

A Guide to the

# Natureoasec Solutions (NbS) Finance langscape in Europe

Outlining the business case, financing models and skillsets required to mobilise investment into NbS in Europe

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# The world economy relies on nature for food, health, water, and much more. Yet, the economy also impacts nature in profound ways. These impacts are growing.

They are leading to global crises like climate change, biodiversity loss and desertification that affect every aspect of life on the planet. Businesses are not immune. The financial repercussions of these crises are already being felt and will become more severe in the years to come. It need not be this way.

Damaging nature has created severe risks but supporting it can bring tremendous benefits that can neutralise these risks. This is because nature itself provides many valuable services including, but not limited to, erosion control, pollination and water purification. Actions, like Nature-based Solutions (NbS), that support and/or enhance these services reduce the risks faced by people and the financial systems that they rely upon. In essence, supporting nature is not just vital for human wellbeing, it is vital for the economy as well.

Harnessing nature to ensure financial stability and a thriving economy in the years ahead is entirely possible, but it will require significant financial support. Awareness of the latest research findings, approaches and tools is important before such investment is made. That is the purpose of this guide. It supports those in the business and financial sectors by providing cutting-edge information from NbS projects funded by the European Commission, including through the Directorate-General for Research and Innovation (DG RTD), and UK Research and Innovation (UKRI). The projects that are considered include those that ask questions like:

- What is the current state of financing for NbS, and where are the gaps?
- How can investors, businesses and nature-based enterprises help fill those gaps?
- What is the business case for investing in NbS?

Nature-based enterprises (NbEs), other businesses, and financial institutions will all have different starting points when it comes to investing more in NbS. However, all groups should start by assessing their impacts and dependencies on nature. This is a vital step for identifying where NbS can address the most material risks to the organisation and add significant value. Once this process is finished, organisations can develop their own NbS strategy, build capacity and implement NbS. There are a wide range of projects funded by the European Union (EU) that can help businesses, NbEs and financial institutions to invest in this area, including those shown on the map of the finance landscape in the EU below.

This guide explains what NbS are and how a business case can be developed for investing in them. It then outlines the wide range of financial models that can support NbS, which span both public and private sources. Finally, it sets out the skills needed to further advance investment in NbS, recommendations for businesses, NbEs and financial institutions.

### Map of the Finance Landscape in the EU

EU funded projects that include activities on finance for Nature-based Solutions



#### **Selected resources:**

NetworkNature:
Nature-based
solutions Business
information package

Connecting Nature:
Nature-based
Enterprise Guidebook

Invest4Nature:
How EU Taxonomy
supports investments
in Nature

#### **Selected resources:**

FABulous Farmers usiness Models based on FAB Measures

Invest4Nature:
Value categories and approaches to assess
NBS economic and financial performance

Naturvation: Taking Action For Urban Nature: Business Model Catalogue

Connecting Nature: The Nature-Based Solutions Business Model Canvas

#### **Selected resources:**

Connecting Nature: Financing and Business Models Guidebook

Invest4Nature:
Markets. Financing
and incentives for NbS

PONDERFUL
Sustainable Finance
Inventory

WaterLANDS: Investing in Peatlands whitepaper

CONEXUS: Valorisation of Nature-based Solutions - A step-bystep guide

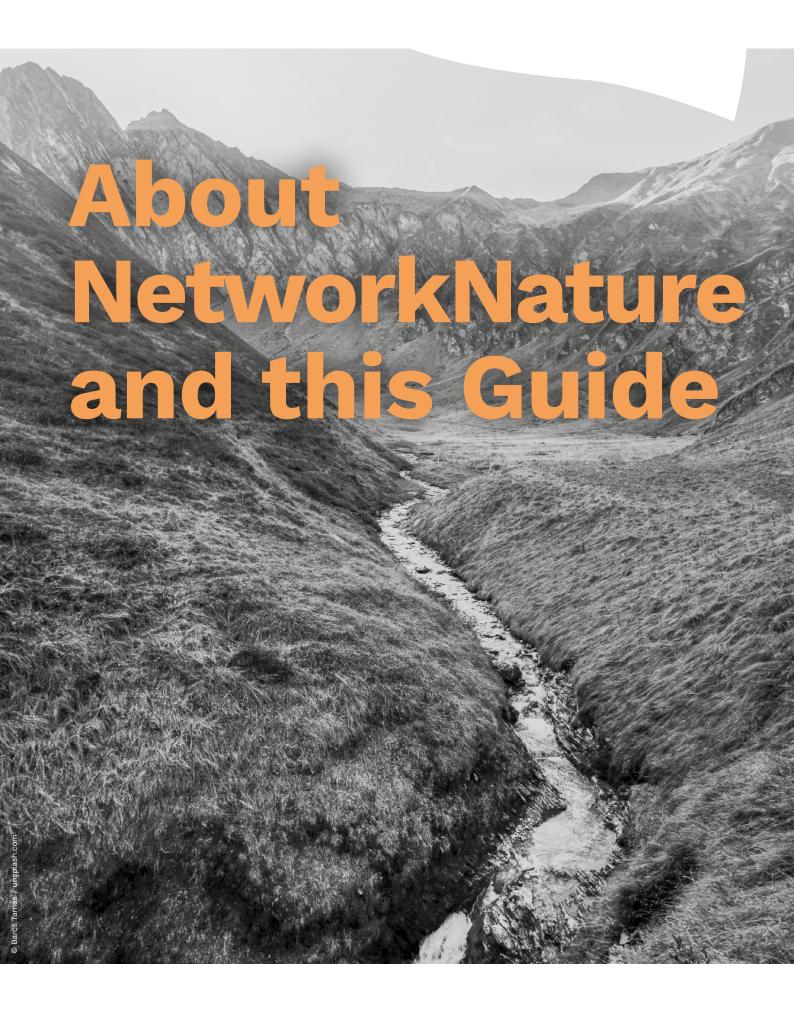
#### **Selected resources:**

GrowGreen: Naturebased Solutions Codesign Guide

Nature4Cities: Implementation handbook

Connecting Nature: Impact Assessment Guidebook

Connecting Nature:
Governance
Guidebook



#### **About NetworkNature**

<u>NetworkNature</u> is a "Key knowledge broker and information resource fostering and strengthening the European nature-based solutions community" which "supports EU-funded R&I projects on NBS by offering collaboration opportunities and dissemination services".<sup>2</sup>

A substantial body of research and knowledge on investing in NbS is being generated through EU-funded Research and Innovation (R&I) projects. NetworkNature brings these projects together to identify synergies and opportunities for collaboration. Crucially, NetworkNature helps to make the information and resources from EU funded projects available and accessible. With a particular focus on the EU, the aim is for all decision-makers, including investors, businesses and entrepreneurs, to use the best available information and tools on the multiple values of nature when making decisions. This includes making decisions about where money should be invested or spent.



