

## APPENDIX 2: Resource Guide for Nature-based Solutions

An output from the Intergovernmental Consultations on Nature-based Solutions

1. Introduction
2. Compilations of examples of nature-based solutions
  1. Proposals, criteria, standards and guidelines for the implementation of nature-based solutions
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### 1. 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.<sup>1</sup>

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

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

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 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,<sup>2</sup> 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.

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.<sup>3</sup>  
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.<sup>4</sup>  
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

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

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

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

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.<sup>5</sup>  
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.<sup>6</sup>  
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.<sup>7</sup>  
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.<sup>8</sup>  
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.<sup>9</sup>  
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.

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

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

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

<sup>8</sup> [NetworkNature \(2023\). Network Nature: Case studies.](#)

<sup>9</sup> [NetworkNature \(2023\). Database of EU research and innovation projects on nature-based solutions.](#)

- Oppla Case Study Finder, 2023.<sup>10</sup>  
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.<sup>11</sup>  
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.<sup>12</sup>  
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.<sup>13</sup>  
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.<sup>14</sup>  
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.
- Towards Nature-based Solutions at scale: 10 case studies from China.<sup>15</sup>  
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

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<sup>10</sup> [Oppla \(2023\). Oppla: Case studies.](#)

<sup>11</sup> [PANORAMA \(2023\). PANORAMA – Solutions for a Healthy Planet.](#)

<sup>12</sup> [Pérez-Cirera et al. \(2021\). Powering Nature: Creating the Conditions to Enable Nature-based Solutions.](#)

<sup>13</sup> [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.](#)

<sup>14</sup> [The ASEAN Secretariat \(2023\). Study on Nature-based Solutions \(NbS\) in ASEAN.](#)

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

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.<sup>16</sup>  
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.<sup>17</sup>  
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.<sup>18</sup>  
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.<sup>19</sup>  
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.

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

<sup>17</sup> WWF (n.d.). [WWF Nature-based Solutions Database Map.](#)

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

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

- Wetland and Peatland restoration: Notable examples, 2021.<sup>20, 21, 22</sup>  
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.<sup>23</sup>  
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.<sup>24</sup>  
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.<sup>25</sup>  
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.

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

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

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

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

<sup>24</sup> [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

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



- The EU – Brazil Sector Dialogue on nature-based solutions: Contribution to a Brazilian roadmap on nature-based solutions for resilient cities, 2019.<sup>26</sup>  
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.
- Green-blue networks in Flanders: Learning from practice, 2019.<sup>27</sup>  
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.<sup>28</sup>  
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.<sup>29</sup>  
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.

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<sup>26</sup> [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.](#)

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

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

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

- Planning and delivering Nature-based Solutions in Mediterranean cities: First assessment of the IUCN NbS Global Standard in Mediterranean urban areas, 2021.<sup>30</sup>

This report presents 18 projects in Mediterranean cities that were assessed against the IUCN Global Standard on NbS.<sup>31</sup> 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.<sup>32</sup>

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 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.<sup>33</sup>

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.<sup>34</sup>

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.<sup>35</sup>

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

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

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

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

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

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

<sup>35</sup> [Physi Solutions \(2023\). Urban Nature Atlas.](#)

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.**<sup>36</sup>  
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.**<sup>37</sup>  
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 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).<sup>38</sup> 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.**<sup>39</sup>  
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

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

<sup>37</sup> [URBiNAT \(2023\). NBS Catalogue.](#)

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

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

in an equitable way” – thereby helping to achieve the three objectives of the CBD.<sup>40, 41</sup> The Ecosystem Approach considers biodiversity conservation and human well-being to be dependent on functioning and resilient natural ecosystems.<sup>42</sup> Therefore, the Ecosystem Approach can be considered as a nature-based solution that addresses biodiversity loss,<sup>43</sup> 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.<sup>44</sup>  
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.<sup>45</sup>  
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.
- Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries, 2021.<sup>46</sup>  
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

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<sup>40</sup> [CBD \(2010\). Ecosystem Approach: Description.](#)

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

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

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

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

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

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

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.<sup>47</sup>  
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.<sup>48</sup>  
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.<sup>49</sup>  
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.<sup>50</sup>  
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.

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<sup>47</sup> [UNFCCC \(n.d.\). ADAPTATION KNOWLEDGE PORTAL.](#)

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

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

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

- Nature-based Solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction, 2021.<sup>51</sup>  
Selects 97 examples from across Europe. The examples highlight lessons learned and consider the transferability of results.
- The NbS Evidence Platform, 2023.<sup>52</sup>  
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.<sup>53</sup>  
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.<sup>54</sup>  
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.<sup>55</sup>  
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).

