. The two case studies included provide an overview of the main actions and challenges addressed as well as the benefits delivered, with links to more detailed explorations.
- [Nature-based Solutions in Action: Lessons from the Frontline, 2021.](#)⁵
This report presents 13 case studies on NbS from a range of contexts and countries. For each case study, the report outlines: the challenge, the NbS implemented, the benefits, and the success factors. Additionally, the report identifies several common success factors from across the case studies.
- [The Nature-based Solutions Initiative \(NbSI\) Case Study Platform, 2023.](#)⁶
This database, focused on rural and coastal NbS, collates 150 examples which are explicitly labelled as “best practices”, and of which 10 are highlighted as “model cases”. In this context, “best practices” examples provide evidence of their effectiveness for addressing climate mitigation and/or adaptation, while delivering positive ecosystem health and socioeconomic outcomes. Information is provided on case study governance, finance, monitoring and evaluation, and trade-offs and limitations.
- [Nature-Based Solutions Resource Guide: Compendium of Federal Examples, Guidance, Resource Documents, Tools, and Technical Assistance, 2022.](#)⁷
A guide containing 30 examples from federal agencies in the United States. The examples are not exhaustive but rather demonstrate the range of scales and contexts where agencies have adopted nature-based solutions to achieve their goals.
- [Network Nature Case Study Map, 2023.](#)⁸

³ [World Bank \(2023\). Gender and Inclusion in Nature-Based Solutions.](#)

⁴ [Gionfra et al. \(2023\). Leaving no one behind: Towards inclusive nature-based solutions.](#)

⁵ [Hou-Jones et al. \(2021\). Nature-based Solutions in Action: Lessons from the Frontline.](#)

⁶ [Nature-based Solutions Initiative \(2023\). NbS Case Study platform: Examples of best practice Nature-based Solutions from around the globe.](#)

⁷ [White House Council on Environmental Quality et al. \(2022\). Nature-Based Solutions Resource Guide.](#)

⁸ [NetworkNature \(2023\). Network Nature: Case studies.](#)

A database containing over 560 case studies mostly, but not exclusively, from Europe. The studies are brief but detailed, characterizing the implementation area and outlining the intervention's objectives, potential impacts/benefits, transferability of the result, and lessons learned.

- Network Nature: Database of EU research and innovation projects on nature-based solutions, 2023.⁹ This database focuses on research and innovation projects on nature-based solutions, rather than interventions that are implemented on the ground. The database contains 300 European research and innovation projects from several major European research and innovation or implementation programmes. The platform provides a description of each project, and in some cases, there are links to more detailed explorations.
- Oppla Case Study Finder, 2023.¹⁰ A platform of over 560 case studies providing examples of the multiple benefits delivered by NbS. It constitutes a tool for the dissemination of knowledge on NbS effectiveness (e.g., multiple benefits, returns on investment and development opportunities).
- Panorama Solutions. IUCN, 2023.¹¹ A database including over 1,000 “full” and “snapshot” examples of nature-based solutions. The studies highlight “building blocks” outlining their success factors. However, the solutions featured on Panorama also include other solutions, such as business engagement and One Health, and the filtering function could be made clearer to facilitate access to only examples of nature-based solutions. Examples are self-submitted by the implementers, although they are reviewed by IUCN before publishing.
- Powering Nature: Creating the Conditions to Enable Nature-Based Solutions, 2021.¹² A report by WWF compiling 13 case studies from around the world. The report provides a summary of each case study, focused mainly on how WWF is supporting NbS interventions.
- Prototype database of international Nature-based Solutions case studies: supplementary report to the CCICED special policy study on value assessment of Nature-based Solutions, 2022.¹³ Presents 5 international case studies that provide insight into particular success factors and challenges for NbS interventions. Case studies are analysed based on the criteria of the IUCN Global Standard for Nature-based Solutions and key lessons learned are extracted for each case study.
- Study on Nature-based Solutions (NbS) in ASEAN, 2023.¹⁴ The purpose of this study was to assess and promote the role of NbS in the regional ASEAN context. It includes eight examples of NbS projects in ASEAN Member States, which include a description of the project, the aim, the impacts, the key lessons learned and the financial mechanisms. The paper also includes best practices examples of national policy frameworks related to NbS in ASEAN Member States, as well as information on the integration of NbS into the NDCs and NBSAPs of ASEAN Member States.

⁹ NetworkNature (2023). Database of EU research and innovation projects on nature-based solutions.

¹⁰ Oppla (2023). Oppla: Case studies.

¹¹ PANORAMA (2023). PANORAMA – Solutions for a Healthy Planet.

¹² Pérez-Cirera et al. (2021). Powering Nature: Creating the Conditions to Enable Nature-based Solutions.

¹³ Meyer & Hessenberger (2022). Prototype database of international Nature-based Solutions case studies: supplementary report to the CCICED special policy study on value assessment of Nature-based Solutions.

¹⁴ The ASEAN Secretariat (2023). Study on Nature-based Solutions (NbS) in ASEAN.

- [Towards Nature-based Solutions at scale: 10 case studies from China.](#)¹⁵
Compiles 10 case studies from China, presented under 3 broad categories (natural, agricultural or urban types of ecosystems), and assesses how well they align with the IUCN’s Global Standard on NbS. Case studies are detailed in their description and include information on the challenges addressed, total financing, main objectives, methods, outcomes, and links to the Global Standard for NbS. The publication also includes some general reflections and lessons learned from case study managers and authors on how the Global Standard for NbS would have retrospectively helped to improve or ensure a more successful NbS intervention.
- [Working with Nature-Based Solutions. Synthesis and mapping of status in the Nordics, 2022.](#)¹⁶
A report that aims to synthesize current work and the development of nature-based solutions in Nordic countries. The report provides an overview of the status of nature-based solutions, including examples of projects implemented in the Nordic region.
- [WWF Nature-based Solutions Database Map, undated.](#)¹⁷
This interactive map shares a selection of WWF projects on nature-based solutions from around the world and explains how they are working to address five key societal challenges: climate change mitigation, climate change adaptation and disaster risk reduction, food security, water security and human health.

2.2 *Compilations focused on a specific action*

2.2.1 Ecosystem Restoration

While not all instances of ecosystem restoration will necessarily qualify as nature-based solutions, many of them will do so, especially where there is an explicit social, economic, or environmental challenge that the restoration is designed to achieve.

- [The Benefits of Ecosystem Restoration: An Analysis of Five European Restoration Initiatives, 2022.](#)¹⁸
A report that features five European Restoration Initiatives that have been selected using criteria that are aligned with those of the UN Decade World Restoration Flagships initiative. The report provides a summary of each initiative followed by an analysis of their restoration benefits focused on four categories (biodiversity, climate change mitigation, climate change adaptation, and socio-economic). The report also identifies a set of common enabling factors that promote restoration.
- [UN Decade on Ecosystem Restoration Flagship Initiatives, 2022.](#)¹⁹
An interactive map of the 10 global flagship initiatives of the UN Decade on Ecosystem Restoration by UNEP. The platform gives an overview of each project, along with key project targets and statistics, and provides links to more detailed explorations of each.

¹⁵ [Luo et al. \(2023\). Towards Nature-based Solutions at scale: 10 case studies from China.](#)

¹⁶ [Sandin et al \(2022\). Working with Nature-Based Solutions. Synthesis and mapping of status in the Nordics.](#)

¹⁷ [WWF \(n.d.\). WWF Nature-based Solutions Database Map.](#)

¹⁸ [United Nations Environment Programme \(2022\). The Benefits of Ecosystem Restoration: an Analysis of Five European Restoration Initiatives.](#)

¹⁹ [UNEP \(2023\). UN Decade on Ecosystem Restoration: 10 flagship initiatives boosting nature and livelihoods around the world.](#)

- Wetland and Peatland restoration: Notable examples, 2021.^{20, 21, 22}

Case studies of wetland and peatland restoration are presented in three fact sheets prepared by the Ramsar Convention for the launch of the UN Decade on Ecosystem Restoration. For each case study, a short summary of the scope of the project is provided.

2.3 *Compilations focused on specific ecosystems*

2.3.1 Montane Ecosystems:

- Adaptation at Altitude Solutions Portal, undated.²³

This portal hosts a collection of over 80 examples of climate adaptation solutions in mountain ecosystems from around the world. The solutions featured include nature-based solutions and others, such as engineering solutions. The portal gives a detailed overview of each intervention, with information on how it was financed, its long-term sustainability, any barriers and adverse effects, and its scalability. The detailed analysis of the examples implicitly identifies success factors.

2.3.2 Urban Ecosystems:

- CLEVER Regional Solutions Catalogue - Showcasing good practice NbS interventions and enablers from China, Europe and Latin America, 2023.²⁴

This catalogue illustrates the various benefits that urban NbS can generate, through a rich compilation of good practice NbS interventions from China, Europe and Latin America. The catalogue also presents different mechanisms and enablers that cities have put in place to facilitate the implementation of NbS, which other cities can learn from and transfer into their own NbS projects. These span areas such as impact monitoring, policy design, stakeholder engagement and access to finance.

- Coastal protection and SUDS* – Nature-based Solutions, 2015.²⁵

A policy brief exploring the economic and environmental potential of nature-based solutions for flood protection in urban areas, together with barriers to implementation and policy support needs. It gives three good practice examples from across Europe. The examples are brief summaries of the interventions without much detail. However, they do implicitly highlight some success factors.

- The EU – Brazil Sector Dialogue on nature-based solutions: Contribution to a Brazilian roadmap on nature-based solutions for resilient cities, 2019.²⁶

A report on the dialogue between the European Commission and Brazil, analysing the occurrence and potential of nature-based solutions in Brazil. The report highlights good practices in the EU for possible adaptation to the Brazilian context and contributes to the elaboration of a nature-based solutions strategy in Brazil. It includes 10 examples from Europe and 15 from Brazil, each of which outline the intervention, the stakeholders engaged, the outcomes, limiting factors and risks, and lessons learned.

²⁰ [The Ramsar Convention on Wetlands \(2021\). Realizing the full potential of marine and coastal wetlands: why their restoration matters.](#)

²¹ [The Ramsar Convention on Wetlands \(2021\). Restoring drained peatlands: now an environmental imperative.](#)

²² [The Ramsar Convention on Wetlands \(2021\). Wetlands restoration: unlocking the untapped potential of the Earth's most valuable ecosystem.](#)

²³ [weADAPT \(n.d.\). Adaptation at Altitude Solutions Portal.](#)

²⁴ [Horn et al. \(2023\). CLEVER Regional Solutions Catalogue - Showcasing good practice NbS interventions and enablers from China, Europe and Latin America.](#)

*SUDS = Sustainable Urban Drainage Systems

²⁵ [Davis, M., Krüger, I. and Hinzmann, M., \(2015\). Coastal Protection and SuDS - Nature-Based Solutions.](#)

²⁶ [European Commission et al. \(2019\). The EU–Brazil sector dialogue on nature-based solutions – Contribution to a Brazilian roadmap on nature-based solutions for resilient cities.](#)

- [Green-blue networks in Flanders: Learning from practice, 2019.](#)²⁷
In Flanders, Green-Blue networks (GBN) aim at connecting or developing different green spaces in the city (e.g., parks, gardens, green roofs, etc.) and in open space (e.g., urban fringe forests, rows of trees, wooded borders, etc.), to create coherent, functional networks in response to various societal challenges. This evaluation report on “Green-Blue networks” tested the six building blocks of GBN in practice: institutional context, multistakeholder process, multifunctionality, system approach, resources and feasibility, and sustainable management. The report examined 15 European GBN cases and case studies, mostly from Flanders, Belgium, identifying the lessons learned from the cases and highlighting their success and failure factors.
- [INTERLACE Hub: Case Study Finder, undated.](#)²⁸
A database containing 120 case studies of nature-based solutions interventions in cities mostly, but not exclusively, in Europe. The studies are brief but detailed, characterizing the implementation area and outlining the intervention’s objectives, potential impacts/benefits, transferability of the result, lessons learned and financing.
- [Nature-based Solutions for urban climate resilience in South Asia: Cases from Bangladesh, India and Nepal, 2022.](#)²⁹
A collection of 15 examples of how cities in Bangladesh, India and Nepal are implementing nature-based solutions, highlighting how each initiative was implemented, success factors, and essential elements for replicating and scaling the initiative.
- [Planning and delivering Nature-based Solutions in Mediterranean cities: First assessment of the IUCN NbS Global Standard in Mediterranean urban areas, 2021.](#)³⁰
This report presents 18 projects in Mediterranean cities that were assessed against the IUCN Global Standard on NbS.³¹ The report assesses projects in terms of their benefits and their contribution to societal challenges, identifies gaps, and explores opportunities for enhancing NbS interventions and their implementation. For each project, the report provides a detailed overview, as well as a description and rating of the project’s performance against each of the criteria and indicators set by the Standard. Though the 18 projects examined were diverse in their contents, status quo, scope, resources and budget, the IUCN considers that all projects show good examples of the use of NbS to cope with relevant city challenges.
- [Public Procurement of Nature-Based Solutions - Addressing barriers to the procurement of urban NBS: case studies and recommendations, 2020.](#)³²
Includes 12 case studies from Europe that illustrate the challenges that cities face with NBS procurement and that provide examples of good practice for overcoming these challenges successfully. By extracting the insights and lessons learned from the collection of case studies, the

²⁷ [Turkelboom et al. \(2019\). Gobelin rapport N° 3: Groenblauwe netwerken in Vlaanderen - Leren uit praktijkvoorbeelden.](#)

²⁸ [INTERLACE \(n.d.\). INTERLACE Hub: Case Study Finder.](#)

²⁹ [CDKN, ICLEI \(2022\). Nature-based Solutions for urban climate resilience in South Asia: Cases from Bangladesh, India and Nepal.](#)

³⁰ [IUCN \(2021\). Planning and delivering Nature-based Solutions in Mediterranean cities. First assessment of the IUCN NbS Global Standard in Mediterranean urban areas.](#)

³¹ [IUCN \(2020\). Global Standard for Nature-based Solutions.](#)

³² [European Commission et al. \(2020\). Public procurement of nature-based solutions – Addressing barriers to the procurement of urban NBS – Case studies and recommendations.](#)

report also suggests practical solutions to support local policymakers and public procurers in driving NBS procurement projects.