#### **About this Guide**

This guide brings together the latest research, thinking, tools and approaches that are coming from EU-funded projects on financing and investment in NbS by:

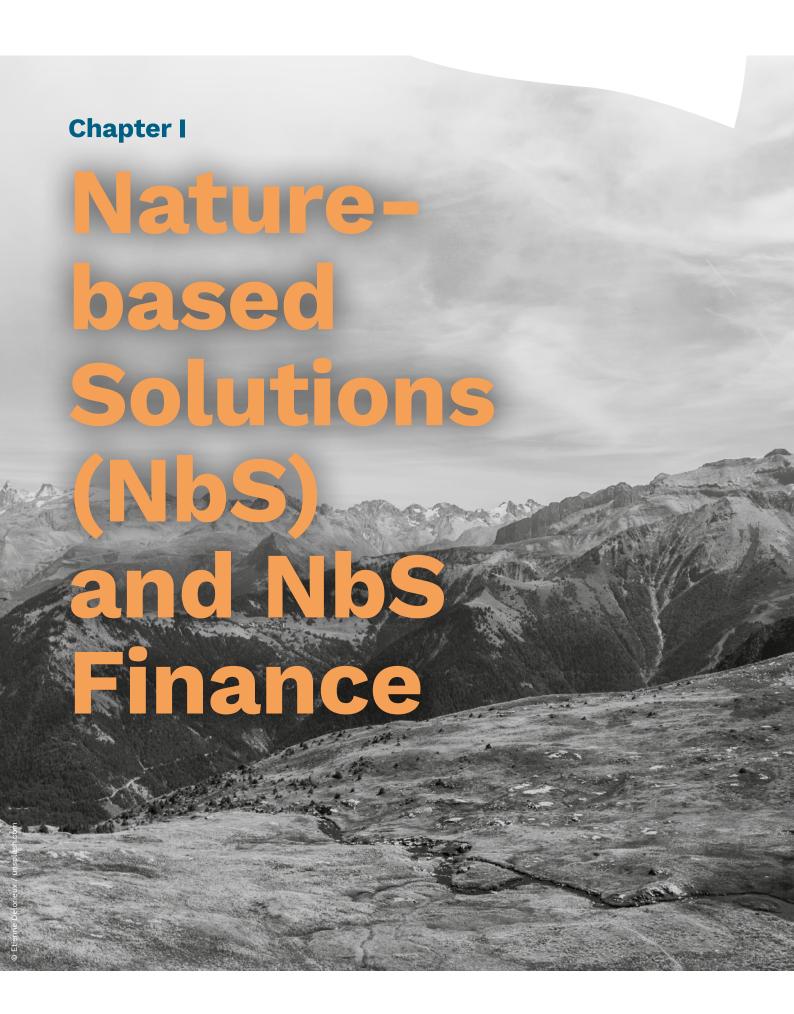
- Showcasing business models and finance instruments that are already implemented in Europe and beyond to support NbS projects,
- Identifying tools, methods and approaches that investors, businesses and nature-based enterprises (NbEs)<sup>a</sup> can use to inform investment decisions, so that they are inclusive of NbS,
- Highlighting projects that are conducting work on different aspects of financing and investing in NbS,
- Summarising and providing links to key documents that are particularly relevant to investors and businesses, including NbEs.

With a geographical focus on the EU, the aim of this guide is for investors, businesses and NbEs to be able to find the latest research, information and project contacts on the areas that most interest them to help them identify how to invest in NbS.



This NetworkNature logo is used in this document to indicate where a project or resource is from an EU funded NbS project.

<sup>a</sup> Naturebased enterprises (NbEs) are defined as independent entities that use nature as a core element of their product/ service offering. Nature may be used directly by growing, harnessing, harvesting or restoring natural resources in a sustainable way and/or indirectly by contributing to the planning, delivery or stewardship of sustainable nature-based solutions. For a list of NbE sectors, see the <u>Nature-based</u> Enterprise Guidebook.



Nature-based Solutions (NbS) are increasingly recognised as being an important way to address the multiple challenges that face society, businesses and governments. NbS can be used to tackle issues such as water shortages, flooding, pollution and even mental health challenges that threaten productivity.

This chapter introduces the concept of NbS. It also reveals their role in fostering sustainable development, addressing climate change and tackling biodiversity loss. It provides investors, businesses and NbEs with an overview of the principles underpinning NbS and their growing importance in global policy. Finally, it reviews data on financial flows to NbS and explains why more finance is needed to implement these actions.

#### I.1. What are Nature-based Solutions?

Several institutions have defined NbS over the years, with the World Bank and the International Union for Conservation of Nature (IUCN) playing a key role in introducing the term in the late 2000s in the context of global climate negotiations.<sup>3</sup> The term provided a framing for ecosystem-based approaches in the context of the climate and development agendas.