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

<sup>52</sup> [Nature-based Solutions Evidence Tool \(2023\). The NbS Evidence Platform.](#)

<sup>53</sup> [Kapos et al. \(2019\). The Role of the Natural Environment in Adaptation, Background Paper for the Global Commission on Adaptation.](#)

<sup>54</sup> [UNFCCC \(2021\). Scoping paper on knowledge gaps in integrating forest and grassland biodiversity and ecosystems into adaptation strategies.](#)

<sup>55</sup> [CRCWSC and ICEM \(2022\). Valuing the benefits of nature-based solutions for integrated urban flood management in the Greater Mekong Region: Synthesis Report.](#)

- Where people and their land are safer: A Compendium of Good Practices in Disaster Risk Reduction, 2017.<sup>56</sup>  
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.<sup>57</sup>  
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.
- Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change and Weather-Related Disasters, 2022.<sup>58</sup>  
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.<sup>59</sup>  
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.<sup>60</sup>  
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.<sup>61</sup>  
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

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<sup>56</sup> [Harari et al. \(2017\). Where people and their land are safer: A Compendium of Good Practices in Disaster Risk Reduction.](#)

<sup>57</sup> [United Nations Office for Disaster Risk Reduction \(2021\). Words into Action: Nature-based Solutions for Disaster Risk Reduction.](#)

<sup>58</sup> [WWF, IFRC \(2022\). Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change And Weather-Related Disasters.](#)

<sup>59</sup> [UNEP \(2022\). CTCN Knowledge Brief. Nature-based Solutions to Emerging Water Management Challenges in the Asia-Pacific Region.](#)

<sup>60</sup> [NWRM \(2015\). Natural Water Retention Measures.](#)

<sup>61</sup> [Global Water Partnership \(2023\). IWRM Action Hub: Case studies.](#)

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.<sup>62</sup>  
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.<sup>63</sup>  
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.<sup>64</sup>  
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 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.<sup>65</sup>  
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.

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<sup>62</sup> [Sonneveld et al. \(2018\). Nature-Based Solutions for agricultural water management and food security.](#)

<sup>63</sup> [Cooper, R. \(2020\). Nature-based solutions for water security.](#)

<sup>64</sup> [WWAP \(United Nations World Water Assessment Programme\)/UN-Water \(2018\). The United Nations World Water Development Report 2018: Nature-Based Solutions for Water.](#)

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



- Hand in hand with nature – Nature-based Solutions for transformative agriculture, 2021.<sup>66</sup>  
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.<sup>67</sup>  
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.<sup>68</sup>  
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.<sup>69</sup>  
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.
- NBI Global Resource Centre Database, 2023.<sup>70</sup>  
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

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

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

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

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

<sup>70</sup> [IISD and UNIDO \(2023\). NBI Global Resource Centre Database.](#)

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.<sup>71</sup>  
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.<sup>72</sup>  
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.<sup>73</sup>  
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.<sup>74</sup>  
This report includes a 'policy database' of relevant national policies and international commitments that enable the implementation of NbS. Artificial Intelligence (AI) techniques were

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<sup>71</sup> [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.](#)

<sup>72</sup> [Beasley et al. \(2019\). Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions.](#)

<sup>73</sup> [Urban Governance Atlas \(2023\). Urban Governance Atlas \(UGA\).](#)

<sup>74</sup> [Nature4Climate \(2022\). Nature-based Solutions \(NbS\) Policy Tracker: An AI Approach to Policy-making for Enabling NbS Worldwide.](#)

used to gather public policies from countries across the globe. Effective government initiatives enacted after 2016 (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.<sup>75</sup>
- 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.

## 2. 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

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<sup>75</sup> 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.

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.<sup>76</sup>

*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.

*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.<sup>77</sup> 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.<sup>78</sup>  
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

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<sup>76</sup> 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.

<sup>77</sup> [UNEP \(2022\). Nature-based Solutions: Opportunities and Challenges for Scaling Up.](#)

<sup>78</sup> [NBS for Climate Coalition \(2019\). The Nature-Based Solutions for Climate Manifesto.](#)

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".<sup>79</sup> 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."<sup>80</sup>

- Leaders' Pledge for Nature, 2020.<sup>81</sup>

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,<sup>82</sup> political leaders committed 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.<sup>83</sup>

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'.<sup>84</sup>

- National Policies.