- [State of Finance for Nature in Cities 2023: Time to Assess - Summary for Local Policymakers, 2023.](#)³³
This publication outlines best practices for NbS financing in cities and showcases nine case studies from around the world. The publication provides a brief description of each case study, including information on how the NbS intervention was financed.
- [UCLG Peer Learning Note #31: Urban Ecosystem Restoration & Nature-based Solutions, 2022.](#)³⁴
This UCLG Peer Learning Note provides three examples of NbS good practice from cities in Europe and Latin America and the Caribbean. In addition to a summary of the NbS intervention, key lessons learned are highlighted for each example.
- [Urban Nature Atlas, 2023.](#)³⁵
Collates over 1,000 examples of nature-based solutions interventions in cities around the world, with a focus on Europe. The case studies are broken down to a granular level of detail, e.g., key challenges addressed; amount, source and type of financing; and environmental, economic and socio-cultural impacts. An advanced filtering system also allows searching by these and other criteria.
- [Urban Nature Based Solutions: Cities Leading The Way, 2021.](#)³⁶
Showcases eight existing and successful programs implemented around the world. The case studies are broken down to a granular level of detail, including a description of the solution; measured impacts on biodiversity and co-benefits on climate change and society, associated with economic data; project management and governance; feasibility analysis (technical, economic and legal); monitoring; and lessons learned. From the entire collection of examples, WWF also draws six key success factors for NbS implementation in urban and peri-urban contexts.
- [URBiNAT NBS Catalogue, 2023.](#)³⁷
This catalogue is a result of the URBiNAT project, funded by the EU's Horizon 2020 Programme. The catalogue consists of nature-based solutions which can be co-selected and co-created and, in some cases, turned into new NbS interventions by citizens in URBiNAT intervention areas. The catalogue consists of four categories of NbS (Territorial, Technological, Participatory, and Social & Solidarity Economy) and includes over 40 solutions. For each NbS intervention, the catalogue presents "best practices", which consist of either a brief description, a reference, or a link to a further source.

2.4 Compilations focused on specific social, economic and environmental challenges

This sub-section provides an overview of compilations focused on nature-based solutions that address particular social, economic, or environmental challenges, such as climate impacts. Although these compilations focus on a particular challenge, it is important to recognise that well-designed NbS can simultaneously deliver multiple benefits for society, the economy, and the environment. This means that

³³ [UNEP \(2023\). State of Finance in Nature in Cities: Time to Assess.](#)

³⁴ [INTERLACE Project, UCLG Learning \(2022\). UCLG Peer Learning Note #31: Urban Ecosystem Restoration & Nature-based Solutions.](#)

³⁵ [Physi Solutions \(2023\). Urban Nature Atlas.](#)

³⁶ [WWF \(2021\). Urban Nature Based Solutions: Cities Leading the Way 2021.](#)

³⁷ [URBiNAT \(2023\). NBS Catalogue.](#)

while these NbS are focused on a particular goal (such as improved water security), they can also provide additional benefits (such as protecting infrastructure, supporting decent work, sequestering carbon, and increasing habitat connectivity).³⁸ In recognising this, some of the compilations below also illustrate the co-benefits of NbS interventions.

2.4.1 Nature-based solutions for biodiversity conservation

- [CBD Ecosystem Approach Sourcebook Database: Case study Search](#), undated.³⁹

This database is not explicitly formulated as a database on nature-based solutions. The Convention on Biological Diversity (CBD) describes the Ecosystem Approach as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” – thereby helping to achieve the three objectives of the CBD.^{40, 41} The Ecosystem Approach considers biodiversity conservation and human well-being to be dependent on functioning and resilient natural ecosystems.⁴² Therefore, the Ecosystem Approach can be considered as a nature-based solution that addresses biodiversity loss,⁴³ while simultaneously providing benefits for human wellbeing. However, case studies should also be reviewed independently to ensure that they are in alignment with the UNEA definition of nature-based solutions. The CBD Ecosystem Approach Sourcebook Database compiles 54 case studies from around the world, self-submitted by the implementers. The case studies include a detailed description, and information on the tools and approaches, issues, relevance of the ecosystem approach principles and operational guidance, and lessons learned.

2.4.2 Nature-based solutions for climate action (mitigation and adaptation)

- [Nature4Climate: NbS in action around the world](#), 2023.⁴⁴

Interactive map containing over 300 case studies from more than 100 countries around the world. Case studies include both NbS for climate mitigation and adaptation, and are organised around four categories: protect, manage, restore, and adapt. The platform provides an overview of each project, as well as links to more detailed explorations.

2.4.3 Nature-based solutions for climate mitigation

These compilations refer to Natural Climate Solutions (NCS), which include nature-based solutions for climate mitigation. However, NCS can also include other solutions which are not considered nature-based solutions.

- [Beyond Beneficiaries: Fairer Carbon Market Frameworks](#), 2023.⁴⁵

This report focuses on natural climate solutions (NCS) projects that are intended for sale in voluntary carbon markets (VCM), with a focus on those with Indigenous Peoples and Local Community involvement. It includes four “positive examples” or case studies, describing IPLC-led or partnered projects in the Global North.

³⁸ [UNEP \(2022\). Nature-based Solutions: Opportunities and Challenges for Scaling Up.](#)

³⁹ [Convention on Biological Diversity \(n.d.\). Ecosystem Approach Sourcebook Database: Case Study Search.](#)

⁴⁰ [CBD \(2010\). Ecosystem Approach: Description.](#)

⁴¹ [WWF \(2021\). Nature-Based Solutions in the Convention on Biological Diversity \(CBD\): Orientating an Evolving Concept Towards Achieving the CBD’s Objectives.](#)

⁴² [Cohen-Shacham et al. \(2019\). Core principles for successfully implementing and upscaling Nature-based Solutions.](#)

⁴³ [IIED \(2021\). Nature-based solutions or the ecosystem approach?](#)

⁴⁴ [Nature4Climate \(2023\). NbS in action around the world.](#)

⁴⁵ [Hamrick et al. \(2023\). Beyond Beneficiaries: Fairer Carbon Market Frameworks.](#)

- [Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries, 2021.](#)⁴⁶
The Nature Conservancy (TNC) refers to NCS in this Handbook as a subset of NbS, though the term NCS is used throughout the guide to refer to a specific Greenhouse Gas (GHG) accounting framework for nature-based climate mitigation. The guide shares five brief case studies from Asia, North America, and South America, which demonstrate how teams have adapted the global NCS framework, a GHG accounting framework for nature-based climate mitigation, to their needs, including the lessons learned in the process.

2.4.4 Nature-based solutions for Ecosystem-based Adaptation (EbA) and Disaster Risk Reduction (DRR)

- [Adaption Knowledge Portal, undated.](#)⁴⁷
This is a large global database of adaptation knowledge, including adaptation through nature-based solutions (Ecosystem-based Adaptation /EbA). The portal provides useful summaries of the “good practices and lessons learned” from each case study.
- [Climate Justice for People and Nature through Urban Ecosystem-Based Adaptation \(EbA\): A Focus on the Global South, 2021.](#)⁴⁸
Showcases six examples of urban ecosystem-based adaptation (EbA) interventions from around the world and explores their links with seven proposed EbA Social Principles: participation and inclusiveness, capacity building, fairness and equitability, integration of traditional/local knowledge, livelihood improvement, gender consideration and appropriateness of scale. These proposed “social principles” overlap with many of the success factors highlighted in other compendia.
- [GeoIKP: Nature-based Solution Catalogue, undated.](#)⁴⁹
A database containing over 670 case studies of NbS for hydro-meteorological risk reduction and mitigation (flooding, landslides, coastal erosion, etc.) from around the world. The catalogue provides an overview of each project, and highlights the main objectives, the geographical coverage, and the potential co-benefits of interventions.
- [Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner’s Guide, 2022.](#)⁵⁰
Includes five case studies from Asia, demonstrating how NBS can be mainstreamed in the portfolio of the Asian Development Bank. Case studies describe the challenge and the NbS intervention, with lessons learned highlighted for one case study.
- [Nature-based Solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction, 2021.](#)⁵¹
Selects 97 examples from across Europe. The examples highlight lessons learned and consider the transferability of results.

⁴⁶ [Leavitt et al. \(2021\). Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries.](#)

⁴⁷ [UNFCCC \(n.d.\). ADAPTATION KNOWLEDGE PORTAL.](#)

⁴⁸ [Vidal Merino et al. \(2021\). Climate Justice for People and Nature through Urban Ecosystem-based Adaptation \(EbA\): A Focus on the Global South.](#)

⁴⁹ [GeoIKP \(n.d.\). Nature-based Solution Catalogue.](#)

⁵⁰ [Matthews & Dela Cruz \(2022\). Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner's Guide.](#)

⁵¹ [EEA \(2021\). Nature-based solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction.](#)

- The NbS Evidence Platform, 2023.⁵²

An interactive map linking nature-based solutions to climate change adaptation outcomes based on a systematic review of peer-reviewed literature. The tool includes cases from around the world and allows the user to explore evidence on how effective different nature-based interventions are for addressing climate change impacts. An advance filtering system allows the user to filter by region, country, ecosystem type, intervention type, or type of outcome.
- The Role of the Natural Environment in Adaptation, 2019.⁵³

This background paper for the Global Commission on Adaptation includes 25 case studies which illustrate the use of NbS in different countries and contexts. The case studies are broken down to a granular level of detail e.g., hazard, sector, vulnerability, NbS action, policy enablers/context, implementers, implementation costs, impacts/avoided losses, co-benefits, and risks/challenges.
- Scoping paper on knowledge gaps in integrating forest and grassland biodiversity and ecosystems into adaptation strategies, 2021.⁵⁴

Compiles 16 case studies from across Africa, South America and Asia encompassing a variety of adaptation approaches, and analyzes lessons learned and best practices per case study. The paper also includes a synthesis of best practice, drawn from across the whole collection.
- Valuing the benefits of nature-based solutions for integrated urban flood management in the Greater Mekong Region: Synthesis Report, 2022.⁵⁵

Includes four case studies from Thailand and Vietnam, which illustrate the potential benefits of the wider application of NbS. Each case study is summarised and presented alongside the results of a benefit–cost analysis (BCA).
- Where people and their land are safer: A Compendium of Good Practices in Disaster Risk Reduction, 2017.⁵⁶

A compendium of 45 examples of interventions for DRR from across Africa, Asia and Latin America and the Caribbean. These include nature-based solutions interventions as well as others, e.g., legal protections, social enterprises, and early warning systems. The descriptions of examples are technical in nature and analyze project impacts, resulting in some lessons learned, but these lessons are not highlighted.
- Words into Action: Nature-based Solutions for Disaster Risk Reduction, 2021.⁵⁷

Compiles 44 case studies from around the world. The case studies are brief in detail, but the report provides references and links to the sources facilitating access to more in-depth information.

⁵² Nature-based Solutions Evidence Tool (2023). The NbS Evidence Platform.

⁵³ Kapos et al. (2019). The Role of the Natural Environment in Adaptation, Background Paper for the Global Commission on Adaptation.

⁵⁴ UNFCCC (2021). Scoping paper on knowledge gaps in integrating forest and grassland biodiversity and ecosystems into adaptation strategies.

⁵⁵ CRCWSC and ICEM (2022). Valuing the benefits of nature-based solutions for integrated urban flood management in the Greater Mekong Region: Synthesis Report.

⁵⁶ Harari et al. (2017). Where people and their land are safer: A Compendium of Good Practices in Disaster Risk Reduction.

⁵⁷ United Nations Office for Disaster Risk Reduction (2021). Words into Action: Nature-based Solutions for Disaster Risk Reduction.

- Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change and Weather-Related Disasters, 2022.⁵⁸
Presents seven case studies from Africa, Asia and the Pacific, and Central America, and identifies five key success factors for NbS from across the evidence base.

2.4.5 Nature-based solutions for water security

- CTCN Knowledge Brief. Nature-based Solutions to Emerging Water Management Challenges in the Asia-Pacific Region, 2022.⁵⁹
Collates 12 examples from across the Asia Pacific region focusing on three ecosystem types: urban, rural and coastal. The examples are brief overviews with little detail. However, they do propose considerations for scaling up.
- The European NWRM Platform, 2015.⁶⁰
A platform containing a catalogue of 140 European case studies of Natural Water Retention Measures (NWRM). The case studies are brief but, in some cases, highlight the lessons learned including success factors and barriers.
- IWRM Action Hub: Case studies, 2023.⁶¹
Compiles 13 case studies of nature-based solutions, which each provide a detailed overview of the intervention and highlight the lessons learned. The solutions featured on the Integrated Water Resources Management (IWRM) Action Hub include NbS and other solutions for IWRM. However, the filtering function facilitates easy access to case studies focused only on nature-based solutions.
- Nature-Based Solutions for agricultural water management and food security, 2018.⁶²
Compiles 21 examples from across the world and considers both successful and unsuccessful examples to extract lessons learned. The paper also identifies a set of possible success factors, against which it ranks each study. The studies themselves are brief summaries of the intervention with no analysis beyond the ranking. However, it synthesises the learnings from the entire collection of examples into lessons learned on each of the success factors.
- Nature-based solutions for water security, 2020.⁶³
A literature review which gathers a wide range of references on nature-based solutions for water security and identifies knowledge gaps. It does not describe the examples; it simply refers to them as examples of nature-based solutions to address water security.
- The United Nations World Water Development Report 2018: Nature-Based Solutions for Water, 2018.⁶⁴
The 2018 UN Water report explores how nature-based solutions contribute to SDG 6: “ensure the availability and sustainable management of water and sanitation for all.” It uses seven short case

⁵⁸ WWF, IFRC (2022). Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change And Weather-Related Disasters.

⁵⁹ UNEP (2022). CTCN Knowledge Brief. Nature-based Solutions to Emerging Water Management Challenges in the Asia-Pacific Region.

⁶⁰ NWRM (2015). Natural Water Retention Measures.

⁶¹ Global Water Partnership (2023). IWRM Action Hub: Case studies.