In 2022, the United Nations Environment Assembly (UNEA), comprising 193 United Nations (UN) Member States adopted a Resolution that provided a multilaterally agreed definition, in a step towards establishing international consensus. In the UNEA 5.2 Resolution 5, NbS are framed as:

Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.<sup>4</sup>

The UNEA NbS definition provides a harmonised baseline for intergovernmental cooperation and cross-sector alignment. Other definitions pre-dating its adoption include those proposed by the <u>European Commission and by IUCN</u>. The original definition set by IUCN in 2016 was reiterated and forms the conceptual basis of its <u>Global Standard for Nature-based Solutions</u>. <sup>5,6</sup> This standard defines criteria and associated indicators to guide the design, implementation and evaluation of NbS projects. In this report, references to NbS are based on the UNEA definition, unless otherwise specified.<sup>b</sup>

NbS can encompass different concepts related to working with nature to generate environmental, social and economic benefits. The UNEA definition incorporates different ecosystems and ways of working with nature, placing emphasis on

b The
European
Commission
agreed to
the UNEA
definition
when it was
adopted.

biodiversity and the role of healthy ecosystems. This breadth explains how NbS can encompass various approaches and actions to engage with ecological processes and achieve multiple outcomes. For instance, NbS projects can adopt ecosystembased adaptation or disaster risk reduction principles. They can also consist of or integrate interventions such as agroforestry, agroecology, green infrastructure and blue infrastructure.<sup>7</sup>

projects contribute to a variety of environmental, social and economic outcomes.

NbS must provide benefits to biodiversity and people while addressing social, economic and environmental challenges. For instance, the <u>IUCN Global Standard for Nature-based Solutions</u> provides a process-oriented framework to design, assess

The term NbS can help stakeholders understand and communicate how their

and implement NbS interventions that deliver multiple outcomes at scale.8 Given how broad the term NbS can be, stakeholders involved across the lifecycle of the project should understand the criteria and indicators presented by the Standard. They should also be able to link them to their specific project.

There are a growing number of resources that provide examples of NbS across ecosystem types and present case studies of existing NbS projects. These include insights from EU-funded research and innovation projects, independent expert reviews, academic papers and the grey literature. In particular, the NetworkNature platform offers a valuable entry point to explore <u>case studies</u>, <u>resources</u> and <u>knowledge</u> generated by the European NbS community. NbS can encompass a variety of actions, including conservation of primary and old-growth forests, restoration of forests in riparian buffers and headwater areas, and implementation of systems that green the building envelope (e.g. green roofs and facades).<sup>c</sup> Interested investors, businesses and nature-based enterprises can learn more about the information available on NbS in Box 1.

This report focuses on ecosystems that present opportunities for NbS implementation across Europe. These are urban, forestry, agriculture, rivers, lakes, wetlands, marine and coastal ecosystems. Other ecosystems, such as savannas and deserts, also offer global opportunities for NbS implementation, but fall outside the scope of this report.

#### I.2. What is NbS Finance?

NbS finance refers to the mobilisation and allocation of financial resources from all sources towards actions aligned with UNEA's definition. In practical terms, NbS finance supports a variety of activities such as:

- Ecosystem restoration (e.g. reforestation, peatland restoration)
- Sustainable land and water management (e.g. cover crops, intercropping, agroforestry)
- Green infrastructure (e.g. urban wetlands for flood control, green roofs)
- Conservation efforts that align with climate adaptation or mitigation goals (e.g. avoided ecosystem conversion)

° A full list of specific NbS actions across coastal areas, mountain areas. agriculture, forest and forestry, water management, and urban areas can be found in The <u>economics of</u> Nature-based Solutions: <u>Value</u> categories <u>and</u> approaches to assess NbS economic and financial performance.

Box 1

# Box 1: Navigating information available on NbS as a financial institution, business or NbE

Private actors that are interested in designing, implementing and scaling up NbS have access to a plethora of resources to inform their thinking depending on the challenges they are trying to address, the ecosystems they operate in and the outcomes they are trying to achieve.

For instance, they can explore the information provided by EU Horizon <u>projects</u>, which includes insights from demonstration sites for different ecosystems, marketplaces for NbEs and capacity building initiatives for private sector stakeholders.

#### **Piloting NbS interventions**

Projects such as <u>SUPERB</u>, <u>REST-COAST</u>, <u>PONDERFUL</u> and <u>WaterLANDS</u> are examples of EU-funded projects that have pilots or demo areas to demonstrate the feasibility of NbS interventions. They present insights into financing for restoring and managing forests, coastal ecosystems, pondscapes, freshwater wetlands and coastal wetlands. Additionally, the <u>Nature-based Solutions for the European Union</u> (NBS4EU) is a cluster composed of seven EU Horizon projects that aim to develop and implement NbS to enhance climate resilience across Europe.

#### **Marketplaces**

Projects such as <u>MERLIN</u> and <u>Connecting Nature</u> have set up marketplaces where organisations such as NbEs involved in ecosystem restoration can promote their products, services, best practices and case studies. In the case of MERLIN, the focus is on freshwater ecosystem restoration, whereas the <u>Connecting Nature Enterprise Platform</u> brings together NbEs from 11 different communities of practice offering NbS solutions across a broad range of ecosystems from rural to urban.

#### Databases and case studies of existing NbS

NetworkNature hosts some of the most comprehensive and widely used NbS knowledge databases in Europe. These databases bring together information from numerous EU-funded projects and initiatives, making it a key entry point for practitioners and researchers seeking real-world examples and lessons learned. Complementary contributions come from projects such as MERLIN, NATURVATION and CONEXUS, which have produced databases or case studies of existing NbS in freshwater and urban ecosystems respectively (e.g. Urban Nature Atlas). Some of these projects, and others such as Grow Green, Connecting Nature and FABulous Farmers also aim to provide resources on business cases and financing models for NbS in urban and agricultural ecosystems, respectively.

#### **Box 1 (continued)**

#### Entry points for the private sector and capacity building

Other projects such as <u>Invest4Nature</u>, <u>GoNaturePositive</u>, <u>BIOFIN-EU</u>, <u>Nature-3B</u> and <u>BIOCAPITAL</u> further aim to outline entry points for the private sector to get involved in NbS implementation and scale up private financial flows for these actions. These projects focus on research, use cases and other resources directed at several private finance actors, from corporate investors to central banks. <u>Oppla</u>, an open platform originating from earlier EU research projects, offers broader guidance, software and data on NbS.

Beyond EU-funded projects and initiatives, private actors can find additional platforms that aim to raise awareness and create resources to help scale up investments in NbS. Examples include University of Oxford's <u>Nature-based Solutions Initiative</u>, World Wide Fund for Nature's (WWF) <u>Nature-based Solutions Accelerator</u>, and the World Business Council for Sustainable Development's (WBCSD) <u>Nature-based Solutions</u> workstream. These can provide insights into existing business cases, develop spatial mapping tools and produce guidance documents that help private sector actors integrate NbS within their strategies and operations.