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<sup>79</sup> [Government of Indonesia \(2022\). G20 Bali Leaders' Declaration – Bali, Indonesia, 15-16 November 2022.](#)

<sup>80</sup> [G7 Germany \(2022\). G7 Climate, Energy and Environment Ministers' Communiqué.](#)

<sup>81</sup> [Leaders' Pledge for Nature \(2020\). United to Reverse Biodiversity Loss by 2030 for Sustainable Development.](#)

<sup>82</sup> [Leaders' Pledge for Nature \(2023\). United to Reverse Biodiversity Loss by 2030 for Sustainable Development.](#)

<sup>83</sup> [The Nordic Council and the Nordic Council of Ministers \(2022\). Nordic Ministerial Declaration on nature-based solutions.](#)

<sup>84</sup> [Nature-Based Solutions Initiative \(2022\). Revised climate pledges show enhanced ambition for nature-based solutions.](#)

Beyond NDCs, countries are also increasingly including commitments to nature-based solutions in their national policies, plans, and programmes.<sup>85</sup> 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.<sup>86</sup> 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.<sup>87</sup> 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.<sup>88</sup> 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.<sup>89</sup> 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.<sup>90</sup>

### *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*

- *IUCN Global Standard for Nature-based Solutions, 2020.*<sup>91</sup>

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 Standard<sup>92</sup> 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.<sup>93</sup>

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<sup>85</sup> [UNEP \(2022\). Nature-based Solutions: Opportunities and Challenges for Scaling Up.](#)

<sup>86</sup> [BMUV \(2023\). Federal Action Plan on Nature-based Solutions for Climate and Biodiversity.](#)

<sup>87</sup> [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.](#)

<sup>88</sup> [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.](#)

<sup>89</sup> [The Department of Environmental Affairs \(2018\). Ecosystem-based Adaptation \(EbA\) in South Africa Guidelines.](#)

<sup>90</sup> [Gobierno de México \(2020\). Programa Sembrando Vida.](#)

<sup>91</sup> [IUCN \(2020\). Global Standard for Nature-based Solutions.](#)

<sup>92</sup> [IUCN \(2020\). Guidance for using the IUCN Global Standard for Nature-based Solutions.](#)

<sup>93</sup> [IUCN \(2020\). IUCN Global Standard for NbS.](#)

- *The NetworkNature Semester on Nature-based solutions and Standards: Final Output Report, 2022.*<sup>94</sup>

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.

### 1.3.2 *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.*<sup>95</sup>

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.*<sup>96</sup>

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.*<sup>97</sup>

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

<sup>94</sup> [Almássy et al. \(2022\). The NetworkNature Semester on Nature-based solutions and Standards: Final Output Report.](#)

<sup>95</sup> [Plan Vivo Foundation \(2022\). Plan Vivo Standard 5.0.](#)

<sup>96</sup> [Architecture for REDD+ Transactions Program \(2021\). The REDD+ Environmental Excellence Standard \(TREES\), Version 2.0.](#)

<sup>97</sup> [VCS \(2017\). Third Edition: Climate, Community & Biodiversity Standards Version 3.1.](#)

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.*<sup>98</sup>

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.<sup>99</sup>

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

- *Making Ecosystem-based Adaptation Effective: Framework for Defining Qualification Criteria and Quality Standards, 2017.*<sup>100</sup>

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.

### 1.3.3 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.*<sup>101</sup>

This summary provides an introduction to the full Society for Ecological Restoration (SER) International Principles and Standards for the Practice of Ecological Restoration.

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<sup>98</sup> [Verra \(2023\). VCS Standard v4.5.](#)

<sup>99</sup> [Hamrick et al. \(2023\). Beyond Beneficiaries: Fairer Carbon Market Frameworks.](#)

<sup>100</sup> [FEBA \(2017\). Making Ecosystem-based Adaptation Effective: A Framework for Defining Qualification Criteria and Quality Standards.](#)

<sup>101</sup> [Gann et al. \(2019\). International principles and standards for the practice of ecological restoration. Second edition summary.](#)



- *Standards of Practice to Guide Ecosystem Restoration, 2023.*<sup>102</sup>  
Developed by the UN Decade on Ecosystem Restoration, these standards comprise ten principles<sup>103</sup> 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.*<sup>104</sup>  
This paper outlines and compares the eight IUCN NbS principles<sup>105</sup> 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.*<sup>106</sup>  
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 makers<sup>107</sup> and an Appendix of Methods.<sup>108</sup>
- *How to Design High-Quality NbS Field Projects: A Guide for Practitioners, 2022.*<sup>109</sup>  
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

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<sup>102</sup> [FAO, SER & IUCN CEM. \(2023\). Standards of practice to guide ecosystem restoration. A contribution to the United Nations Decade on Ecosystem Restoration.](#)

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

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

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

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

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

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

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

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.*<sup>110</sup>  
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 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.*<sup>111</sup>  
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.*<sup>112</sup>  
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.<sup>113, 114</sup> The Ecosystem Approach considers biodiversity conservation and human well-being to be dependent on functioning and resilient natural ecosystems.<sup>115</sup> Therefore, the Ecosystem Approach can be considered as a nature-based solution that addresses biodiversity loss,<sup>116</sup> 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