⁶² Sonneveld et al. (2018). Nature-Based Solutions for agricultural water management and food security.

⁶³ Cooper, R. (2020). Nature-based solutions for water security.

⁶⁴ WWAP (United Nations World Water Assessment Programme)/UN-Water (2018). The United Nations World Water Development Report 2018: Nature-Based Solutions for Water.

study summaries to illustrate sectoral and issue-based suggestions on how nature-based solutions can help manage water availability.

2.4.6 Nature-based solutions for agriculture and food security

- [Enabling rural women as key actors in nature-based solutions, 2023.](#)⁶⁵
This paper aims to better understand the role of rural women in NbS. It explores four NbS approaches relevant to agriculture – natural climate solutions (NCS), forest landscape restoration (FLR), ecosystem-based adaptation (EbA), and payments for ecosystem services (PES). Illustrative examples of gender integration in interventions are provided for NCS, FLR, and EbA, which highlight an overall positive gender outcome. For PES, three ‘deeper dive’ examples are provided, which differ in the extent to which gender is integrated. In each case, the enabling factors and gaps in the project approaches are highlighted across three scales of influence (global level, national/subnational level, and local level). Based on these deep dives and a literature review, the paper goes on to highlight key enabling factors and promising practices for a more gender-responsive approach to NbS necessary for climate-resilient, sustainable agroecosystems.
- [Hand in hand with nature – Nature-based Solutions for transformative agriculture, 2021.](#)⁶⁶
This report summarises eight successful examples from around the world, with the aim to provide countries in the Europe and Central Asia (ECA) region with an overview of Nature-based Solutions applied to agriculture.
- [Nature-based solutions in agriculture – The case and pathway for adoption, 2021.](#)⁶⁷
Outlines four case studies demonstrating a range of practices, benefits and approaches from Africa, Asia, Latin America, and North America. The report provides a detailed description of each case study, including information on the NbS practices implemented, the scale, the benefits, the replicability, and the enabling environment, including the role of funders and policy makers in enabling uptake. The report also illustrates how multiple NbS practices can be deployed concurrently and systematically to maximize benefits to farms and nature.
- [NBS Framework for Agricultural Landscapes, 2021.](#)⁶⁸
An academic paper which mentions relevant examples but does not describe the examples in any detail.

2.4.7 Nature-based solutions for infrastructure

- [Nature-based green infrastructure: A review of African experience and potential, 2023.](#)⁶⁹
This report includes eight case studies from diverse African contexts. Case studies are detailed illustrating the documented objectives, measures taken, intended and unintended outcomes, and sources of information. Where possible, information is also provided on the economic instruments used to finance programmes, and analysis of the decision criteria used for prioritising green or grey-green infrastructure choices. Case studies are also labelled for their contribution to relevant sectoral goals and ecosystem services harnessed e.g., inland flood risk reduction, wastewater filtering, agricultural land productivity etc. The report synthesises key lessons learned from the literature and case studies to draw a series of conclusions.

⁶⁵ [Salcedo-La Viña et al. \(2023\). Enabling rural women as key actors in nature-based solutions.](#)

⁶⁶ [Arnés García & Santivañez \(2021\). Hand in hand with nature – Nature-based solutions for transformative agriculture.](#)

⁶⁷ [Iseman and Miralles-Wilhelm \(2021\). Nature-based solutions in agriculture – The case and pathway for adoption.](#)

⁶⁸ [Simelton et al. \(2021\). NBS Framework for Agricultural Landscapes.](#)

⁶⁹ [Dupar et al. \(2023\). Nature-based green infrastructure: A review of African experience and potential.](#)

- NBI Global Resource Centre Database, 2023.⁷⁰
The NBI Global Resource Centre is focused on making the business case for investment in nature-based infrastructure (NBI), through the use of NBI Sustainable Asset Valuation (SAVi) and other integrated cost-benefit analyses. The NBI database compares NBI solutions with those of conventional grey infrastructure and the economic value of the positive externalities provided by NBI solutions are determined for case studies (i.e., on the ground interventions). The database categorizes each entry using the following fields: Value type (i.e., added benefit, avoided cost, or direct cost); Category (e.g., sectoral, biophysical groupings); Subcategory, providing descriptive information about the cost or benefit; Unit for the value provided; Climate Scenario for which the indicator was calculated (e.g., Intergovernmental Panel on Climate Change Representative Concentration Pathway (RCP) scenarios); Policy Scenario for which the indicator was calculated; Value of the cost or benefit; Country in which the project was assessed; Project Code; SAVi Assessment; and Assessment URL. The database can be organised by any of these fields.

2.5 *Compilations of nature-based solution policy instruments*

- Blue Carbon and Nationally Determined Contributions Second Edition: A guide on how countries may include blue carbon in their Nationally Determined Contributions, 2023.⁷¹
Includes brief examples and case studies of how countries have included blue carbon in their NDCs.
- Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions, 2019.⁷²
Includes three case studies from Costa Rica, Uruguay and Belize, which briefly describe each country's experience in including natural climate solutions (or nature-based solutions) in their NDCs.
- INTERLACE Urban Governance Atlas, 2023.⁷³
A collection of more than 250 good practice policy instruments from 41 countries supporting nature-based solutions and ecosystem restoration. Policy instruments are organised into 4 categories: legislative, regulatory and strategic instruments; economic and fiscal instruments; agreement-based or cooperative instruments; and knowledge, communication and innovation instruments. The platform provides information on what made the instruments successful, lessons learned in their design and implementation, and their approaches to governance, such as stakeholder involvement, institutional arrangements and participatory methods utilised. The Atlas also includes an advanced filtering system which allows users to search for the policy instruments that are most relevant to their context or interests (e.g., by type of instrument, region, or challenges addressed).
- Nature-based Solutions (NbS) Policy Tracker: An AI Approach to Policy-making for Enabling NbS Worldwide, 2022.⁷⁴
This report includes a 'policy database' of relevant national policies and international commitments that enable the implementation of NbS. Artificial Intelligence (AI) techniques were used to gather public policies from countries across the globe. Effective government initiatives enacted after 2016

⁷⁰ IISD and UNIDO (2023). NBI Global Resource Centre Database.

⁷¹ The Blue Carbon Initiative (2023). Blue Carbon and Nationally Determined Contributions Second Edition: Guidelines on Enhanced Action. A guide on how countries may include blue carbon in their Nationally Determined Contributions.

⁷² Beasley et al. (2019). Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions.

⁷³ Urban Governance Atlas (2023). Urban Governance Atlas (UGA).

⁷⁴ Nature4Climate (2022). Nature-based Solutions (NbS) Policy Tracker: An AI Approach to Policy-making for Enabling NbS Worldwide.

(since the Paris Agreement was signed) were considered for this database, in particular legislation, subsidies and policy documents with budgets. The NbS policy database includes a total of 462 policies across 144 countries and is included in Appendix 7 of the document. The report also features a mapping of NbS-relevant targets in 31 countries' international nature and climate commitment in Appendix 6. Furthermore, the report outlines 10 case studies from around the world that highlight how countries are moving beyond international commitments and have integrated NbS into action. For each case study, the report provides a summary of the selected national policy and details the policy attributes and its links with the country's international commitments.

2.6 Analysis of the existing compilations of examples of nature-based solutions

- Of the existing compilations identified in this Resource Guide, the majority (66%) had a global scope, including examples from both the Global North and the Global South.
- 20% of the compilations identified in this Resource Guide focused exclusively on the Global South. Of these compilations, almost half (46%) were focused only on Asia and the Pacific.
- 14% of the compilations focused exclusively on WEOG countries. Of these compilations, the majority (78%) were focused only on Europe.⁷⁵
- Of the existing compilations identified, only one compilation was focused exclusively on Africa, as was the same for Latin America and the Caribbean, while no compilations were focused exclusively on Eastern Europe.
- 23% of the compilations identified in this Resource Guide include, in principle, all types of nature-based solutions. After this, most compilations were focused on urban NbS (20%), followed by those focused on Ecosystem-based Adaptation (EbA) and Disaster Risk Reduction (DRR) (19%).
- 64 compilations were included in total, representing a big collection, though this is by no means exhaustive. For instance, only four compilations of nature-based solutions for agriculture and food security are included, which all refer directly to the term 'nature-based solutions' in the title. It is likely that other compilations could be identified using additional search terms such as 'regenerative agriculture' or 'agroforestry'. Nevertheless, this collection still represents a useful resource to guide readers towards the myriad of compilations that currently exist on nature-based solutions.

3. Proposals, criteria, standards and guidelines for the implementation of nature-based solutions

The second specific task that the UNEA resolution set out for the intergovernmental consultations was to "assess existing and discuss potential new proposals, criteria, standards and guidelines" (UNEA resolution 5/5 Operative paragraph 5(c)). This section provides information related to this task. There is a brief consideration of the meaning of the four key terms ('proposal', 'criterion', 'standard' and 'guideline'). This is followed by a survey of how these terms have been applied to nature-based solutions.

3.1 The key terms

For the purposes of this paper, we understand the four terms in the following way.⁷⁶

Proposal: A suggested or intended plan, scheme, or course of action.

Criterion: A test, principle, rule, canon, or standard, by which anything is judged or estimated.

Standard: A rule, principle, criterion or measure by which something can be judged or evaluated.

⁷⁵ Of the compilations focused only on European countries, some examples also covered Eastern European countries. However, as most of the examples were focused on EU Member States and the United Kingdom, the compilations were categorised as WEOG.

⁷⁶ These are definitions of the English terms. It is an open question whether other languages have terms with exactly the same meaning as these English terms.

Guideline: A principle, or general statement which may be regarded as a guide to procedure, policy, interpretation, as well as actions or decisions that need to be taken etc.

In normal usage the term ‘standard’ is often used as a higher-level term than ‘criterion’; and a guideline typically has a specific focus on providing advice or guidance for how some decision is to be taken or action implemented. Recognizing that the three terms are closely related, the term ‘rule’ (which appears in the definition of all three terms) usually refers to a criterion or standard or guideline that is binding upon actors at either the national or international level and that has followed a specific process of adoption, for example, adoption by a national or intergovernmental body. In contrast, the term ‘proposal’ has a distinct meaning, especially when used within the context of rules of procedure for United Nations inter-governmental meetings.

Safeguards are also similar in definition. In the simplest definition, safeguards are principles or measures that aim to protect someone or something from harm or damage.⁷⁷ The term ‘principle’ also appears in the definition of criterion, standard and guideline, while ‘measure’ appears in the definition of standard and criterion. Section 3.5 provides more information on safeguards.

3.2 Examples of proposals on nature-based solutions

In this sub-section, a proposal refers to a formal statement or written document which outlines an intended plan or course of action.

- Nature-based Solutions for Climate Manifesto, 2019.⁷⁸
This was launched at the 2019 UN Climate Action Summit by the NBS Coalition co-led by China and New Zealand. It had the support of more than 70 governments, private sector, civil society and international organizations. It proposed four priorities for action. These are: increasing and mainstreaming nature-based solutions within national governance and climate action and policy; enhancing regional and international cooperation; generating shifts in domestic and international governance and finance to realize the potential of nature-based solutions; and scaling up nature-based solutions for mitigation, resilience and adaptation.
- Proposals from the G20 and G7, 2022.
Recent Presidencies for the G20 and G7 have made proposals for action on nature-based solutions. For example, in 2022, the Indonesian Presidency of the G20 culminated in the Bali Leaders’ Declaration that pledged to “step up efforts to halt and reverse biodiversity loss, including through Nature-based Solutions and Ecosystem-based Approaches”.⁷⁹ In the same year, under the German Presidency of the G7, the Climate, Energy and Environment Ministers committed to “substantially increase our national and international funding for nature by 2025, including increased funding for nature-based solutions.”⁸⁰
- Leaders’ Pledge for Nature, 2020.⁸¹
In the Leaders’ Pledge for Nature, endorsed by Heads of State and Government from 96 countries and the President of the European Commission for the European Union,⁸² political leaders committed

⁷⁷ UNEP (2022). *Nature-based Solutions: Opportunities and Challenges for Scaling Up*.

⁷⁸ NBS for Climate Coalition (2019). *The Nature-Based Solutions for Climate Manifesto*.

⁷⁹ Government of Indonesia (2022). *G20 Bali Leaders’ Declaration – Bali, Indonesia, 15-16 November 2022*.

⁸⁰ G7 Germany (2022). *G7 Climate, Energy and Environment Ministers’ Communiqué*.

⁸¹ Leaders’ Pledge for Nature (2020). *United to Reverse Biodiversity Loss by 2030 for Sustainable Development*.

⁸² Leaders’ Pledge for Nature (2023). *United to Reverse Biodiversity Loss by 2030 for Sustainable Development*.

to “a significant scale-up in nature-based solutions and ecosystem-based approaches on land and at sea” and to the mobilisation of resources to support nature-based solutions.

- Nordic Ministerial Declaration on nature-based solutions, 2022.⁸³
On 2 November 2022, the Nordic Ministers for the Environment and Climate signed a Declaration on nature-based solutions, where they pledged to work together to actively promote the full potential of nature-based solutions in the Global Biodiversity Framework and to upscale and mainstream nature-based solutions in the Nordic region.
- Nationally Determined Contributions.
A total of 122 new NDCs were submitted in 2021. Forty-one per cent of these new NDCs included the term ‘nature-based solutions’ in their proposals, representing fifty countries, and an additional two mentioned ‘nature-based’ actions or interventions. According to this analysis by the Nature-Based Solutions Initiative, nature-based solutions are referred to in the NDCs of all the 17 nations classified as ‘low income’ by the World Bank, and all but four of the 40 nations classified as ‘lower-middle income’.⁸⁴
- National Policies.
Beyond NDCs, countries are also increasingly including commitments to nature-based solutions in their national policies, plans, and programmes.⁸⁵ For example, Germany recently adopted the German Federal Action Plan on Nature-based Solutions for Climate and Biodiversity. This plan comprises 69 measures in a total of ten fields of action and has four billion euros earmarked for its implementation up to 2026.⁸⁶ In the United States, the Biden-Harris Administration released an NbS Roadmap in 2022, which provides five strategic recommendations for federal agencies to unlock the potential of nature-based solutions.⁸⁷ The Administration also announced interagency commitments aligned with the roadmap, such as agency actions to ensure over \$25 billion in infrastructure and climate funding can support nature-based solutions.⁸⁸ Additionally, South Africa has developed the Strategic Framework and Overarching Implementation Plan for Ecosystem-based Adaptation, also known as the South African EbA strategy, as a core component of its overall approach to climate change adaptation.⁸⁹ In Mexico, the Government is implementing the Programa Sembrando Vida (Sowing Life Programme), which aims to reduce the vulnerability of the country’s agrarian population, through the establishment of agroforestry production systems.⁹⁰

3.3 Examples of criteria and standards as applied to nature-based solutions

Below, examples are provided of criteria and standards applied to nature-based solutions. These examples are categorised in order of decreasing scope.