The 2023 United Nations Environment Programme's (UNEP) State of Finance for Nature report tracked global financial flows to NbS, concluding that these actions remain severely underfunded. The report estimates that current flows to NbS are around USD 200 billion. This is only one third of the amount needed to reach climate, biodiversity and land degradation global targets by 2030. This therefore leaves a considerable opportunity for private financial institutions and businesses to invest in NbS, accessing the many benefits that NbS provide for their organisations and supporting these global goals. The benefits that NbS can provide for individual businesses should not be overlooked, including the increased resilience of supply chains and buildings offered by appropriately designed and implemented NbS.

In its estimation of current finance to NbS, the <u>State of Finance for Nature</u> report identified both public and private finance flows.<sup>10</sup> For public finance flows, the report considered expected and actual disbursements targeting:

- Biodiversity and landscapes protection,
- · Sustainable agriculture, forestry and fishing,
- Wastewater management,
- · Pollution abatement, and
- Official Development Assistance (ODA).

Private finance flows referred to transactions resulting from biodiversity offset and credit mechanisms, sustainable supply chains, and impact investments, among others.

d Future investment needs to reach Rio targets were estimated through scenario analysis. Sixteen NbS were included in the model based on their mitigation potential and data availability. These include reforestation, agroforestry and avoided deforestation. NbS such as urban interventions and natural forest management are not included.

The <u>State of Finance for Nature</u> report highlights that 82% of finance flows to NbS are public.<sup>11</sup> In Europe, the <u>Investing in Nature-based Solutions</u> report found only 3% of the EU projects reviewed had more than 50% of the total project costs covered by a private sector investor.<sup>12</sup> It is likely that governments will continue to lead on NbS finance in the future, given the long-term and/or indirect returns that NbS projects deliver and their focus on delivering public services. However, the report estimates that private finance flows for NbS could grow from 18% to 33% of total finance flows to NbS by 2050. Currently, over half of private finance flows occurred via biodiversity offsets and credits and sustainable supply chains. Compared to 2022 figures, philanthropic finance and finance mobilised by ODA via blended finance deals registered the highest per cent increase in NbS investment.

Public actors are actively seeking to attract additional finance for NbS design, implementation and maintenance from private sources. Communiqués issued in 2024 from <u>G7</u> and <u>G20</u> countries mention NbS. These mention the need to accelerate the scaling up of NbS and the need to address financing challenges. In its <u>Recommendations for Scaling Finance for NbS</u>, the UNEP Finance Initiative (UNEP FI) outlines a series of recommendations for governments to implement policies that ensure an increase in private finance mobilisation.

Multilateral and national development banks are integrating NbS into their policies and strategies to support both investment and lending in this area. For example, the International Finance Corporation (IFC) published its Approach to Biodiversity and Nature Finance and the Biodiversity Finance Reference Guide. Here, NbS investments are defined as "solutions that provide infrastructure-type and other services that are material to projects' operations and that can displace or complement man-made structures, such as grey infrastructure". Organisations such as the European Investment Bank (EIB), the Inter-American Development Bank (IDB), the Asian Development Bank (ADB) and the Asian Infrastructure Investment Bank (AIIB) have released publications on the importance of NbS and launched dedicated programs.

Some private sector actors are already actively supporting NbS design and implementation. Financial institutions that have incorporated NbS into their investment and/or lending policies include <u>Triodos Bank</u>, <u>Aviva Investors</u>, <u>Lloyds Banking Group</u> and <u>Swiss Re</u>. Businesses that have committed to finance NbS as part of their corporate sustainability strategies include <u>Ørsted</u>, <u>Microsoft</u> and <u>Unilever</u>. Finally, NbEs operate across sectors and support the design, implementation and maintenance of NbS by contributing their expertise and resources.<sup>13,f</sup>

Scaling NbS uptake with private finance faces additional challenges, above and beyond the current policy landscape. Barriers that are often identified include a perceived lack of viable business and finance models, the need for valuation and accounting methods for assessing and monitoring NbS, potentially high risk and low financial returns and the lack of coordination between public and private finance providers. Many of these challenges were also reflected in EIB's Investing in Nature-based Solutions report, which focused on the state of play in the EU.

e For example, see EIB's <u>Nature</u> <u>Capital</u> <u>Finance</u> <u>Facility</u> (no longer running) and EIB's <u>partnership</u> with WWF to develop NbS projects. See also ADB's NbS Hub for Climate and the Environment.

f NbEs are discussed further in Chapter II, particularly in Box 5.



# I.3. Mobilising Resources for NbS: Aligning with Policy Goals and Financial Sector Regulations

By channelling finance to NbS, private actors can support international policy frameworks, such as the 2030 Agenda for Sustainable Development and the Kunming-Montreal Global Biodiversity Framework. The IPBES Nexus Assessment synthesises evidence in this regard, including a mapping that illustrates how various proposed response options, many of which qualify as NbS, contribute to the achievement of the Sustainable Development Goals (SDGs) and the targets of the Global Biodiversity Framework.

The UNEA 5.2's Resolution 5 establishes that NbS are "among the actions that play an essential role in the overall global effort to achieve the Sustainable Development Goals (SDGs)", as they can deliver multiple environmental, social and economic benefits.<sup>17</sup> In particular, the Resolution states that NbS can help address 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".<sup>18</sup>

The Resolution also highlights how NbS are instrumental to the three UN Rio conventions – the Convention to Combat Desertification (<u>UNCCD</u>), the Convention on Biological Diversity (<u>CBD</u>) and the Convention on Climate Change (<u>UNFCCC</u>). These multilateral agreements all underline the importance of mobilising all sources of finance, including private finance, to achieve their commitments.

g See
Appendix
5 of the
IPBES Nexus
Assessment
Summary for
Policymakers.