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

<sup>111</sup> [Pérez-Cirera et al. \(2021\). Powering Nature: Creating the Conditions to Enable Nature-based Solutions.](#)

<sup>112</sup> [Convention on Biological Diversity \(2008\). Ecosystem Approach Implementation.](#)

<sup>113</sup> [CBD \(2010\). Ecosystem Approach: Description.](#)

<sup>114</sup> [WWF \(2021\). Nature-Based Solutions in the Convention on Biological Diversity \(CBD\): Orientating an Evolving Concept Towards Achieving the CBD’s Objectives.](#)

<sup>115</sup> [Cohen-Shacham et al. \(2019\). Core principles for successfully implementing and upscaling Nature-based Solutions.](#)

<sup>116</sup> [IIED \(2021\). Nature-based solutions or the ecosystem approach?](#)

tools for practitioners, including the Principles, the Operational Guidance, a sourcebook of guidelines for applying the approach and a database of case studies.<sup>117</sup>

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.<sup>118</sup>

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.

- *Blue Carbon and Nationally Determined Contributions Second Edition: A guide on how countries may include blue carbon in their Nationally Determined Contributions*, 2023.<sup>119</sup>

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.<sup>120</sup>

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-

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<sup>117</sup> [CBD \(2008\). Ecosystem Approach Implementation.](#)

<sup>118</sup> [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.](#)

<sup>119</sup> [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.](#)

<sup>120</sup> [UNEP-WCMC \(2023\). Mapping nature-based solutions for societal challenges.](#)

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.*<sup>121</sup>  
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.*<sup>122</sup>  
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,<sup>123</sup> 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.
- *Beyond Carbon Credits: A Blueprint for High-Quality Interventions that Work for People, Nature and Climate, 2021.*<sup>124</sup>  
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.*<sup>125</sup>  
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.*<sup>126</sup>  
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

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<sup>121</sup> [WWF \(2020\). Nature-Based Solutions for Climate Change.](#)

<sup>122</sup> [UNEP \(2023\). Accessing Carbon Finance for Nature Restoration in Europe: Guidance for ecosystem restoration practitioners.](#)

<sup>123</sup> [The Endangered Landscapes Programme \(2023\). Understanding Voluntary Carbon Markets.](#)

<sup>124</sup> [Hacking et al. \(2021\). Beyond Carbon Credits: A Blueprint for High-Quality Interventions that Work for People, Nature and Climate.](#)

<sup>125</sup> [Nature-based Solutions Initiative \(2023\). The four guidelines for Nature-based Solutions.](#)

<sup>126</sup> [World Resources Institute \(2022\). Guidance on Voluntary Use of Nature-based Solution Carbon Credits Through 2040.](#)

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.*<sup>127</sup>  
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.*<sup>128</sup>  
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.*<sup>129</sup>  
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 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.*<sup>130</sup>  
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.

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<sup>127</sup> [Beasley et al. \(2019\). Guide to including nature in Nationally Determined Contributions: A checklist of information and accounting approaches for natural climate solutions.](#)

<sup>128</sup> [Leavitt et al. \(2021\). Natural Climate Solutions Handbook: A Technical Guide for Assessing Nature-Based Mitigation Opportunities in Countries.](#)

<sup>129</sup> [TFCI \(2023\). Tropical Forest Credit Integrity Guide for Companies Version 2.](#)

<sup>130</sup> [VCMI \(2023\). Claims Code of Practice: Building integrity in voluntary carbon markets.](#)

- *Who Reaps the Benefits? Integrity Principles for Benefit Sharing in Forest NbS for Climate Mitigation, 2022.*<sup>131</sup>

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.*<sup>132</sup>

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.*<sup>133</sup>

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.*<sup>134</sup>

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.

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<sup>131</sup> [Preston Whitt \(2022\). Who Reaps the Benefits? Integrity Principles for Benefit Sharing in Forest NbS for Climate Mitigation.](#)

<sup>132</sup> [Reid et al. \(2018\). A framework for assessing the effectiveness of ecosystem-based approaches to adaptation.](#)

<sup>133</sup> [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.](#)

<sup>134</sup> [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.<sup>135</sup>  
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.<sup>136</sup>  
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.<sup>137</sup>  
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.<sup>138</sup>  
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.<sup>139</sup>  
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.<sup>140</sup> 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.