3.3.1 As applied to all types of nature-based solutions

⁸³ The Nordic Council and the Nordic Council of Ministers (2022). Nordic Ministerial Declaration on nature-based solutions.

⁸⁴ Nature-Based Solutions Initiative (2022). Revised climate pledges show enhanced ambition for nature-based solutions.

⁸⁵ UNEP (2022). Nature-based Solutions: Opportunities and Challenges for Scaling Up.

⁸⁶ BMUV (2023). Federal Action Plan on Nature-based Solutions for Climate and Biodiversity.

⁸⁷ White House Council on Environmental Quality et al. (2022). Opportunities for Accelerating Nature-Based Solutions: A Roadmap for Climate Progress, Thriving Nature, Equity, and Prosperity.

⁸⁸ The White House (2022). FACT SHEET: Biden-Harris Administration Announces Roadmap for Nature-Based Solutions to Fight Climate Change, Strengthen Communities, and Support Local Economies.

⁸⁹ The Department of Environmental Affairs (2018). Ecosystem-based Adaptation (EbA) in South Africa Guidelines.

⁹⁰ Gobierno de México (2020). Programa Sembrando Vida.

- *IUCN Global Standard for Nature-based Solutions, 2020.*⁹¹
The IUCN Global Standard states that it aims to equip users with a robust framework for designing and verifying nature-based solutions that yields the outcomes desired, in solving one or several societal challenge(s). It has been developed as a facilitative Standard, purposefully avoiding a rigid normative framing. The Global Standard is itself made up of eight criteria and 28 Indicators. IUCN has also developed detailed ‘Guidance’ for using the Standard⁹² and is in the process of developing sector-specific guidelines, illustrating the close connections between criteria, standards and guidelines. The governing body of the IUCN Global Standard is responsible for revising the Standard every four years, enabling its improvement.⁹³
- *The NetworkNature Semester on Nature-based solutions and Standards: Final Output Report, 2022.*⁹⁴
This final report collects the results of the NetworkNature semester on “NBS and Standards”. In order to better understand what high-quality NBS means in practice and how quality criteria and requirements can be translated into universally applicable standards, the semester focused on identifying the essential criteria and requirements to plan and deliver high-quality NBS. The report outlines identified potential quality criteria and implementation requirements, which can be necessary to ensure high-quality NBS. The report also highlights potential weaknesses or misuses of NBS interventions, which can result in flawed NBS implementation.

3.3.2 *As applied to nature-based solutions that address particular social, economic, or environmental challenges*

Nature-based solutions for climate mitigation:

- *Plan Vivo Standard 5.0, 2022.*⁹⁵
The Plan Vivo Standard is a set of requirements used to certify smallholder and community projects based on their climate, livelihood and environmental benefits. It is the longest-standing carbon Standard in the Voluntary Carbon Market and has gone through a 25+ year evolution, incorporating lessons learned from working with smallholder and community-led restoration and forest protection projects. The Plan Vivo Standard is periodically updated, most recently in 2022.
- *The REDD+ Environmental Excellence Standard Version 2.0, 2021.*⁹⁶
This publication is produced by the Architecture for REDD+ Transactions Program. The Program aims to promote the environmental and social integrity and ambition of greenhouse gas emission reductions and removals from the forest and land use sector. Thus, this Standard applies to a particular aspect of nature-based solutions for climate mitigation – namely, the requirements for the quantification, monitoring, and reporting of GHG emissions and removals; demonstration of implementation of the Cancún Safeguards; and verification, registration, and issuance of credits
- *Verra’s Climate, Community & Biodiversity Standards Version 3.1, 2017.*⁹⁷

⁹¹ IUCN (2020). *Global Standard for Nature-based Solutions*.

⁹² IUCN (2020). *Guidance for using the IUCN Global Standard for Nature-based Solutions*.

⁹³ IUCN (2020). *IUCN Global Standard for NBS*.

⁹⁴ Almásy et al. (2022). *The NetworkNature Semester on Nature-based solutions and Standards: Final Output Report*.

⁹⁵ Plan Vivo Foundation (2022). *Plan Vivo Standard 5.0*.

⁹⁶ Architecture for REDD+ Transactions Program (2021). *The REDD+ Environmental Excellence Standard (TREES), Version 2.0*.

⁹⁷ VCS (2017). *Third Edition: Climate, Community & Biodiversity Standards Version 3.1*.

The Climate, Community & Biodiversity (CCB) Standards and the rules and requirements that operationalize them (collectively referred to as the CCB Program) were created to foster the development and marketing of projects that deliver credible and significant climate, community and biodiversity benefits in an integrated, sustainable manner. The CCB Program performs two important roles: provides rules and guidance to encourage effective and integrated project design (project design standard); and verifies the adoption of best practices and the delivery of social and environmental benefits of a land-based carbon project (multiple-benefit standard). These standards can be applied to any land management project, can be used regardless of a project's geographical location, start date, or size, and are intended for use at all phases of project planning and management, from design through to implementation and monitoring.

- *Verra's Verified Carbon Standard (VCS)*, 2023.⁹⁸
The VCS Standard provides a global standard for GHG emission reduction and removal projects and programs. It provides the requirements for developing projects and programs, as well as the requirements for validation, monitoring, and verification of projects, programs, and GHG emission reductions and carbon dioxide removals. Typically, with NbS projects, Verra's VCS and CCB standards are used together.⁹⁹

Nature-based solutions for Ecosystem-based Adaptation (EbA):

- *Making Ecosystem-based Adaptation Effective: Framework for Defining Qualification Criteria and Quality Standards*, 2017.¹⁰⁰
This publication from the Friends of EbA aims to increase understanding amongst policymakers and practitioners about what qualifies as EbA. The publication provides a practical assessment framework for designing, implementing and monitoring EbA measures by proposing a set of 3 elements, 5 qualification criteria and 20 quality standards. As this publication proposes a set of criteria and standards, in order to provide guidance, there is ambiguity as to where this Framework would place in relation to the three closely related terms.

3.3.3 As applied to specific NbS actions

Ecosystem Restoration:

While not all instances of ecosystem restoration will necessarily qualify as nature-based solutions, many of them will do so, especially where there is an explicit social, economic or environmental challenge that the restoration is designed to achieve.

- *International Principles and Standards for the Practice of Ecological Restoration. Second edition summary*, 2019.¹⁰¹
This summary provides an introduction to the full Society for Ecological Restoration (SER) International Principles and Standards for the Practice of Ecological Restoration.
- *Standards of Practice to Guide Ecosystem Restoration*, 2023.¹⁰²

⁹⁸ Verra (2023). VCS Standard v4.5.

⁹⁹ Hamrick et al. (2023). Beyond Beneficiaries: Fairer Carbon Market Frameworks.

¹⁰⁰ FEBA (2017). Making Ecosystem-based Adaptation Effective: A Framework for Defining Qualification Criteria and Quality Standards.

¹⁰¹ Gann et al. (2019). International principles and standards for the practice of ecological restoration. Second edition summary.

¹⁰² FAO, SER & IUCN CEM. (2023). Standards of practice to guide ecosystem restoration. A contribution to the United Nations Decade on Ecosystem Restoration.

Developed by the UN Decade on Ecosystem Restoration, these standards comprise ten principles¹⁰³ that are designed to guide the entire restoration process.

3.4 Examples of guidelines as applied to nature-based solutions

Below, examples are provided of guidelines applied to nature-based solutions. These examples are categorised in order of decreasing scope.

3.4.1 As applied to all types of nature-based solutions

- *Core principles for successfully implementing and upscaling Nature-based Solutions*, 2019.¹⁰⁴
This paper outlines and compares the eight IUCN NbS principles¹⁰⁵ to principles in five other ecosystem-related approaches, namely, the Ecosystem Approach, Forest Landscape Restoration, Ecosystem-based Adaptation, Ecological Restoration, and Protected Areas. The paper identifies areas of agreement between the principles, as well as gaps that should be addressed to improve conservation impact across all types of ecosystem management. This critical analysis of the strengths and weaknesses of the NbS principles could be used to inform the review and revision of principles supporting specific types of NbS or could serve as the foundation for the development of standards for the successful implementation of NbS.
- *Evaluating the Impact of Nature-Based Solutions: A Handbook for Practitioners*, 2021.¹⁰⁶
This European Commission publication intends to serve as a guide for the periodic evaluation of both the positive and negative features of NbS impacts. The handbook guides the reader through the development and implementation of NbS monitoring and evaluation plans, the selection and application of impact indicators, and the acquisition and management of relevant data. The handbook is also accompanied by a summary for policy makers¹⁰⁷ and an Appendix of Methods.¹⁰⁸
- *How to Design High-Quality NbS Field Projects: A Guide for Practitioners*, 2022.¹⁰⁹
This WWF document aims to provide practical and simplified guidance for practitioners to develop and implement high-quality nature-based solutions interventions. The document intends to not repeat what other guidance provides, but rather aims to simplify and point practitioners towards the myriad documents and papers available on the core elements required to identify, design and implement good NbS.
- *Integrating Gender and Social Inclusion in Nature-Based Solutions: Guidance Note*, 2023.¹¹⁰
This note aims to provide guidance on gender and social inclusion in NbS. Specifically, the note presents factors for consideration in NbS projects, from the early stages of project conceptualization through to the project design and implementation process. Section 4 of the note describes a four-step approach to integrating gender and social inclusion into NbS interventions. Implementation of these

¹⁰³ [FAO, IUCN CEM and SER. \(2021\). Principles for ecosystem restoration to guide the United Nations Decade 2021–2030.](#)

¹⁰⁴ [Cohen-Shacham et al. \(2019\). Core principles for successfully implementing and upscaling Nature-based Solutions.](#)

¹⁰⁵ [IUCN \(2016\). WCC-2016-Res-069-EN: Defining Nature-based Solutions.](#)

¹⁰⁶ [European Commission \(2021\). Evaluating the impact of nature-based solutions – A handbook for practitioners.](#)

¹⁰⁷ [European Commission \(2021\). Evaluating the impact of nature-based solutions – A summary for policy makers.](#)

¹⁰⁸ [European Commission \(2021\). Evaluating the impact of nature-based solutions – Appendix of methods.](#)

¹⁰⁹ [WWF \(2022\). How to design high-quality NbS field projects: A guide for practitioners.](#)

¹¹⁰ [World Bank \(2023\). Gender and Inclusion in Nature-Based Solutions.](#)

steps will vary in different contexts, including in settings of fragility, conflict, and violence and in under resourced countries.

- *Powering Nature: Creating the Conditions to Enable Nature-Based Solutions*, 2021.¹¹¹
This report by WWF proposes a systemic enabling framework to effectively implement, scale up and mainstream nature-based solutions. By identifying structural barriers, policy levers and systemic enablers, this report provides governments, decisionmakers, civil society and the private sector with a practical basis for integrating nature-based solutions into planning decisions at different scales and in multiple sectors.

3.4.2 As applied to nature-based solutions that address particular social, economic, or environmental challenges

Nature-based solutions for biodiversity conservation:

- *CBD Ecosystem Approach*, 2008.¹¹²
The CBD describes the Ecosystem Approach as “a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way” – thereby helping to achieve the three objectives of the CBD.^{113, 114} The Ecosystem Approach considers biodiversity conservation and human well-being to be dependent on functioning and resilient natural ecosystems.¹¹⁵ Therefore, the Ecosystem Approach can be considered as a nature-based solution that addresses biodiversity loss,¹¹⁶ while simultaneously providing benefits for human-wellbeing. The CBD has developed 12 Principles and 5 points of Operational Guidance to support practitioners to implement the Ecosystem Approach. The CBD website includes numerous tools for practitioners, including the Principles, the Operational Guidance, a sourcebook of guidelines for applying the approach and a database of case studies.¹¹⁷

Nature-based solutions for climate action (mitigation and adaptation):

- *Bankable Nature Solutions: Blueprints for Bankable Nature Solutions from across the globe to adapt to and mitigate climate change and to help our living planet thrive*, 2020.¹¹⁸
This publication demonstrates what bankable projects are and aims to show global landscape practitioners, investors, and investees that Bankable Nature Solutions (BNS) can be a promising solution. It provides information on risks and safeguards, how to structure a BNS, key takeaways from project developers that are already working on BNS and outlines the four steps to setting up a BNS project. Though this publication is not explicitly focused on nature-based solutions, the information in this report can be used to guide the process of developing a bankable NbS project.

¹¹¹ Pérez-Cirera et al. (2021). *Powering Nature: Creating the Conditions to Enable Nature-based Solutions*.

¹¹² Convention on Biological Diversity (2008). *Ecosystem Approach Implementation*.

¹¹³ CBD (2010). *Ecosystem Approach: Description*.

¹¹⁴ WWF (2021). *Nature-Based Solutions in the Convention on Biological Diversity (CBD): Orientating an Evolving Concept Towards Achieving the CBD’s Objectives*.

¹¹⁵ Cohen-Shacham et al. (2019). *Core principles for successfully implementing and upscaling Nature-based Solutions*.

¹¹⁶ IIED (2021). *Nature-based solutions or the ecosystem approach?*

¹¹⁷ CBD (2008). *Ecosystem Approach Implementation*.

¹¹⁸ WWF (2020). *Bankable Nature Solutions: Blueprints for Bankable Nature Solutions from across the globe to adapt to and mitigate climate change and to help our living planet thrive*.