Private sector alignment with global goals can be enhanced if associated with policy incentives for private sector actors to (re)direct finance towards NbS. Legislation and policy instruments can play this role, providing relevant means for increasing the demand or attractiveness of NbS in different regions and jurisdictions. For example, the EU's biodiversity strategy for 2030 and the EU strategy for financing the transition to a sustainable economy both aim to involve private actors and enable them to direct more finance flows towards activities that are good for nature, climate and people, including NbS.

Additional examples of EU regulatory instruments with direct and systemic implications for scaling and mainstreaming NbS by the private sector include the EU Nature Restoration Regulation and the EU Taxonomy Regulation. The former sets binding targets to restore specific ecosystems, habitats and species. It also invites member states to promote the deployment of public and private mechanisms to achieve these targets (e.g. through the carbon removal certification scheme). The latter provides a standardised framework for defining and classifying sustainable economic activities. It includes the conservation and restoration of habitats, ecosystems and species, NbS for flood and drought risk prevention and protection, and sustainable urban drainage systems (SuDS).

**Read more:** More information on how NbS are integrated within the EU taxonomy can be found in this blog from Invest4Nature: <u>How EU Taxonomy</u> supports investments in Nature

Robust social and environmental safeguards should be upheld for all finance flows to NbS to ensure that these interventions deliver genuine, long-term benefits for both people and nature. Without such safeguards, NbS projects risk causing harm, eroding their legitimacy and effectiveness. UNEA Resolution 5 emphasises that NbS should "respect social and environmental safeguards, in line with the three Rio conventions, including such safeguards for local communities and indigenous peoples". Concrete examples of such safeguards can be found in UNEP's report, Nature-based Solutions: Opportunities and Challenges for Scaling Up. Insights from EU Horizon projects can be found in Box 2.

## I.4. Towards a Nature-positive Economy

Scaling up finance for NbS is critical to addressing climate change, biodiversity loss and pollution. It also plays a central role in building a nature positive economy, where nature is recognised as the foundation of economic activity and human wellbeing. A nature-positive economy focuses on achieving net positive outcomes for nature by investing in activities that restore and enhance ecosystems.

In a nature positive economy, nature is understood as more than biodiversity in the form of species and habitats. Nature includes terrestrial, freshwater and marine ecosystems, as well as physical processes such atmospheric circulation and the water cycle. It also includes the dynamic ecological systems and processes that sustain life, such as soil formation, water purification and air quality regulation. Nature is viewed as an interconnected web of life and ecological functions essential for environmental health and socio-economic resilience.

- <sup>h</sup> Restoration and NbS are similar concepts that can be mutually supportive. However, as stated in Waylen et <u>al. (2024),</u> it should be noted that "the starting point of restoration is to repair nature itself, whereas the starting point of NbS is societal needs and goals. Restoration's focus of healthy ecosystems will also tend to benefit society. but this cannot be assumed."
- For instance. the Regulation states "A range of Union, national and private initiatives are available to stimulate private financing, such as the InvestEU Programme. Funding nature restoration measures on the ground, through private or public financing, including result-based support and innovative schemes such as carbon removal certification schemes, could be promoted. Private investment could also be incentivised through public investment schemes, including financial instruments, subsidies and other instruments, provided State aid rules are complied with" (16/93).

Box 2

# Safeguards and participatory governance approaches for NbS

When providing finance for NbS projects, private actors should have a robust understanding of their social and environmental implications and engage with all stakeholders to ensure that appropriate safeguards and standards are established. Agreements between the parties to design, implement and maintain NbS should demonstrate alignment with relevant guidance, such as the I<u>UCN Global Standard for NbS</u>, the <u>Cancun REDD+ safeguards</u>, the <u>Principles for Locally Led Adaptation</u> (LLA), the <u>SAGE methodology</u> and the <u>Sendai Framework on Disaster Risk Reduction</u>.

Past and current NbS projects in Europe and beyond have produced resources on best practices and lessons learned from involving local stakeholders. These are discussed further in Chapter IV: Skillset for Advancing NbS Finance.

Rather than simply reducing environmental harm, a nature positive economy shifts the focus to actions that actively regenerate ecosystems. It also redefines value creation by including ecological performance, biodiversity gains and equity considerations. NbS projects like <u>GoNaturePositive!</u> publish clear guidance on what a nature-positive economy might look like, what policy measures are needed, how to support a move towards nature-positive and how to measure progress towards a nature-positive economy.<sup>j</sup>

The NetworkNature project's <u>Task Force 3 on Finance and Business Models (for NbS) in a Nature-Positive Economy</u> focuses on finance and business models that support this transition. It brings together experts from the EU-funded NbS community, including researchers, policymakers and practitioners working across different ecosystems. The Task Force is structured around key thematic areas, including:

- · the mapping of financing instruments and business models,
- · the economic valuation of the benefits of NbS,
- · policies and regulations that impact NbS financing, and
- strategies for activating business engagement in a nature-positive economy.