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<sup>135</sup> [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.](#)

<sup>136</sup> [Reid et al. \(2020\). Ecosystem-based adaptation: Question-based guidance for assessing effectiveness.](#)

<sup>137</sup> [UNEP \(2021\). Guidelines for Integrating Ecosystem-based Adaptation into National Adaptation Plans: Supplement to the UNFCCC NAP Technical Guidelines.](#)

<sup>138</sup> [GIZ, UNEP-WCMC and FEBA \(2020\). Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions.](#)

<sup>139</sup> [International Union for Conservation of Nature \(IUCN\) \(2022\). Handbook System for the Design and Implementation of Ecosystem-based Adaptation in Mountains. Gland, Switzerland: IUCN.](#)

<sup>140</sup> [International Union for Conservation of Nature \(IUCN\) \(2023\). Scaling Up Mountain EbA.](#)

- *Implementing nature-based flood protection: Principles and implementation guidance*, 2017.<sup>141</sup>  
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 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.<sup>142</sup>  
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.<sup>143</sup>  
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.<sup>144</sup>  
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.<sup>145</sup>  
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.

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<sup>141</sup> [World Bank \(2017\). Implementing nature-based flood protection: Principles and implementation guidance.](#)

<sup>142</sup> [Matthews & Dela Cruz \(2022\). Integrating Nature-Based Solutions for Climate Change Adaptation and Disaster Risk Management: A Practitioner's Guide.](#)

<sup>143</sup> [Sphere \(2023\). Nature-based Solutions for Climate Resilience in Humanitarian Action.](#)

<sup>144</sup> [United Nations Office for Disaster Risk Reduction \(2021\). Words into Action: Nature-based Solutions for Disaster Risk Reduction.](#)

<sup>145</sup> [Andrade et al. \(2012\). Principles and Guidelines for Integrating Ecosystem-based Approaches to Adaptation in Project and Policy Design.](#)



- *Principles for just and equitable nature-based solutions, 2022.*<sup>146</sup>  
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.*<sup>147</sup>  
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.

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.*<sup>148</sup>  
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.*<sup>149</sup>  
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

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<sup>146</sup> [Boyland et al. \(2022\). Principles for just and equitable nature-based solutions.](#)

<sup>147</sup> [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.](#)

<sup>148</sup> [Altamirano et al. \(2021\). Handbook for the Implementation of Nature-based Solutions for Water Security: guidelines for designing an implementation and financing arrangement.](#)

<sup>149</sup> [Collier et al. \(2023\). An integrated process for planning, delivery, and stewardship of urban nature-based solutions: the Connecting Nature Framework.](#)

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.<sup>150</sup>  
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.<sup>151</sup>  
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.<sup>152</sup>  
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.<sup>153</sup>  
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.<sup>154</sup>

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<sup>150</sup> [McQuaid & Fletcher \(n.d.\). Financing and Business Models Guidebook.](#)

<sup>151</sup> [Dumitru, A., and Tomé Lourido., D \(n.d.\). Impact Assessment Guidebook.](#)

<sup>152</sup> [Raymond et al. \(2017\). An Impact Evaluation Framework to Support Planning and Evaluation of Nature-based Solutions Projects.](#)

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

<sup>154</sup> [NATURVATION \(n.d.\). Urban Nature Navigator.](#)

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.*<sup>155</sup>

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,<sup>156</sup> which provides hands-on methodological guidance for restoring drained peatlands, and a Policy Brief,<sup>157</sup> 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.*<sup>158</sup>

Eight guiding principles for forest landscape restoration, developed by the Global Restoration Initiative.

- *Measuring Climate Change Mitigation Potential: Guidance on tools and methodologies to measure the climate change mitigation potential of ecosystem restoration projects, 2022.*<sup>159</sup>

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

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

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

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

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

<sup>159</sup> [UNEP \(2022\). Measuring Climate Change Mitigation Potential: Guidance on tools and methodologies to measure the climate change mitigation potential of ecosystem restoration projects.](#)

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.*<sup>160</sup>

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.*<sup>161</sup>

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.*<sup>162</sup>

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.*<sup>163</sup>

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.*<sup>164</sup>

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

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<sup>160</sup> [Di Sacco et al. \(2021\). Ten golden rules for reforestation to optimize carbon sequestration, biodiversity recovery and livelihood benefits.](#)

<sup>161</sup> [Maarit & Kaisa \(2012\). Ecological restoration and management in boreal forests - best practices from Finland.](#)

<sup>162</sup> [Maarit et al. \(2014\). Ecological restoration in drained peatlands - best practices from Finland.](#)

<sup>163</sup> [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.](#)

<sup>164</sup> [GIZ, ONWR, IUCN \(2022\). Guidebook for the Design and Implementation of Ecosystem-based Adaptation Measures in River Basins in Thailand.](#)

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.<sup>165</sup>

- *Guidelines for Ecosystem-Based Adaptation (EbA) in South Africa, 2018.*<sup>166</sup>  
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.*<sup>167</sup>  
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.*<sup>168</sup>  
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.<sup>169</sup> The guide also includes information on how to access support from the EIB's dedicated Natural Capital Financing Facility.