- *Blue Carbon and Nationally Determined Contributions Second Edition: A guide on how countries may include blue carbon in their Nationally Determined Contributions*, 2023.¹¹⁹
This publication provides technical guidance on the multiple avenues for including blue carbon ecosystems within updated NDCs. The document recommends a “tiered approach” to demonstrate how a variety of motivations and starting points represent viable pathways for the inclusion of these ecosystems. Having determined which engagement level is appropriate for a country, the guidelines go on to present the following five pillars as guidance: (i) Readiness Assessment & Options for Including Coastal Wetlands in NDCs; (ii) Blue Carbon in the Adaptation Component of an NDC; (iii) Blue Carbon and Mitigation Targets; (iv) Greenhouse Gas (GHG) Reporting and Inventories for Blue Carbon Ecosystems; and (v) Guidelines for Implementation. Within this document the term “guidelines” refers to practices recommended by the authors.
- *Mapping nature-based solutions to societal challenges*, 2023.¹²⁰
This technical review aims to provide technical advisers with a summary of the different spatial analysis approaches available to map potential locations for nature-based solutions that provide the greatest benefits. Section 1 defines nature-based solutions and their role in climate change mitigation and adaptation. Section 2 describes the six steps of a spatial planning process. Section 3 presents four spatial analysis approaches: suitability-first, systematic conservation planning, participatory mapping and mixed. The requirements, advantages, challenges, and limitations of these approaches are described and illustrated through case studies, and the approaches are compared in a final summary. Although the case studies in this review are examples of nature-based solutions for climate change mitigation and/or adaptation, the included approaches could be used to identify locations for all types of nature-based solutions.
- *Nature-based solutions for climate change*, 2020.¹²¹
WWF outlines 5 key principles for nature-based solutions for climate change.

Nature-based solutions for climate mitigation:

- *Accessing Carbon Finance for Nature Restoration in Europe: Guidance for ecosystem restoration practitioners*, 2023.¹²²
This document aims to provide guidance to European restoration practitioners on accessing voluntary carbon markets to finance their projects. It was produced under the ‘Understanding Voluntary Carbon Markets’ project,¹²³ funded by the Endangered Landscapes Programme (ELP). An overview of voluntary carbon markets and their potential role in supporting nature-based solutions, and ecosystem restoration more specifically, is provided in section 2 of the document. The sections that follow (3-5) then aim to help practitioners understand the process of setting up a carbon project, and whether doing so is right for them. Specifically, section 4 outlines the carbon standard landscape in Europe and the types of methodologies currently available.

¹¹⁹ The Blue Carbon Initiative (2023). *Blue Carbon and Nationally Determined Contributions Second Edition: Guidelines on Enhanced Action. A guide on how countries may include blue carbon in their Nationally Determined Contributions*.

¹²⁰ UNEP-WCMC (2023). *Mapping nature-based solutions for societal challenges*.

¹²¹ WWF (2020). *Nature-Based Solutions for Climate Change*.

¹²² UNEP (2023). *Accessing Carbon Finance for Nature Restoration in Europe: Guidance for ecosystem restoration practitioners*.

¹²³ The Endangered Landscapes Programme (2023). *Understanding Voluntary Carbon Markets*.

- *Beyond Carbon Credits: A Blueprint for High-Quality Interventions that Work for People, Nature and Climate*, 2021.¹²⁴
This guide from WWF provides a set of guidelines to help practitioners, policymakers, funders and investors to identify high-quality NbS interventions for climate mitigation that are measurable, credible and impactful. The guide focuses on forests, including mangroves, though many of the same considerations can also apply to NbS for climate mitigation deriving from other ecosystems.
- *The four guidelines for Nature-based Solutions*, 2021.¹²⁵
Four evidence-based guidelines that aim to inform the planning, implementation, and evaluation of NbS projects. The guidelines are brief and are intended to be complementary to the more detailed IUCN Global Standard for Nature-based Solutions.
- *Guidance on Voluntary Use of Nature-based Solution Carbon Credits Through 2040*, 2022.¹²⁶
This Technical Perspective, developed by a WRI working group focused on nature-based solutions and markets, aims to provide guidance to organizations (companies and institutions) on the voluntary use of carbon credits generated by nature-based solutions (“NBS credits”), particularly those credits generated beyond an organization’s value chain.
- *Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions*, 2019.¹²⁷
This guide refers to nature-based solutions as natural climate solutions. The guide includes a checklist of information and accounting approaches for national-level decision-makers to fully consider nature as a part of their NDC. It also includes national case studies, recommendations for specific categories of natural climate solutions, and additional resources and methodologies to consider when revising NDCs to incorporate natural climate solutions (or NbS).
- *Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries*, 2021.¹²⁸
The Nature Conservancy (TNC) refers to Natural Climate Solutions (NCS) in this Handbook as a subset of Nature-based Solutions (NbS), though the term NCS is used throughout the guide to refer to a specific GHG accounting framework for nature-based climate mitigation. This guide offers step-by-step instructions to those seeking to evaluate the potential of nature to mitigate climate change in their country or other jurisdiction. It outlines the basic parameters for getting started with an NCS assessment, flags key decision points, and explains the factors to consider when making those decisions for unique situations. TNC’s intention is that this guide will be easy to use and will outline a clear pathway to assessing the opportunity of NCS at any scale.
- *The Tropical Forest Credit Integrity (TFCI) Guide for Companies Version 2*, 2023.¹²⁹
This guide has been developed for companies that are interested in purchasing forest carbon credits in the voluntary carbon market. This guide intends to help move the carbon market towards credits

¹²⁴ Hacking et al. (2021). *Beyond Carbon Credits: A Blueprint for High-Quality Interventions that Work for People, Nature and Climate*.

¹²⁵ Nature-based Solutions Initiative (2023). *The four guidelines for Nature-based Solutions*.

¹²⁶ World Resources Institute (2022). *Guidance on Voluntary Use of Nature-based Solution Carbon Credits Through 2040*.

¹²⁷ Beasley et al. (2019). *Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions*.

¹²⁸ Leavitt et al. (2021). *Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries*.

¹²⁹ TFCI (2023). *Tropical Forest Credit Integrity Guide for Companies Version 2*.

with high social and environmental integrity, by supporting companies to differentiate among forest carbon credits by impact, quality, and scale. It includes a section on Implementation Guidance, which aims to support decision makers and teams responsible for developing and implementing corporate climate mitigation/net zero strategies navigate the tropical forest carbon credit marketplace with clear purpose and high integrity.

- *VCMI Claims Code of Practice: Building integrity in voluntary carbon markets*, 2023.¹³⁰
This document provides a rulebook for companies and other non-state actors on credible use of high-quality carbon credits, and associated claims, to catalyse climate action.
- *Who Reaps the Benefits? Integrity Principles for Benefit Sharing in Forest NbS for Climate Mitigation*, 2022.¹³¹
A discussion paper which proposes a set of 12 closely interrelated principles, organized by four values, for NbS benefit sharing in forest ecosystems.

Nature-based solutions for Ecosystem-based Adaptation (EbA) and Disaster Risk Reduction (DRR):

- *A Framework for Assessing the Effectiveness of Ecosystem-Based Approaches to Adaptation*, 2018.¹³²
This IIED publication outlines a question-based framework developed to qualitatively assess the effectiveness of ecosystem-based adaptation interventions.
- *A Guide to Eco-DRR Practices for Sustainable Community Development – Using Potential Map of Ecosystem Conservation/Restoration to Promote Eco-DRR*, 2023.¹³³
This guide, published by the Ministry of the Environment of the Government of Japan, provides an outline of the information and methods that can be used to promote Eco-DRR (Ecosystem-based Disaster Risk Reduction) in response to water-related disasters. Specifically, it describes how to create and use the “ecosystem conservation/restoration potential map” to visualize areas that have potential for the implementation of Eco-DRR.
- *Assessing the Benefits and Costs of Nature-Based Solutions for Climate Resilience: A Guideline for Project Developers*, 2023.¹³⁴
This document aims to guide the design, implementation, and use of studies to value the benefits and costs of Nature-based Solutions for climate resilience projects. It provides an overview of the methods and approaches, along with a decision framework to help guide study design, considering the project context as well as time and budget constraints. The decision framework presented should enable project developers to come up with a cost-effective approach for quantifying the benefits and costs of NbS, that is effective and convincing in the context of climate resilience projects. To illustrate this in practical applications, eight case studies from World Bank projects are also included to better show how different valuation methods are applied in the field. Although this document is focused on nature-based solutions for climate resilience, many of the same approaches can also be applied to other types of nature-based solutions.

¹³⁰ VCMI (2023). *Claims Code of Practice: Building integrity in voluntary carbon markets*.

¹³¹ Preston Whitt (2022). *Who Reaps the Benefits? Integrity Principles for Benefit Sharing in Forest NbS for Climate Mitigation*.

¹³² Reid et al. (2018). *A framework for assessing the effectiveness of ecosystem-based approaches to adaptation*.

¹³³ Ministry of the Environment, Government of Japan (2023). *A Guide to Eco-DRR Practices for Sustainable Community Development [Summary Version] – Using Potential Map of Ecosystem Conservation/Restoration to Promote Eco-DRR*.

¹³⁴ Van Zanten et al. (2023). *Assessing the Benefits and Costs of Nature-Based Solutions for Climate Resilience: A Guideline for Project Developers*.

- *The Blue Guide to Coastal Resilience: Protecting coastal communities through nature-based solutions*, 2021.¹³⁵
This Conservation International publication provides an eight-stage guide to implementing nature-based solutions to build coastal protection against climate-related hazards.
- *Ecosystem-based adaptation: Question-based guidance for assessing effectiveness*, 2017.¹³⁶
This booklet sets out guidance for assessing the effectiveness of an ecosystem-based approach to climate change adaptation. It describes a process, based around 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.
- *Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans*, 2021.¹³⁷
These guidelines, developed by UNEP, are focused on a particular aspect of nature-based solutions for adaptation – namely, how EbA can be integrated into National Adaptation Plans.
- *Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions*, 2020.¹³⁸
This guidebook provides an overview of the process for designing and implementing an effective monitoring and evaluation (M&E) system for Ecosystem-based Adaptation (EbA) interventions. The process is broken down into four key steps: developing a results framework; defining indicators and setting a baseline; operationalising the monitoring and evaluation system; and using and communicating the results. The Guidebook is not a detailed manual for the M&E process – rather, it describes key considerations and components for each step and points to additional tools and methodologies that provide more specific instructions, when they exist.
- *Handbook System for the Design and Implementation of EbA*, 2022.¹³⁹
This handbook system was originally created to guide the process of designing, setting up, implementing, monitoring, and up-scaling EbA interventions under IUCN’s global Mountain EbA Program.¹⁴⁰ It has since been adapted into this publication aimed at sharing materials and methodology with the larger EbA community. This document takes the EbA practitioner through the 7 stages of the EbA cycle, from selecting suitable sites for EbA interventions to supporting the process of mainstreaming EbA. Each stage is summarized and supported by resources and forms.
- *Implementing nature-based flood protection: Principles and implementation guidance*, 2017.¹⁴¹
This World Bank publication comprises two parts. The first part lists five principles that describe issues to be considered when planning nature-based solutions. The second part contains implementation guidance describing the timeline and activities needed to implement nature-based solutions. It is noteworthy that the publication addresses both pure nature-based approaches and

¹³⁵ The Nature Conservancy (2021). *The Blue Guide to coastal resilience. Protecting coastal communities through nature-based solutions. A handbook for practitioners of disaster risk reduction.*

¹³⁶ Reid et al. (2020). *Ecosystem-based adaptation: Question-based guidance for assessing effectiveness.*

¹³⁷ UNEP (2021). *Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans: Supplement to the UNFCCC NAP Technical Guidelines.*

¹³⁸ GIZ, UNEP-WCMC and FEBA (2020). *Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions.*

¹³⁹ International Union for Conservation of Nature (IUCN) (2022). *Handbook System for the Design and Implementation of Ecosystem-based Adaptation in Mountains.* Gland, Switzerland: IUCN.

¹⁴⁰ International Union for Conservation of Nature (IUCN) (2023). *Scaling Up Mountain EbA.*

¹⁴¹ World Bank (2017). *Implementing nature-based flood protection: Principles and implementation guidance.*

hybrid grey-green interventions that combine nature-based elements and hard engineering approaches.

- *Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner's Guide*, 2022.¹⁴²
This guide explores the benefits of using NbS in a suite of development options to promote sustainable and resource-efficient infrastructure. Through this practical guide, the authors aim to support the mainstreaming of NbS in the portfolio of the Asian Development Bank.
- *Nature-based Solutions for Climate Resilience in Humanitarian Action Unpacked Guide*, 2023.¹⁴³
Practical guidance for using the Sphere minimum standards when implementing nature-based solutions that address societal challenges in humanitarian action, including DRR and climate change adaptation. The Sphere Standards are expressions of universally applicable human rights and are based on the fundamental respect for people's right to be fully involved in decisions regarding their recovery.
- *Words into Action: Nature-based Solutions for Disaster Risk Reduction*, 2021.¹⁴⁴
This publication from the UN Office of Disaster Risk Reduction (UNDRR) aims to provide practical information on designing and implementing nature-based solutions for disaster risk reduction and climate change adaptation.
- *Principles and Guidelines for Integrating Ecosystem-based Approaches to Adaptation in Project and Policy Design*, 2012.¹⁴⁵
This paper proposes a set of draft principles and guidelines for integrating ecosystem-based approaches to adaptation in project and policy design. They are intended for use when undertaking national adaptation planning; by financial institutions; and in project and research design.
- *Principles for just and equitable nature-based solutions*, 2022.¹⁴⁶
This brief proposes five principles for ensuring just and equitable NbS design and implementation.
- *Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction*, 2019.¹⁴⁷
This report provides detailed information on the principles, safeguards, and overarching considerations for EbA and Eco-DRR design and implementation. It includes a flexible framework for planning and implementing ecosystem-based approaches. The report is organised into three parts. Part 1 provides high-level policy guidance; part 2 provides guidelines for practitioners and implementers for operationalising EbA and Eco-DRR at the programme and project level; and part 3 contains briefs to support advocacy by EbA and Eco-DRR practitioners for the integration of EbA and Eco-DRR into sectoral policies and plans.