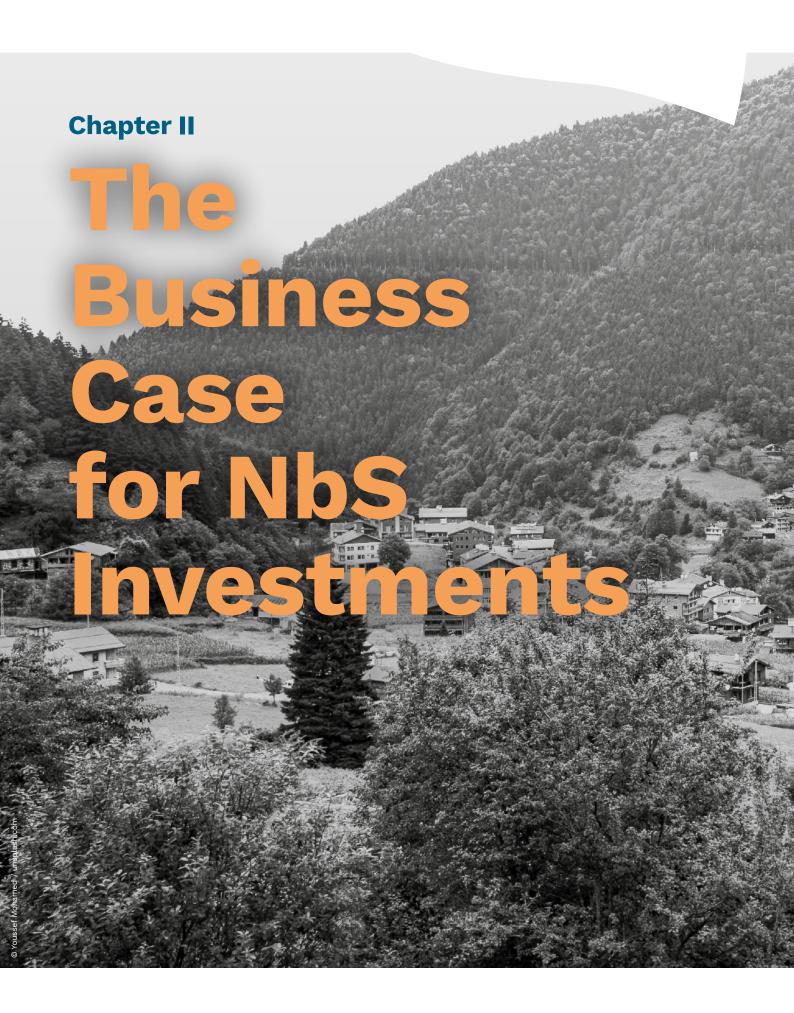
The Task Force explores how finance can support NbS that deliver long-term environmental and social benefits. It also promotes knowledge exchange, identifies enabling conditions and policy gaps, and develops tools to support integrated regulatory reforms that scale up investments in NbS. More than 30 projects from this Task Force came together in 2022, to produce a joint publication identifying the vital role of nature-based solutions in the transition to a nature-positive economy.<sup>k</sup>

- <sup>j</sup> GoNaturePositive! along with CLEVER, BioValue and RAINFOREST are part of a Transformative Change Cluster of EU projects co-ordinated by DG REA, ERCEA, DG RTD and BioAgora. These projects are informed by the IPBES <u>Transformative</u> Change Assessment on the Underlying Causes of **Biodiversity** Loss and the Determinants of <u>Transformative</u> Change (2024).
- k The Task Force will be launching another joint publication titled "Policy Imperatives for a Competitive and Resilient Nature-Positive Economy" later in 2025.

# Building a nature-positive economy involves realigning financial flows, reshaping incentives and fostering new ways of doing business. This includes:

- · directing public and private finance to restore and maintain ecosystems,
- · developing a strong pipeline of investable NbS projects,
- increasing access to finance for nature-positive business models, in particular those of nature-based enterprises (NbEs),
- · integrating natural capital into financial and economic decision-making, and
- ensuring social and environmental safeguards in all NbS investments.

Through its policy theme NbS Finance for a Just Transition to a Nature Positive Economy, NetworkNature highlights the role of the finance and business sectors in enabling a just transition. The theme informs EU policy processes by showcasing insights from research and practice, raising awareness of enabling conditions for scaling up NbS investment, and identifying how financing strategies can better align with the goals of a nature positive economy. It also supports the integration of nature into financial and economic decision-making, drawing from the work of Task Force 3 on finance and business models for NbS.



NbS deliver benefits for human well-being, ecosystem services, climate resilience and biodiversity.<sup>20</sup> Their emphasis on multiple, peoplecentred benefits enables the attribution of multiple values to nature, offering diverse rationales for investment. This includes demonstrating the monetary outcomes that NbS generate, the value that they create and the costs that they help avoid.

This chapter offers financial institutions, businesses and NbEs examples of business cases for NbS across different sectors, illustrating why investing in NbS can be a strategic choice for the private sector. These cases are presented in the context of four key drivers for implementing NbS: enhanced risk mitigation, improved cost-efficiency, maintaining a social license to operate and unlocking opportunities for revenue generation. Each of these drivers is discussed in detail. These drivers can serve as a framework for private sector actors to identify their key rationale for supporting or financing NbS. Based on what would better apply to their specific context, they can match the drivers with a range of suitable NbS actions. This can be supported by existing resources, such as the WBCSD's Nature-based Solutions Map.

Once the rationale for investment is established, business cases should be further developed to include information on the full range of costs and benefits associated with the chosen NbS project. Information on existing approaches to cost-benefit analysis and economic valuation methods can be found in publications by <a href="Invest4Nature">Invest4Nature</a>, <a href="NAIAD">NAIAD</a>, and <a href="CONEXUS">CONEXUS</a>. The latter explores how valuation methods are perceived and applied by local governments in Europe and Latin America, and highlights the potential of participatory approaches to strengthen business cases.

Further resources on NbS business cases include:

- CONEXUS <u>Valuation of urban nature-based solutions in Latin American and European cities</u>. A peer-reviewed article explores valuation techniques for urban NbS
- REGREEN Prospectus For Nature-Based Solutions Business Investment. An approach for developing sustainable business models is outlined in theory and applied in practice. This results in three distinct business models for NbS: i) a public-private driven model aiming for a balanced and fair relationship between parties; ii) a commercially driven consultancy model; and iii) a citizen driven model.
- NAIAD Handbook for the Implementation of Nature-based Solutions for Water Security: Guidelines for designing an implementation and financing arrangement. The handbook offers a practical step-by-step guidance tools and templates that support private and public sector proponents of NbS to develop the full business case of these projects, turning early-stage ideas into bankable investment proposals
- <sup>1</sup> This selection of drivers is aligned with other publications on private sector drivers for NbS and restoration finance, such as the UN Environment Programme World Conservation Monitoring Centre's (UNEP-WCMC) Restoration <u>Project</u> Developers' <u>Playbook</u> on Private Finance: Europe and WBCSD's NbS Blueprint: Building <u>business</u> cases for Nature-based Solutions.

- NetworkNature <u>Nature-based solutions Business information package</u>. This
  resource presents examples of NbEs and sets out the business opportunities
  offered by NbS. Business model canvases are introduced that have been
  adapted especially for NbS.
- NATURVATION <u>Taking Action For Urban Nature: Business Model Catalogue</u>.