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<sup>165</sup> [GIZ, ONWR, TEI \(2022\). Ecosystem-based Adaptation Code of Practice Compendium for the Thai Water Sector.](#)

<sup>166</sup> [The Department of Environmental Affairs \(2018\). Ecosystem-based Adaptation \(EbA\) in South Africa Guidelines.](#)

<sup>167</sup> [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.](#)

<sup>168</sup> [EIB \(n.d.\). Investing In Nature: Financing Conservation and Nature-based Solutions – A Practical Guide for Europe.](#)

<sup>169</sup> [Climate-ADAPT \(2022\). Investing in nature: Financing conservation and nature-based solutions.](#)

- *Nature-based Solutions Triple Win Toolkit, 2021.*<sup>170</sup>  
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 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).*<sup>171</sup>  
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.<sup>172</sup> 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.<sup>173,174</sup> The principle of CBDR and “Respective Capabilities” (CBDR-RC) is conceptualized based on international negotiations under the UNFCCC.<sup>175</sup> Under the convention, the CBDR principle recognizes that each country should take responsibility for climate mitigation

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<sup>170</sup> [JNCC \(2021\). Nature-based Solutions Triple Win Toolkit – International Climate Finance Evidence Project.](#)

<sup>171</sup> [European Commission \(2023\). Urban Greening Platform.](#)

<sup>172</sup> See, for example, [FAO \(2023\). Indigenous Peoples: Free, Prior, and Informed Consent \(FPIC\).](#)

<sup>173</sup> [Yan \(2023\). Application of the principle of common but differentiated responsibility and respective capabilities to the passive mitigation and active removal of space debris.](#)

<sup>174</sup> [Tomoi et al. \(2022\). Is “Common But Differentiated Responsibilities” principle applicable in biodiversity? – Towards approaches for shared responsibilities based on updated capabilities and data.](#)

<sup>175</sup> [Tomoi et al. \(2022\). Is “Common But Differentiated Responsibilities” principle applicable in biodiversity? – Towards approaches for shared responsibilities based on updated capabilities and data.](#)

but developed countries should bear primary responsibilities as they have contributed to the largest proportion of historical and current Greenhouse gas (GHG) emissions.<sup>176</sup>

- UNCTAD’s BioTrade Principles and Criteria,<sup>177</sup> 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 aim to prevent negative impacts and promote positive impacts.<sup>178</sup> 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),<sup>179</sup> 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,<sup>180</sup> adopted under the CBD.<sup>181</sup> 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.

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<sup>176</sup> [Chen \(2021\). Reconciling common but differentiated responsibilities principle and no more favourable treatment principle in regulating greenhouse gas emissions from international shipping.](#)

<sup>177</sup> [UNCTAD \(2020\). UNCTAD BioTrade Initiative: BioTrade Principles and Criteria for terrestrial, marine and other aquatic biodiversity-based products and services.](#)

<sup>178</sup> [UNEP \(2022\). Nature-based Solutions: Opportunities and Challenges for Scaling Up.](#)

<sup>179</sup> [UNFCCC \(2023\). REDD+ Web Platform: Safeguards.](#)

<sup>180</sup> [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.](#)

<sup>181</sup> [UNEP and IUCN \(2021\). Nature-based solutions for climate change mitigation.](#)

### 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.<sup>182</sup>

## 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 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,<sup>183</sup> most of which (83%) comes from public funding sources, with the private sector contributing only 17%.<sup>184</sup> 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.<sup>185</sup> The G20 countries together invest USD 120 billion each year in nature-based solutions and related assets and activities. This

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<sup>182</sup> [UNEP \(2022\). Nature-based Solutions: Opportunities and Challenges for Scaling Up.](#)

<sup>183</sup> 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.

<sup>184</sup> [UNEP \(2022\). State of Finance for Nature. Time to act: Doubling investment by 2025 and eliminating nature-negative finance flows.](#)

<sup>185</sup> [WE MEAN BUSINESS COALITION \(2022\). Guiding Principles For Corporate Climate Leadership On The Role Of Nature-Based Solutions.](#)



accounts for 92% of global investments in nature-based solutions,<sup>186</sup> but this is mostly spent on domestic initiatives. There is a large gap in funding for nature-based solutions in developing countries.<sup>187</sup> 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.<sup>188</sup>

#### 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.<sup>189</sup> 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.<sup>190</sup> 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.<sup>191</sup>

The primary types of finance are as follows:<sup>192, 193, 194, 195</sup>

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

##### 4.2.1 Sources of domestic public finance<sup>196, 197, 198, 199</sup>

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<sup>186</sup> [World Economic Forum \(2022\). G20 Countries Can Help Close Climate Finance Gap by Investing in Nature-based Solutions.](#)