¹⁴² Matthews & Dela Cruz (2022). *Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner's Guide*.

¹⁴³ Sphere (2023). *Nature-based Solutions for Climate Resilience in Humanitarian Action*.

¹⁴⁴ United Nations Office for Disaster Risk Reduction (2021). *Words into Action: Nature-based Solutions for Disaster Risk Reduction*.

¹⁴⁵ Andrade et al. (2012). *Principles and Guidelines for Integrating Ecosystem-based Approaches to Adaptation in Project and Policy Design*.

¹⁴⁶ Boyland et al. (2022). *Principles for just and equitable nature-based solutions*.

¹⁴⁷ Secretariat of the Convention on Biological Diversity (2019). *Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information*.

Nature-based solutions for water security:

- *Handbook for the Implementation of Nature-based Solutions for Water Security: Guidelines for designing an implementation and financing arrangement*, 2021.¹⁴⁸

This publication is an output of the European Commission-funded NAIAD project. Its main aim is to provide guidance on the development of bankable nature-based solution projects that are attractive to both public and private investors.

3.4.3 As applied to nature-based solutions that focus on specific ecosystems

Urban:

- *An integrated process for planning, delivery, and stewardship of urban nature-based solutions: The Connecting Nature Framework*, 2023.¹⁴⁹

Co-authored with a multidisciplinary team, this paper presents a new framework for planning nature-based solutions that emerged during the Connecting Nature project. The Connecting Nature Framework is a 3-stage, iterative process that involves 7 key activity areas for mainstreaming nature-based solutions: technical solutions, governance, financing and business models, nature-based enterprises, co-production, reflexive monitoring, and impact assessment. The tested and applied framework is designed to address and overcome barriers to the implementation of nature-based solutions in cities *via* a co-created, iterative, and reflective approach. The planning process guided by the proposed framework has already yielded promising results with some European cities, though further usage and its adoption by other cities is needed to explore its potential in different contexts, especially in the Global South.

- *Connecting Nature Financing and Business Models Guidebook*, undated.¹⁵⁰

The Connecting Nature Guidebook on Financing and Business Models for NbS introduces the topic of financing and business models, identifies common challenges and enablers to financing, and presents a step-by-step guide to securing financing for nature-based solutions.

- *Impact Assessment Guidebook*, undated.¹⁵¹

This guidebook presents the Connecting Nature impact assessment framework, which aims at contributing to the development of a European standard for NbS monitoring and evaluation. The framework was co-produced by academic partners and representatives of three European cities and aims to support cities in developing and successfully implementing robust monitoring and evaluation plans for NbS interventions. The guidebook describes the five steps of the monitoring and evaluation process, which includes indicator selection and assessment. The monitoring process is intended for use throughout the implementation of NbS interventions to inform NbS adjustments based on the evaluation of impacts.

- *Impact evaluation framework to support planning and evaluation of nature-based solutions projects*, 2017.¹⁵²

¹⁴⁸ Altamirano et al. (2021). *Handbook for the Implementation of Nature-based Solutions for Water Security: guidelines for designing an implementation and financing arrangement*.

¹⁴⁹ Collier et al. (2023). *An integrated process for planning, delivery, and stewardship of urban nature-based solutions: the Connecting Nature Framework*.

¹⁵⁰ McQuaid & Fletcher (n.d.). *Financing and Business Models Guidebook*.

¹⁵¹ Dumitru, A., and Tomé Lourido, D (n.d.). *Impact Assessment Guidebook*.

¹⁵² Raymond et al. (2017). *An Impact Evaluation Framework to Support Planning and Evaluation of Nature-based Solutions Projects*.

This report is intended to be used as a reference document by members of European projects with an interest in urban nature-based solutions, and by practitioners seeking to compare the effectiveness of NbS design, implementation, and evaluation. The report presents an impact evaluation framework which provides examples of indicators and methods for assessing both the positive and negative impacts of NbS actions within and across 10 challenge areas in European cities.

- *Urban Nature Labs Replication Framework*, undated.¹⁵³
This Replication Framework aims to support cities in the implementation of nature-based solutions for climate and water resilience, based on the use of tailored IT-tools and the implementation of Urban Living Lab approaches. The framework follows an adaptive management cycle, supporting every step in the nature-based solution implementation process, and provides different entry points for different type of stakeholders, including citizens.
- *Urban Nature Navigator*, undated.¹⁵⁴
An online tool which can guide policymakers in identifying the nature-based solutions which best fit their needs. By using indicators that capture ecological, social and cultural benefits, the Urban Nature Navigator assesses the contributions that different NbS can make to meeting urban sustainability challenges.

Peatlands:

- *Global guidelines for peatland rewetting and restoration*, 2021.¹⁵⁵
Peatland restoration, and especially efforts to stop peatland degradation, can be treated as a nature-based solution due to the contribution of this action to climate mitigation. This Ramsar Technical Report provides comprehensive technical guidance and background information on peatland rewetting and restoration for regional planners, site managers and policy makers. The report is complemented by a Briefing Note,¹⁵⁶ which provides hands-on methodological guidance for restoring drained peatlands, and a Policy Brief,¹⁵⁷ which provides information and recommendations for policy makers.

3.4.4 As applied to specific NbS actions

Ecosystem Restoration:

While not all instances of ecosystem restoration will necessarily qualify as nature-based solutions, many of them will do so, especially where there is an explicit social, economic or environmental challenge that the restoration is designed to achieve.

- *Forest Landscape Restoration Principles*, 2023.¹⁵⁸
Eight guiding principles for forest landscape restoration, developed by the Global Restoration Initiative.

¹⁵³ [ERRIN \(2023\). URBAN NATURE LABS – the UNaLab project's replication framework.](#)

¹⁵⁴ [NATURVATION \(n.d.\). Urban Nature Navigator.](#)

¹⁵⁵ [Convention on Wetlands \(2021\). Global guidelines for peatland rewetting and restoration.](#)

¹⁵⁶ [Convention on Wetlands \(2021\). Briefing Note 11: Practical peatland restoration.](#)

¹⁵⁷ [Convention on Wetlands \(2021\). Ramsar Policy Brief 5: Restoring drained peatlands: A necessary step to achieve global climate goals.](#)

¹⁵⁸ [World Resources Institute \(2023\). Global Restoration Initiative: Forest Landscape Restoration Principles.](#)

- *Measuring Climate Change Mitigation Potential: Guidance on tools and methodologies to measure the climate change mitigation potential of ecosystem restoration projects*, 2022.¹⁵⁹

This document sets out the tools and methods that can be used to provide a greenhouse gas (GHG) balance estimate for ecosystem restoration projects, using landscape restoration projects funded by the Endangered Landscapes Programme (ELP) as ‘real-world’ examples. It assesses the suitability of two freely available tools for assessing the GHG balances of ecosystem restoration interventions, their strengths and limitations. The document also provides guidance on using these two GHG assessment tools, EX-ACT and the Carbon Benefits Project toolkit, to estimate the climate mitigation benefit of landscape-scale ecosystem restoration projects and the activities they include. It is intended to provide guidance to restoration practitioners, project managers, ecologists, and scientist to apply these approaches to their own projects.

- *Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits*, 2021.¹⁶⁰

This paper highlights the main environmental risks of large-scale tree planting and proposes 10 golden rules, based on ecological research, for implementing forest ecosystem restoration that maximizes the rates of both carbon sequestration and biodiversity recovery, whilst improving livelihoods.

3.4.5 As applied to specific national or regional contexts

- *Ecological restoration and management in boreal forests - best practices from Finland*, 2012.¹⁶¹

This guide provides an overview of the practical methods applied in the ecological management and restoration of forest habitats in Finland. The guide is based on a wealth of information and experiences that have accumulated over 20 years in Finland, relating to the restoration and management of forest habitats in protected areas.

- *Ecological restoration in drained peatlands - best practices from Finland*, 2014.¹⁶²

A comprehensive handbook for the restoration of drained peatlands, produced with the help of dozens of Finnish peatland experts. The publication compiles the knowhow accumulated from more than 25 years of peatland habitat restoration in Finland, together with useful background ecological information on peat and the hydrology of peatlands.

- *Ecosystem services and building with nature on our sandy coast*, 2021.¹⁶³

This Belgian report provides an evaluation framework, and a set of criteria and methodology, to assess the impacts of nature-based solutions on coast defence systems and their potential to realize additional benefits.

- *Guidebook for the Design and Implementation of Ecosystem-based Adaptation Measures in River Basins in Thailand*, 2022.¹⁶⁴

¹⁵⁹ UNEP (2022). *Measuring Climate Change Mitigation Potential: Guidance on tools and methodologies to measure the climate change mitigation potential of ecosystem restoration projects*.

¹⁶⁰ Di Sacco et al. (2021). *Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits*.

¹⁶¹ Maarit & Kaisa (2012). *Ecological restoration and management in boreal forests - best practices from Finland*.

¹⁶² Maarit et al. (2014). *Ecological restoration in drained peatlands - best practices from Finland*.

¹⁶³ Boerema, A., Pieterse, A., Van der Biest, K., Pandelaers, C., Roder, J., Verheyen, B., Bolle, A., (2021). *Ecosysteemdiensten en bouwen met de natuur aan onze zandige kust*.

¹⁶⁴ GIZ, ONWR, IUCN (2022). *Guidebook for the Design and Implementation of Ecosystem-based Adaptation Measures in River Basins in Thailand*.

This Guidebook aims to guide practitioners through the process of designing, implementing, monitoring, evaluating, and mainstreaming Ecosystem-based Adaptation interventions for river basin management in Thailand. The Guidebook is also directly supported by the EbA Code of Practice, developed by Thailand Environment Institute (TEI), which provides step-by-step details on the implementation of a range of EbA measures for water management.¹⁶⁵

- *Guidelines for Ecosystem-Based Adaptation (EbA) in South Africa*, 2018.¹⁶⁶
This guideline document sets out four cornerstones of EbA practice and defines a set of seven principles, with a subset of criteria, and 11 safeguards to support the design and implementation of EbA interventions in South Africa, with the aim of ensuring that these are consistent with international and national best practice. This document also presents a preliminary monitoring and evaluation framework for EbA interventions. Furthermore, the document highlights four prospective user groups namely, project and programme planners and implementers, policymakers, funders, and researchers. Guidance on key questions and steps for planning and implementing EbA are provided for each user group in the form of flowcharts which reference relevant sections of the guideline document.
- *Guidelines on the Implementation of Nature-based Solutions (NbS) to Combat the Negative Impact of Climate Change on Forestry – Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan and Uzbekistan*, 2023.¹⁶⁷
These Guidelines are intended to serve as a reference to provide information on forest cover and climate change trends in the sub-region, improve understanding of the NbS concept for forests, and facilitate NbS implementation to enhance climate change mitigation and adaptation. The practical part of these Guidelines are centered around six topics: (i) global frameworks promoting the implementation of NbS; (ii) global and regional initiatives, platforms, projects, and examples; (iii) current NbS implementation in the sub-region; (iv) suitable NbS approaches for sub-region forests under climate change; (v) applicability of NbS in the sub-region; and (vi) investments in NbS.
- *Investing In Nature: Financing Conservation and Nature-based Solutions – A Practical Guide for Europe*, undated.¹⁶⁸
A seven-step practical guide to financing conservation and nature-based solutions projects, developed by the European Investment Bank (EIB). Directed at a wide range of actors, the guide aims to help readers in identifying viable conservation and nature-based solutions, and to support them in finding the optimal financial structure to incorporate such solutions into their business operations.¹⁶⁹ The guide also includes information on how to access support from the EIB’s dedicated Natural Capital Financing Facility.
- *Nature-based Solutions Triple Win Toolkit*, 2021.¹⁷⁰
This Toolkit offers guidance to achieve, through Nature-based Solutions (NbS), a ‘triple win’ to enhance biodiversity, address climate change, and reduce poverty in the context of Official

¹⁶⁵ GIZ, ONWR, TEI (2022). Ecosystem-based Adaptation Code of Practice Compendium for the Thai Water Sector.

¹⁶⁶ The Department of Environmental Affairs (2018). Ecosystem-based Adaptation (EbA) in South Africa Guidelines.

¹⁶⁷ Başsüllü et al. (2023). Guidelines on the Implementation of Nature-based Solutions (NbS) to Combat the Negative Impact of Climate Change on Forestry – Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan and Uzbekistan.

¹⁶⁸ EIB (n.d.). Investing In Nature: Financing Conservation and Nature-based Solutions – A Practical Guide for Europe.

¹⁶⁹ Climate-ADAPT (2022). Investing in nature: Financing conservation and nature-based solutions.

¹⁷⁰ JNCC (2021). Nature-based Solutions Triple Win Toolkit – International Climate Finance Evidence Project.

Development Assistance (ODA) spend, especially for the UK’s International Climate Finance (ICF) programme. It includes a summary of the current state of knowledge, as well as nine core principles for effective and efficient delivery of NbS. These principles are the product of a review and synthesis of core principles from the many interventions that qualify as NbS, other meta-analyses, and lessons learned from case studies. Implementation Guidance builds on these principles to present key considerations and possible tools to achieve the triple win. Furthermore, a review of Biodiversity Indicators provides recommendations to measure the impact of NbS interventions on biodiversity from the project to portfolio scale.

- *Urban Greening Plan Guidance*, 2021 (draft).¹⁷¹
This guidance, developed by the EU with Eurocities and ICLEI, aims to support local authorities in Europe to develop ambitious urban greening plans.