  Provides examples of business models for NbS creating several values, including risk reduction for extreme weather and urban NbS for health.
- UNaLabs <u>Business Models and Financing Strategies</u>. This report provides city planners with examples of business models for selected NbS. It also provides financing strategies that can support NbS implementation and operation efforts.
- WaterLANDS Review of Business and Finance Models and Market Demand.

  The report examines business and financing options that are most relevant to the upscaling of wetland restoration in Europe.

## **II.1. NbS for Risk Mitigation**

NbS can be a key tool for businesses and financial institutions to mitigate risks and improve their resilience. Businesses, and by extension their financiers, depend upon ecosystem services which are provided by nature, but also directly and indirectly impact nature through their actions. NbS can be deployed to reduce the negative impacts that businesses have on nature while also benefiting ecosystems and strengthening the ecosystem services that they provide. In this way, NbS can help businesses mitigate the risks that they face from the potential loss of ecosystem services.

Recognition of NbS as a risk mitigation and future proofing tool for financial institutions and businesses has been driven by both regulatory requirements and pressures from financial regulators and business associations.<sup>m</sup> For example, the *Guidelines on the management of ESG risks* from the European Banking Authority will apply from 2026 and "set out requirements for institutions for the identification, measurement, management and monitoring of ESG risks". NbS are one tool that could be applied within the scope of these guidelines to manage Environmental, Social and Governance (ESG) risks<sup>21</sup>

Businesses operating in sectors with high dependencies or impacts on nature, whether directly or through their supply chains, are clear candidates for using NbS to mitigate operational risks. These sectors include, for example, water, agriculture, forestry, real estate, tourism, mining and energy. Tools such as <a href="ENCORE">ENCORE</a> offer a starting point for companies to understand where their direct operations and supply chains interact with natural ecosystems. Companies can then leverage this information to identify and assess appropriate NbS.

NbS can mitigate risks linked to climate change, environmental degradation, pollution and health. A comprehensive list of challenges that NbS can address is found in the report <u>Value categories and approaches to assess NbS economic and financial performance</u> by Invest4Nature, along with examples of specific NbS that can be applied to these challenges. However, NbS can occupy more space than grey

<sup>m</sup> A sample list of legislative and voluntary drivers with the potential to increase private finance for nature conservation and restoration in Europe can be found in: The <u>current state,</u> <u>opportunities</u> and <u>challenges</u> for upscaling private investment in biodiversity in

infrastructure alternatives, and may overlap with private land. Therefore, effective implementation calls for a multidisciplinary and landscape-scale approach involving many stakeholders.

Financial institutions can adopt a variety of approaches to calculate their nature-related risk exposure, and then assess how NbS can be used to reduce these risks.

Value at risk (VaR) methods and scenario analysis can be used in this context.<sup>22</sup> Once a financial institution's lending and/or investment portfolios are screened, appropriate NbS interventions that reduce risks can be selected. However, these interventions may not be implemented if they are not required by legislation or if customers are not incentivised to engage with associated products. Understanding risk is also important for insurers, but the role that NbS can play in reducing the risk associated with assets that they insure is not yet widely understood. Some projects explore how risk reduction from NbS implementation can be integrated into risk calculations for insurance products. See more on this in Box 3.

Businesses can integrate NbS within landscapes associated with their supply chain to address the nature and climate-related impacts that they face. This approach is known as insetting, and it can help build ecological, social and economic resilience and mitigate material business risks. Examples of insetting could include companies supporting farmers in their supply chains to adopt NbS like creating small scale wetlands to reduce flood risk.<sup>23</sup> Combined with a wider assessment of nature-related impacts and dependencies, such actions can help reduce the impacts of producing raw materials, and help future proof supply chains.<sup>24</sup>

More granular risk analysis can further guide businesses with selecting priority NbS interventions to mitigate operational risks. This can include actions such as completing the "Locate" step set in the LEAP process developed by the Taskforce for Nature-related Financial Disclosures (TNFD) and integrating nature assessments with other financial and non-financial analyses (e.g. climate risk assessments, carbon emission accounting, strategic priorities).<sup>25</sup>

Table 1 below, presents a range of short case studies of how NbS have been used across different sectors as an approach to risk mitigation. In these cases, risk mitigation has provided a rationale for mobilising (private) finance to support the implementation of NbS projects and interventions, in Europe and beyond. Additional examples for other sectors can be found in Annex A.

Further resources on NbS for risk mitigation:

NATURANCE Improved methods for the assessment of risk reduction
 achieved by NbS for insurance and for assessing co-benefits to society. This
 deliverable explores improved metrics and modelling approaches for assessing
 NbS effectiveness in risk reduction, including hazard, exposure, and vulnerability
 modelling. It also covers long-term ecosystem services modelling and co benefit monetisation using choice experiments.

Box 3

# NbS for risk mitigation: the NATURANCE and NAIAD projects and the insurance perspective

The NATURANCE project investigates how NbS can support disaster risk reduction and strengthen the role of the insurance and finance sectors in climate adaptation. Its deliverable "Methods for Assessing Risk Reduction and Co-Benefits by Nature-based Solutions" reviews current assessment methods, identifies gaps, and outlines opportunities for integrating NbS into insurance and investment frameworks. It highlights the importance of aligning risk models with the temporal and spatial dynamics of NbS and calls for more context-sensitive, participatory approaches to valuation.

NAIAD stands for *Nature Insurance Value:* Assessment and Demonstration. Running from 2016 to 2020, the project aimed to operationalise the insurance value of ecosystems to reduce the human and economic costs of risks experienced in the water sector (floods and droughts). The project aimed to develop and test the business models necessary for the mainstreaming of NbS in managing water-related risks.

To this end, the project analysed several natural assurance schemes (NAS). NAS are defined as NbS solutions applied to risk and impact reduction in the context of water-related risk. The project developed a NAS canvas and a Financing Framework for Water Security tailored to NbS to evaluate the business models of existing and future NbS projects focused on water-related risk reduction. These frameworks made it possible to gather information on the flow of ecosystem services, as well as on costs and income streams. More information on the identified schemes and the application of the financing and the canvas framework can be found in deliverables 7.2, 7.3 and 7.4.