<sup>187</sup> [UNEP \(2022\). State of Finance for Nature in the G20.](#)

<sup>188</sup> [Atteridge et al. \(2022\). Assessing Finance for Nature-based Solutions to Climate Change.](#)

<sup>189</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>190</sup> [EIB \(2023\). Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe.](#)

<sup>191</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>192</sup> [Atteridge et al. \(2022\). Assessing Finance for Nature-based Solutions to Climate Change.](#)

<sup>193</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>194</sup> [Ludwig \(2021\). Financing NbS: Overview of relevant finance options.](#)

<sup>195</sup> [Standing Committee on Finance \(2021\). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

<sup>196</sup> [Ludwig \(2021\). Financing NbS: Overview of relevant finance options.](#)

<sup>197</sup> Brears (2022). Financing Nature-Based Solutions.

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

<sup>199</sup> [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.](#)

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

- 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.<sup>201</sup>
- National development banks.
- National Funds, including those addressing thematic areas such as climate change and conservation.<sup>202</sup> 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,<sup>203</sup> and the Indonesia Environment Fund. The Government of Canada has also established a dedicated Nature Smart Climate Solutions Fund<sup>204</sup> and a Natural Infrastructure Fund.<sup>205</sup> 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.<sup>206</sup> The OECD estimates that governments spend approximately USD 500 billion per year in support that is potentially harmful to biodiversity.<sup>207</sup> 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.<sup>208</sup>

- Multilateral donors include<sup>209</sup> – inter alia – the European Union, the Climate Investment Funds “Nature, People and Climate Investment Program”,<sup>210</sup> the Green Climate Fund,<sup>211</sup> the Global

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<sup>200</sup> [OECD \(2020\). A Comprehensive Overview of Global Biodiversity Finance.](#)

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

<sup>202</sup> [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.](#)

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

<sup>204</sup> [Government of Canada \(2023\). Nature Smart Climate Solutions Fund.](#)

<sup>205</sup> [Government of Canada \(2023\). Natural Infrastructure Fund.](#)

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

<sup>207</sup> [OECD \(2020\). A Comprehensive Overview of Global Biodiversity Finance.](#)

<sup>208</sup> [OECD \(2020\). A Comprehensive Overview of Global Biodiversity Finance.](#)

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

<sup>210</sup> [Climate Investment Funds \(2023\). Nature People & Climate Program.](#)

<sup>211</sup> [Green Climate Fund \(2023\).](#)

Environmental Facility,<sup>212</sup> the Adaptation Fund,<sup>213</sup> the International Fund for Agricultural Development,<sup>214</sup> and the new Global Biodiversity Framework Fund (GBFF).<sup>215, 216</sup>

- 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.<sup>217, 218</sup> 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.<sup>219, 220</sup> In their ‘joint nature statement at COP26’,<sup>221</sup> 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’.<sup>222</sup>
- Bilateral technical and financial cooperation, including government-to-government support, Official Development Assistance (ODA), and other official flows (OOF).<sup>223</sup> 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.<sup>224</sup> 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.<sup>225</sup>
- 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.<sup>226</sup>

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<sup>212</sup> [Global Environment Facility \(2023\)](#).

<sup>213</sup> [Adaptation Fund \(2023\)](#).

<sup>214</sup> [IFAD \(2023\)](#).

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

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

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

<sup>218</sup> Brears (2022). Financing Nature-Based Solutions.

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

<sup>220</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>221</sup> [UKCOP26.ORG \(2021\). MDB Joint Nature Statement](#).

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

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

<sup>224</sup> [OECD \(2023\). Official development assistance \(ODA\)](#).

<sup>225</sup> Brears (2022). Financing Nature-Based Solutions.

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

Examples of sources of international public finance are included in the ‘Joint donor statement on international finance for biodiversity and nature’.<sup>227</sup> 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 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:<sup>228</sup>

- 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.<sup>229</sup>

#### 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.<sup>230</sup> 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.<sup>231</sup>
- 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,<sup>232</sup> TNC NatureVest,<sup>233</sup> and the Landscape Finance Lab.<sup>234</sup>

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

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

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

<sup>230</sup> [UNIDO \(2023\). Corporate Social Responsibility](#).

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

<sup>232</sup> [WWF \(2023\). WWF Impact](#).

<sup>233</sup> [The Nature Conservancy \(2023\). NatureVest](#).

<sup>234</sup> [Landscape Finance Lab \(2023\)](#).