In addition to the criteria, standards and guidelines that have been developed for nature-based solutions in general, or specific types and aspects of nature-based solutions, it should also be noted that there are other criteria, standards and guidelines which do not have a focus on nature-based solutions, but which are or may be relevant to the implementation of nature-based solutions. Examples include:

- The principle of free, prior and informed consent (FPIC) is designed to protect the rights and interests of Indigenous Peoples.¹⁷² The principle is incorporated into many UN conventions, treaties and other instruments, including the United Nations Declaration on the Rights of Indigenous People. FPIC is applicable to many actions and measures that affect Indigenous Peoples. This includes nature-based solutions, but also many other actions and measures.
- The principle of Common but Differentiated Responsibility (CBDR) is established to require all countries to take the common responsibility to protect the environment with due regard to different circumstances regarding each country's contribution to global environmental degradation.^{173,174} The principle of CBDR and “Respective Capabilities” (CBDR-RC) is conceptualized based on international negotiations under the UNFCCC.¹⁷⁵ Under the convention, the CBDR principle recognizes that each country should take responsibility for climate mitigation but developed countries should bear primary responsibilities as they have contributed to the largest proportion of historical and current Greenhouse gas (GHG) emissions.¹⁷⁶
- UNCTAD’s BioTrade Principles and Criteria,¹⁷⁷ which are set of guidelines for governments, businesses and civil society that have been implemented in almost 100 countries since 2007. These guidelines foster the sustainable production and trade of biodiversity-based products and are implemented considering the following four approaches: the value chain approach, the adaptive management approach, the ecosystem approach, and the sustainable livelihoods approach.

3.5 Examples of social and environmental safeguards

In addition to criteria, standards and guidelines, robust safeguards and safeguarding systems must also be put in place to guide the design and implementation of nature-based solutions. In the context of NbS, safeguards

¹⁷¹ European Commission (2023). *Urban Greening Platform*.

¹⁷² See, for example, FAO (2023). *Indigenous Peoples: Free, Prior, and Informed Consent (FPIC)*.

¹⁷³ Yan (2023). *Application of the principle of common but differentiated responsibility and respective capabilities to the passive mitigation and active removal of space debris*.

¹⁷⁴ Tomoi et al. (2022). *Is “Common But Differentiated Responsibilities” principle applicable in biodiversity? – Towards approaches for shared responsibilities based on updated capabilities and data*.

¹⁷⁵ Tomoi et al. (2022). *Is “Common But Differentiated Responsibilities” principle applicable in biodiversity? – Towards approaches for shared responsibilities based on updated capabilities and data*.

¹⁷⁶ Chen (2021). *Reconciling common but differentiated responsibilities principle and no more favourable treatment principle in regulating greenhouse gas emissions from international shipping*.

¹⁷⁷ UNCTAD (2020). *UNCTAD BioTrade Initiative: BioTrade Principles and Criteria for terrestrial, marine and other aquatic biodiversity-based products and services*.

aim to prevent negative impacts and promote positive impacts.¹⁷⁸ The UNEA Resolution states that nature-based solutions must “Respect social and environmental safeguards, in line with the three “Rio conventions” (the Convention on Biological Diversity, the United Nations Convention to Combat Desertification and the United Nations Framework Convention on Climate Change), including such safeguards for local communities and indigenous peoples”.

Safeguards that are currently applied or may be applied to nature-based solutions include the Cancun safeguards for REDD+ (Reducing Emissions from Deforestation and Forest Degradation, plus the sustainable management of forests, and the conservation and enhancement of forest carbon stocks),¹⁷⁹ agreed under the UNFCCC; and the safeguards detailed in the voluntary guidelines for the design and effective implementation of ecosystem-based approaches for climate change adaptation and disaster risk reduction,¹⁸⁰ adopted under the CBD.¹⁸¹ The latter are as follows:

- Applying environmental impact assessments and robust monitoring and evaluation,
- Prevention of transfer of risks and impacts,
- Prevention of harm to biodiversity, ecosystems and ecosystem services,
- Sustainable resource use,
- Promotion of full, effective and inclusive participation,
- Fair and equitable access to benefits,
- Transparent governance and access to information,
- Respecting rights of women and men from indigenous peoples and local communities.

3.6 Analysis of proposals, criteria, standards and guidelines for the implementation of nature-based solutions

- Nature-based solutions are increasingly gaining recognition in global, regional, and national policy agendas.
- Several standards and criteria already exist that are dedicated or applicable to nature-based solutions. Before initiating a new multilateral process to develop a new set of standards and criteria, a more comprehensive review of what already exists might be helpful.
- There is a wealth of guidance that has been developed on nature-based solutions, of various sorts. An evaluation of the quality and usefulness of this guidance would be helpful.
- A further review and assessment on the completeness and applicability of existing safeguards for nature-based solutions would also likely be useful.¹⁸²

4. Financing for nature-based solutions

The third specific task that the UNEA resolution set for the intergovernmental consultations was to “identify options for supporting sustainable investment in nature-based solutions and share information on the bilateral and multilateral sources of finance to enable developing countries to develop and deploy nature-based solutions”. The phrase “options for sustainable investment in nature-based solutions” is understood here to cover a range of different dimensions, such as the different sources of finance, the types of interventions funded, how to access the finance, and which entities can access it. The phrase “bilateral and multilateral

¹⁷⁸ UNEP (2022). *Nature-based Solutions: Opportunities and Challenges for Scaling Up*.

¹⁷⁹ UNFCCC (2023). *REDD+ Web Platform: Safeguards*.

¹⁸⁰ Secretariat of the Convention on Biological Diversity (2019). *Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information*.

¹⁸¹ UNEP and IUCN (2021). *Nature-based solutions for climate change mitigation*.

¹⁸² UNEP (2022). *Nature-based Solutions: Opportunities and Challenges for Scaling Up*.

sources of finance” puts a specific focus on public sources of international finance that are accessible by developing countries. This section presents an overview of the wide range of funding sources available.

4.1 Current Status

Financial flows to nature-based solutions currently amount to an estimated USD 154 billion per year,¹⁸³ most of which (83%) comes from public funding sources, with the private sector contributing only 17%.¹⁸⁴ However, opportunities to increase financing from the private sector exist, as shown in the Guiding Principles for Corporate Climate Leadership on the role of Nature-based Solutions.¹⁸⁵ The G20 countries together invest USD 120 billion each year in nature-based solutions and related assets and activities. This accounts for 92% of global investments in nature-based solutions,¹⁸⁶ but this is mostly spent on domestic initiatives. There is a large gap in funding for nature-based solutions in developing countries.¹⁸⁷ Only USD 2 billion of the USD 154 billion annual finance to nature-based solutions is via official development assistance (ODA). Yet, developing countries rely heavily on international development finance, and such external assistance is likely to remain critical for implementing nature-based solutions in developing countries, especially LDCs and SIDS.¹⁸⁸

4.2 Types and sources of financing available

It is important to recognise that there is no single type of funding or funding mechanism for the implementation of all nature-based solutions interventions, and a diversity of sources and mechanisms should be sought to match the context, scale, and timescale of nature-based solutions interventions. Additional funding is needed from existing sources as well as new funding sources, especially the private sector, where great opportunities for increasing funding exist.¹⁸⁹ However, the private sector is likely to only invest in nature-based solutions if they are to receive an attractive return on their investment over a reasonable period. While this financial return cannot be provided, private investment is not expected to significantly increase under the same market conditions.¹⁹⁰ It is therefore, very likely that, at least in the short term, public finance will remain the main source of finance for nature-based solutions.¹⁹¹

The primary types of finance are as follows:^{192, 193, 194, 195}

- Domestic public finance
- International public finance
- Private finance
- Innovative sources of finance and financial instruments, such as blended finance

¹⁸³ However, this figure, from the State of Finance for Nature Report 2022, covers only certain types of nature-based solutions. For public financial flows it covers only those types of NbS that fall under: protection of biodiversity and landscape; sustainable agriculture, forestry & fishing; wastewater management; pollution abatement; and environmental policy. It is unlikely that NbS in urban systems, or NbS for coastal protection are fully included. Thus, the estimate of current financial flows to NbS may be an underestimate.

¹⁸⁴ UNEP (2022). *State of Finance for Nature. Time to act: Doubling investment by 2025 and eliminating nature-negative finance flows.*

¹⁸⁵ WE MEAN BUSINESS COALITION (2022). *Guiding Principles For Corporate Climate Leadership On The Role Of Nature-Based Solutions.*

¹⁸⁶ World Economic Forum (2022). *G20 Countries Can Help Close Climate Finance Gap by Investing in Nature-based Solutions.*

¹⁸⁷ UNEP (2022). *State of Finance for Nature in the G20.*

¹⁸⁸ Atteridge et al. (2022). *Assessing Finance for Nature-based Solutions to Climate Change.*

¹⁸⁹ Brears (2022). *Financing Nature-Based Solutions.*

¹⁹⁰ EIB (2023). *Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe.*

¹⁹¹ Brears (2022). *Financing Nature-Based Solutions.*

¹⁹² Atteridge et al. (2022). *Assessing Finance for Nature-based Solutions to Climate Change.*

¹⁹³ Brears (2022). *Financing Nature-Based Solutions.*

¹⁹⁴ Ludwig (2021). *Financing NbS: Overview of relevant finance options.*

¹⁹⁵ Standing Committee on Finance (2021). *Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.*

4.2.1 Sources of domestic public finance^{196, 197, 198, 199}

Domestic public finance refers to finance provided within a country by national and subnational governments, public agencies, and public financial institutions.²⁰⁰

- Domestic budgets. Domestic investments in nature take various forms and use different financial instruments. Direct assistance can be in the form of grants (commonly provided by governments) or other financial outlays.²⁰¹
- National development banks.
- National Funds, including those addressing thematic areas such as climate change and conservation.²⁰² Examples include the Bangladesh Climate Change Resilience Fund, the Benin National Fund for Environment and Climate, the Mali Climate Fund, the Rwanda Green Fund, the Guatemala National Conservation Fund,²⁰³ and the Indonesia Environment Fund. The Government of Canada has also established a dedicated Nature Smart Climate Solutions Fund²⁰⁴ and a Natural Infrastructure Fund.²⁰⁵ Through the Nature Smart Climate Solutions Fund, the Government of Canada has invested CAD 4.7 billion towards nature-based solutions over the next ten years.
- Beyond mobilizing new and additional domestic finance for nature-based solutions, governments can also repurpose subsidies that harm nature.²⁰⁶ The OECD estimates that governments spend approximately USD 500 billion per year in support that is potentially harmful to biodiversity.²⁰⁷ This is three times the amount of financing that is currently flowing towards nature-based solutions.

4.2.2. Sources of international public finance

International public finance refers to financial transfers from government, public agencies, or public financial institutions in one country to support the pursuit of objectives in another country.²⁰⁸

- Multilateral donors include²⁰⁹ – inter alia – the European Union, the Climate Investment Funds “Nature, People and Climate Investment Program”,²¹⁰ the Green Climate Fund,²¹¹ the Global

¹⁹⁶ Ludwig (2021). [Financing NbS: Overview of relevant finance options.](#)

¹⁹⁷ Brears (2022). [Financing Nature-Based Solutions.](#)

¹⁹⁸ Standing Committee on Finance (2021). [Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

¹⁹⁹ UNCCD (2023). [Preliminary analysis – strategic objective 5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level.](#)

²⁰⁰ OECD (2020). [A Comprehensive Overview of Global Biodiversity Finance.](#)

²⁰¹ Standing Committee on Finance (2021). [Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

²⁰² UNCCD (2023). [Preliminary analysis – strategic objective 5: To mobilize substantial and additional financial and non-financial resources to support the implementation of the Convention by building effective partnerships at global and national level.](#)

²⁰³ Standing Committee on Finance (2021). [Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

²⁰⁴ Government of Canada (2023). [Nature Smart Climate Solutions Fund.](#)

²⁰⁵ Government of Canada (2023). [Natural Infrastructure Fund.](#)

²⁰⁶ Standing Committee on Finance (2021). [Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

²⁰⁷ OECD (2020). [A Comprehensive Overview of Global Biodiversity Finance.](#)

²⁰⁸ OECD (2020). [A Comprehensive Overview of Global Biodiversity Finance.](#)

²⁰⁹ Swann et al. (2021). [Public International Funding of Nature-based Solutions for Adaptation: A Landscape Assessment.](#)

²¹⁰ Climate Investment Funds (2023). [Nature People & Climate Program.](#)

²¹¹ Green Climate Fund (2023).

Environmental Facility,²¹² the Adaptation Fund,²¹³ the International Fund for Agricultural Development,²¹⁴ and the new Global Biodiversity Framework Fund (GBFF).^{215, 216}

- Multilateral Development Banks (MDBs), such as the World Bank, Asian Development Bank, African Development Bank, European Investment Bank, Islamic Development Bank, Development Bank of Latin America, and the Inter-American Development Bank, provide funding in the form of grants or loans.^{217, 218} MDBs provide project funding, in the form of short or long term loans, or at times grants, to developing countries for investments in nature-based solutions.^{219, 220} In their ‘joint nature statement at COP26’,²²¹ MDBs committed to ‘look[ing] for opportunities to step up nature financing and efforts to mobilise or leverage private finance for investments in nature, including nature-based solutions for climate change mitigation and adaptation with co-benefits for nature and people’.²²²
- Bilateral technical and financial cooperation, including government-to-government support, Official Development Assistance (ODA), and other official flows (OOF).²²³ ODA – “government aid that promotes and specifically targets the economic development and welfare of developing countries” – totalled USD 185.9 billion in 2021 and USD 204 billion in 2022.²²⁴ This is in the form of bilateral aid between developed countries and developing countries, e.g., through DEFRA, USAID, Norad, CIDA, SIDA, etc. ODA primarily takes the form of grants and is provided in direct government-to-government support, or via civil society organisations. Bilateral cooperation also includes specialised development banks or subsidiaries that can finance nature-based solution investments and leverage funding from the private sector for nature-based solutions. Examples of such specialised banks include the German KfW and the French AFD. They also often provide technical assistance to accompany their finance.²²⁵
- International partnerships and networks, such as the IUCN, also play an important role in facilitating financial and technical support for the implementation of nature-based solutions in developing countries.²²⁶

Examples of sources of international public finance are included in the ‘Joint donor statement on international finance for biodiversity and nature’.²²⁷ In this statement, 13 countries and the European Union committed to collectively increase the amount international public finance for biodiversity, including by “dedicate[ing] a meaningful amount of climate finance to biodiversity and nature, recognising that nature-based solutions can

²¹² [Global Environment Facility \(2023\)](#).

²¹³ [Adaptation Fund \(2023\)](#).

²¹⁴ [IFAD \(2023\)](#).