- Investors who provide green bonds, loans or impact investment<sup>235</sup> 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.<sup>236</sup>
- 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.<sup>237</sup>
- 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 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.<sup>238</sup> See for example the Norwegian Sovereign Wealth Fund,<sup>239</sup> which invests in more than 9,000 companies in over 70 countries and has principles of sustainable and ethical investment.<sup>240</sup>
- Reinsurance companies are increasingly investing in nature-based solutions, considering that healthy ecosystems increase resilience and contribute to disaster risk reduction.<sup>241</sup> 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.<sup>242</sup>

#### 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.<sup>243, 244</sup> 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.<sup>245</sup> Blended finance

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<sup>235</sup> [Impact investing](#) is an investment strategy aimed at generating positive social or environmental results in addition to financial gains.

<sup>236</sup> [UN DESA \(2022\). Nature+ Accelerator Fund.](#)

<sup>237</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>238</sup> Brears (2022). Financing Nature-Based Solutions.

<sup>239</sup> [Norges Bank Investment Management \(2023\).](#)

<sup>240</sup> [Norges Bank Investment Management \(2023\). About the fund.](#)

<sup>241</sup> [Swiss Re \(2023\). Nature based solutions.](#)

<sup>242</sup> [World Resources Institute \(2023\). Pathways to Unblocking Private Financing for Nature-based Solutions.](#)

<sup>243</sup> [Standing Committee on Finance \(2021\). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

<sup>244</sup> [Smith et al. \(2022\). Getting Blended Finance to Where It's Needed: The Case of CBNRM Enterprises in Southern Africa.](#)

<sup>245</sup> [United Nations Multi-Partner Trust Fund Office \(2023\). Global Fund for Coral Reefs.](#)

crowds in private capital by mitigating investment risks, for example through credit guarantees, risk insurance, first loss and subordinate debt arrangements, and technical assistance.<sup>246</sup>

- 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.<sup>247</sup>
- Market-based mechanisms such as payment for ecosystem services (water provision, carbon markets, offsetting of development impacts),<sup>248</sup> 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.<sup>249,</sup>  
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- 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 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.<sup>251</sup>
- Ecological fiscal transfers (EFT) transfer public revenue between governments within a country based on ecological indicators,<sup>252</sup> for example, protected areas or watershed management areas.<sup>253</sup> 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.<sup>254</sup> 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

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<sup>246</sup> [Standing Committee on Finance \(2021\). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

<sup>247</sup> [Commonwealth Secretariat \(2021\). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.](#)

<sup>248</sup> [Fripp, E. \(2014\). Payments for Ecosystem Services \(PES\): A practical guide to assessing the feasibility of PES projects.](#)

<sup>249</sup> [Standing Committee on Finance \(2021\). Forum of the Standing Committee on Finance for Nature-based Solutions: Synthesis paper by the secretariat.](#)

<sup>250</sup> [Deutz et al. \(2020\). Financing Nature: Closing the global biodiversity financing gap.](#)

<sup>251</sup> [King \(2021\). Conservation Finance Options to Support African Post-2020 Biodiversity Priorities.](#)

<sup>252</sup> [Busch et al. \(2021\). A global review of ecological fiscal transfers.](#)

<sup>253</sup> [Commonwealth Secretariat \(2021\). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.](#)

<sup>254</sup> [Busch et al. \(2021\). A global review of ecological fiscal transfers.](#)

Degradation (REDD+) and payments for ecosystem services, is that funds are transferred within a country to and between local governments.<sup>255</sup>

- 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.<sup>256</sup>
- Business improvement districts (BID),<sup>257</sup> also known as city improvement districts, can be an interesting option to finance large urban parks in touristic or business areas.<sup>258</sup> 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.<sup>259</sup> 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.<sup>260</sup>

#### 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.<sup>261</sup> 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.<sup>262</sup>
- 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, 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.<sup>263</sup>
- 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

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<sup>255</sup> [Commonwealth Secretariat \(2021\). Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.](#)

<sup>256</sup> [GOV.UK \(2023\). UK – France Global Roadmap launched to mobilise global nature finance.](#)

<sup>257</sup> [University of Antwerp \(2021\). INNOFINS Implementation of innovative finance for nature-based solutions in Flemish cities.](#)

<sup>258</sup> [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.](#)

<sup>259</sup> [Baroni et al. \(2019\). Grow Green: Approaches to financing nature-based solutions in cities.](#)

<sup>260</sup> [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.](#)

<sup>261</sup> [European Investment Bank \(2023\). Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe.](#)

<sup>262</sup> [WWF, IFRC \(2022\). Working with Nature to Protect People: How Nature-Based Solutions Reduce Climate Change And Weather-Related Disasters.](#)

<sup>263</sup> [ILO, UNEP and IUCN \(2022\). Decent Work in Nature-based Solutions 2022.](#)

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.<sup>264</sup>

- 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.<sup>265</sup>

#### 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.

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<sup>264</sup> [IISD \(2021\). How Can Investment in Nature Close the Infrastructure Gap?](#)

<sup>265</sup> [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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