²¹⁵ [Convention on Biological Diversity \(2023\)](#). [Launch of the Global Biodiversity Framework Fund](#).

²¹⁶ Some multilateral funds can also receive financing from private and philanthropic sources, such as the GBFF.

²¹⁷ [Swann et al. \(2021\)](#). [Public International Funding of Nature-based Solutions for Adaptation: A Landscape Assessment](#).

²¹⁸ [Brears \(2022\)](#). [Financing Nature-Based Solutions](#).

²¹⁹ [Swann et al. \(2021\)](#). [Public International Funding of Nature-based Solutions for Adaptation: A Landscape Assessment](#).

²²⁰ [Brears \(2022\)](#). [Financing Nature-Based Solutions](#).

²²¹ [UKCOP26.ORG \(2021\)](#). [MDB Joint Nature Statement](#).

²²² [UKCOP26.ORG \(2021\)](#). [MDB Joint Nature Statement \(Paragraph 1.18\)](#).

²²³ [Organisation for Economic Cooperation and Development \(OECD\) \(2020\)](#). [A Comprehensive Overview of Global Biodiversity Finance](#).

²²⁴ [OECD \(2023\)](#). [Official development assistance \(ODA\)](#).

²²⁵ [Brears \(2022\)](#). [Financing Nature-Based Solutions](#).

²²⁶ [Standing Committee on Finance \(2021\)](#). [Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat](#).

²²⁷ [Joint Donor Statement on International Finance for Biodiversity and Nature \(2022\)](#).

deliver up to one third of the mitigation potential needed to keep the 1.5C temperature limit within reach, while offering significant benefits for adaptation”. Commitments made by countries include:²²⁸

- Australia plans to increase its international public finance for nature through to 2030 to support developing countries implement an ambitious Global Biodiversity Framework. This builds on Australia’s existing commitment to provide AUD\$2 billion in climate finance over 2020-2025 period, including for environment and biodiversity projects.
- Canada commits to doubling its international climate finance to CAD 5.3 billion over 2021-26, including a commitment to dedicate 20% of this funding to projects that leverage nature-based climate solutions and projects with biodiversity co-benefits.
- Germany will increase its international biodiversity funding to EUR 1.5 billion by 2025, as part of the increase of its international climate budget to 6 billion euro annually by 2025 at the latest.
- The United Kingdom intends to meet its commitment of doubling International Climate Finance to GBP 11.6 billion by 2025/26, including at least GBP 3 billion on climate solutions that protect, restore and sustainably manage nature by 2025/26.²²⁹

4.2.3 Sources of private finance

- Domestic and international private sources.
- Corporate Social Responsibility (CSR), which is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders.²³⁰ One way in which companies fulfil their CSR mandates is by participating in tree planting activities.
- Philanthropic sources, such as the Bezos Earth Fund, Bloomberg Philanthropies and the Gordon and Betty Moore Foundation, which have all pledged to support global biodiversity targets.²³¹
- Investors seeking investment opportunities arising from the conservation, restoration and sustainable use of nature. Many NGOs have created their own impact investment specialist groups to encourage investments by private sector groups. See for example, WWF Impact,²³² TNC NatureVest,²³³ and the Landscape Finance Lab.²³⁴
- Investors who provide green bonds, loans or impact investment²³⁵ opportunities. Private finance includes commercial banks, investors, private equity companies which are looking for investment opportunities. An example of innovative funding is the Nature+ Accelerator Fund (Nature+), a private sector-focused nature conservation fund providing measurable conservation and social benefits while delivering financial returns for investors. It is a collaboration between public and private institutions and platforms aimed at attracting private finance to conservation including nature-based solutions.²³⁶
- Private sector businesses which wish to offset their negative impacts by providing funds for projects that conserve nature and address climate change and other societal challenges.²³⁷
- Institutional investors, such as pension funds and sovereign wealth funds, are also looking for ways in which to maximize their investments, but often these have lower appetite for risk than commercial

²²⁸ [Joint Donor Statement on International Finance for Biodiversity and Nature \(2022\)](#).

²²⁹ [HM Government \(2023\). Together for People and Planet: UK International Climate Finance Strategy](#).

²³⁰ [UNIDO \(2023\). Corporate Social Responsibility](#).

²³¹ [UNEP \(2022\). State of Finance for Nature. Time to act: Doubling investment by 2025 and eliminating nature-negative finance flows](#).

²³² [WWF \(2023\). WWF Impact](#).

²³³ [The Nature Conservancy \(2023\). NatureVest](#).

²³⁴ [Landscape Finance Lab \(2023\)](#).

²³⁵ Impact investing is an investment strategy aimed at generating positive social or environmental results in addition to financial gains.

²³⁶ [UN DESA \(2022\). Nature+ Accelerator Fund](#).

²³⁷ [Brears \(2022\). Financing Nature-Based Solutions](#).

investors. While having a lower risk appetite, sovereign wealth funds have a long-term and large-scale horizon so could be good investors for nature-based solutions.²³⁸ See for example the Norwegian Sovereign Wealth Fund,²³⁹ which invests in more than 9,000 companies in over 70 countries and has principles of sustainable and ethical investment.²⁴⁰

- Reinsurance companies are increasingly investing in nature-based solutions, considering that healthy ecosystems increase resilience and contribute to disaster risk reduction.²⁴¹ For example, insurance company Swiss Re and TNC have devised insurance for coral protection, guaranteeing a rapid disbursement of funds for trained members from local communities to address reef damage following tropical storms. The government of Quintana Roo in Mexico acquired this insurance, which protects 160 km of beaches.²⁴²

4.2.4 Innovative sources of finance and financial instruments for nature-based solutions

Examples of innovative sources of finance and financial instruments for nature-based solutions include:

- Blended finance, which refers to the use of development finance (public or philanthropic) to mobilise additional private finance toward investments in sustainable development, such as in NbS.^{243, 244} For example, the Global Fund for Coral Reefs (GFCR) is a blended finance instrument to mobilise action and resources to protect and restore coral reef ecosystems.²⁴⁵ Blended finance crowds in private capital by mitigating investment risks, for example through credit guarantees, risk insurance, first loss and subordinate debt arrangements, and technical assistance.²⁴⁶
- Green bonds, which are debt instruments that are used to generate capital. They are among the most visible green financial products and are emerging as an innovative financial instrument for NbS. However, a key issue in applying green bonds is determining if a bond is truly ‘green’ or not; this is particularly relevant for NbS approaches, where there is a risk of greenwashing. To combat the risk of greenwashing, there exist some international metrics and standards proposed by different organisations. The Climate Bonds Initiative, for example, has developed sector-specific criteria and guidance to support issuers and investors.²⁴⁷
- Market-based mechanisms such as payment for ecosystem services (water provision, carbon markets, offsetting of development impacts),²⁴⁸ where governments or other groups pay for an ecosystem service provided and local communities receive funds to maintain the ecosystem and its provision of that service. For example, water funds mobilize private and public sector funds (downstream users) to invest in upstream habitat conservation, protecting water at its source.^{249, 250}
- Debt-for-nature swaps, whereby a donor pays off a component of a country’s debt, and with the savings made in reduced debt repayments, the country invests in conservation interventions. More

²³⁸ Brears (2022). Financing Nature-Based Solutions.

²³⁹ Norges Bank Investment Management (2023).

²⁴⁰ Norges Bank Investment Management (2023). About the fund.

²⁴¹ Swiss Re (2023). Nature based solutions.

²⁴² World Resources Institute (2023). Pathways to Unblocking Private Financing for Nature-based Solutions.

²⁴³ Standing Committee on Finance (2021). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.

²⁴⁴ Smith et al. (2022). Getting Blended Finance to Where It’s Needed: The Case of CBNRM Enterprises in Southern Africa.

²⁴⁵ United Nations Multi-Partner Trust Fund Office (2023). Global Fund for Coral Reefs.

²⁴⁶ Standing Committee on Finance (2021). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.

²⁴⁷ Commonwealth Secretariat (2021). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.

²⁴⁸ Fripp, E. (2014). Payments for Ecosystem Services (PES): A practical guide to assessing the feasibility of PES projects.

²⁴⁹ Standing Committee on Finance (2021). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.

²⁵⁰ Deutz et al. (2020). Financing Nature: Closing the global biodiversity financing gap.

than 30 countries have participated in debt-for-nature swaps since the first one in 1987, generating around \$1.2 billion for conservation which may include nature-based solution initiatives.²⁵¹

- Ecological fiscal transfers (EFT) transfer public revenue between governments within a country based on ecological indicators,²⁵² for example, protected areas or watershed management areas.²⁵³ According to Busch et al. (2021), EFT have grown rapidly from US\$0.35 billion per year in 2007 to US\$23 billion per year in 2020.²⁵⁴ EFT can mobilise funding for NbS by compensating governments for the cost of conserving ecosystems, and in turn some of the conservation actions, such as protected areas, can also generate revenues. The distinguishing feature of EFT compared to other complementary mechanisms, such as Reducing Emissions from Deforestation and Forest Degradation (REDD+) and payments for ecosystem services, is that funds are transferred within a country to and between local governments.²⁵⁵
- The role of biodiversity credits in closing the nature finance gap is being explored. The recently launched UK-French Global Biodiversity Credits Roadmap sets out a plan for scaling up global efforts to support companies buying credits that contribute to the recovery of nature in a credible way. A UK-French initiated Advisory Panel was also launched, which will harness and bring together collective thinking on biodiversity credits from all around the world.²⁵⁶
- Business improvement districts (BID),²⁵⁷ also known as city improvement districts, can be an interesting option to finance large urban parks in touristic or business areas.²⁵⁸ Across a specific neighbourhood, landowners, businesses and other stakeholders enter an agreement with local government to contribute an additional levy to finance improvements in a specific area. Once established, BIDs are free to constitute their own management body, make spending decisions, and seek additional income through various instruments.²⁵⁹ For example, the Bryant Park Corporation was established in the 1980s in New York, United States, by prominent businesses to turn a lost urban amenity in their neighbourhood into the renowned Bryant Park.²⁶⁰

4.3. Opportunities for NbS financing

- Insurance companies are in a unique position to tackle long-term physical risks through risk-hedging programmes based on nature.²⁶¹ In recognising the benefits of NbS for disaster risk reduction, insurance companies have already started exploring innovative insurance solutions. These initiatives have taken the form of smaller-scale pilots to establish feasibility and more work is necessary to establish scale-up potential and feasibility across different geographies.²⁶²
- The joint report ‘Decent Jobs in Nature-based Solutions’ by ILO, UNEP and the IUCN demonstrates the job and business potential which can be achieved through investment in nature-based solutions,

²⁵¹ King (2021). Conservation Finance Options to Support African Post-2020 Biodiversity Priorities.

²⁵² Busch et al. (2021). A global review of ecological fiscal transfers.

²⁵³ Commonwealth Secretariat (2021). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.

²⁵⁴ Busch et al. (2021). A global review of ecological fiscal transfers.

²⁵⁵ Commonwealth Secretariat (2021). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.

²⁵⁶ GOV.UK (2023). UK – France Global Roadmap launched to mobilise global nature finance.

²⁵⁷ University of Antwerp (2021). INNOFINS Implementation of innovative finance for nature-based solutions in Flemish cities.

²⁵⁸ UNEP (2021). Smart, Sustainable and Resilient cities: the Power of Nature-based Solutions. Annex II: Financing Nature-Based Solutions For Smart, Sustainable And Resilient Cities.

²⁵⁹ Baroni et al. (2019). Grow Green: Approaches to financing nature-based solutions in cities.

²⁶⁰ UNEP (2021). Smart, Sustainable and Resilient cities: the Power of Nature-based Solutions. Annex II: Financing Nature-Based Solutions For Smart, Sustainable And Resilient Cities.

²⁶¹ European Investment Bank (2023). Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe.

²⁶² WWF, IFRC (2022). Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change And Weather-Related Disasters.

as their implementation requires many people and different skills. Bearing this in mind, investment in nature-based solutions should not be considered a cost, but rather be seen as an investment in people and livelihoods.²⁶³

- The report ‘How Can Investment in Nature Close the Infrastructure Gap?’ by the NBI Global Resource Centre estimated how much nature-based infrastructure (NBI) can save costs and create value relative to traditional grey infrastructure. The report found that if we met our global infrastructure needs but swapped just over 11% of this with NBI—rather than traditional or “grey” infrastructure—we would save USD 248 billion each year, out of the USD 4.29 trillion needed annually. These savings could relieve some of the strains placed on public budgets.²⁶⁴
- As highlighted by the EIB report ‘Investing in nature-based solutions’, under the right conditions, public utilities (especially water utilities) and corporations would be well positioned to allocate capital to nature-based solutions. In most cases, their incentives align, as they have long investment timeframes in their core business and significant amounts of capital to deploy. Direct land ownership or significant influence over land in many cases would enable them to directly operate in the target areas. Importantly, the adoption of nature-based solutions can be justified through alignment with their long-term strategic considerations, for instance resilient supply chains reliant on natural systems or a social license to operate, and their capacity to leverage customers’ ability and willingness to pay either on a regulatory or voluntary basis.²⁶⁵

4.4. Analysis on financing for nature-based solutions

- There are a wide range of funding sources available for financing nature-based solutions. The development of a comprehensive guide to financing nature-based solutions would be useful, particularly one that explores all sources, the types of interventions funded, how to access the finance, and which entities can access it.
- Financing for nature-based solutions is needed from a diversity of sources: public and private, national and international, as well innovative sources and financial mechanisms.
- More information is needed on how much public funding is negatively impacting nature, and this should be compared with current financial flows towards nature-based solutions.
- Countries are increasingly dedicating a share of their international climate finance towards nature. It might be useful to analyse how much of this is new and additional finance for nature-based solutions and how much is being re-directed from existing government budgets.
- Private financing for nature-based solutions needs to increase – but the private sector will need to receive an attractive return on their investment.
- Opportunities for NbS financing exist. This information should be communicated widely.

²⁶³ ILO, UNEP and IUCN (2022). *Decent Work in Nature-based Solutions 2022*.

²⁶⁴ IISD (2021). *How Can Investment in Nature Close the Infrastructure Gap?*

²⁶⁵ EIB (2023). *Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe*.

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