Both frameworks were applied to NAIAD's nine demonstration cases. To prove the role that ecosystems play in reducing risks, the project developed assessment tools (e.g. Co\$tingNature, Eco:Actuary, Flood-Excess-Volume tool) and tested them at these locations. Case studies and lessons learned from assessing the economic value of NbS for risk reduction can be found <a href="here">here</a>. In addition, an overview of the five different roles that the insurance sector can play in mainstreaming NbS can be found <a href="here">here</a>.

Table 1 - NbS business cases and risk mitigation

| Sector      | Challenges  | Examples of NbS<br>for risk mitigation   | Case studies and further reading   |
|-------------|---|--|--|
| Agriculture | Loss of soil<br>carbon,<br>carbon<br>dioxide<br>emissions<br>from the<br>sector more<br>generally | Cover cropping<br>and minimal<br>tillage to increase<br>soil carbon                        | NbS linked to sustainable land management practices can effectively mitigate risks associated with loss of soil carbon and broader carbon dioxide (CO <sub>2</sub> ) emissions from land-based sectors by minimizing soil disturbance, enhancing soil health, as well as promoting the retention of organic matter in soils, thereby reducing emissions and slowing or reversing soil carbon loss.   |
|             |   |  | The project "Soils of Brittany" aims to support farmers to transition to regenerative agriculture. The project brings together an impact investment fund – the Livelihoods Carbon Fund (LCF2), the Region of Brittany, the Regional Chamber of Agriculture and local farmer association Sols d'Armorique in a novel investment model.  |
|             |   |  | During the first 5 years of the project (transition phase), the Region and the Livelihoods Carbon Fund are committed to paying the beneficiaries EUR 80 per hectare annually. Then, over the next 5 years, committed farmers will receive EUR 46 per hectare to maintain their practices. The Livelihoods Carbon Fund will also measure the carbon stored in the soil per year as well as the reduction of carbon emissions through reduced fuel consumption and reduced chemical fertilisers. |
|             |   |  | Read more: [Livelihoods Carbon Fund] Press Release   |
| Water       | Stormwater<br>runoff<br>overwhelming<br>sewerage<br>systems                                       | Retention pond to<br>collect rainwater,<br>nature-based<br>methods for<br>water absorption | Started in 2006, the Room for the River project in the Netherlands has deployed NbS to increase water absorption and reduce flood risks.   |
|             |   |  | The Dutch government has funded the project, collaborating with a range of public and private partners to ensure effective implementation. For instance, the government has used proceeds from green bonds to dismantle and replace an old sluice as well as digging a new branch river. The Room for the River 2.0 programme will expand on these efforts.  |
|             |   |  | Read more: [Dutch Foundation for Applied Water Research]: Room for the River   |
| Forestry    | Floods, fires,<br>erosion,<br>pollution   | Reforestation,<br>forest<br>conservation,<br>sustainable forest<br>management              | NbS linked to reforestation, forest conservation, and sustainable forest management can mitigate a range of environmental and socio-economic risks through a variety of ecological mechanisms (e.g. carbon sequestration, erosion control, water cycle regulation).  |
|             |   |  | In 2023, The Alliance for Ecosystem Services of Spanish region Castilla-La Mancha was formalised by regional decree. This is a platform for dialogue and public-private cooperation which recognises the value of the environmental benefits that the region's forests bring to their citizens.  |
|             |   |  | The program encourages voluntary contributions from cities and corporations for sustainable forest management. Seven cities and Carrefour have committed to the initiative, supporting Forest Stewardship Council (FSC) certified forests in Cuenca province. Cooperation is promoted through voluntary payments for ecosystem services, project financing, and research.  |
|             |   |  | Read more: [Finance Earth and EIB] <u>Sustainable forest management</u>  |

- NAIAD NbS Solutions Guide. Helps users to match NbS types to different types of risk.
- FABulous Farmers Business Models. This document lists twelve innovative business models based on functional agrobiodiversity measures, that have been implemented and tested by farmers across North-West Europe, in the pilot areas of the Fabulous Farmers project.
- Investing with Nature: Exploring Investment Opportunities Across Ecosystems. A series of six primers: Introduction, Oceans & Coastal, Forests, Freshwater, Farmland, Urban Areas. These primers from UNEP FI aim to enable financial institutions to start a journey towards investments in NbS across terrestrial, freshwater and marine ecosystems following the concepts of decent work and just transition. The primers highlight key opportunities, case studies and relevant resources.
- Nature-Positive Insurance Briefing Paper. UNEP FI explores in this paper how
  the insurance sector can contribute to nature-positive outcomes through
  underwriting, risk modelling, and investment strategies. It offers concrete
  recommendations and examples to align insurance practices with biodiversity
  and climate goals, including the role of NbS in reducing risk and creating new
  insurance products.
- Doubling Down on Nature: State of Investment in Nature-based Solutions for Water Security. As the global water crisis deepens, NbS are gaining attention for their role in reducing water risks and restoring ecosystems—but it's unclear whether this growing interest is translating into real investment. To answer this, The Nature Conservancy and Forest Trends released this report, the most comprehensive global assessment of finance directed specifically toward water-focused NbS. Findings per region, including the EU are presented.
- The <u>Nature-Based Solutions Opportunity Scan</u>. A method developed by the Global Facility for Disaster Risk Reduction (GFDRR), leverages Earth Observation to identify investment opportunities in NbS for climate resilience in cities and coasts across the world. GFDRR, administered by the World Bank has a comprehensive and recognised set of tools, methods and NbS Database.

## **II.2. NbS for Improved Cost Efficiency**

NbS can deliver cost efficiency savings to businesses and NbEs by reducing or avoiding costs associated with environmental degradation and conventional infrastructure development. Savings can be linked to both capital and operational expenses, such as lower maintenance costs in the real asset sector and reduced reliance on expensive inputs in the water sector.

Cost efficiency can manifest differently depending on the perspective and objectives of the actor involved, for example:

<sup>n</sup> The direct cost reduction benefits of NbS may be less clear for financial institutions, but they may benefit from reduced risks when the customers they lend to implement NbS. For more information, see the Wall Street Journal article "For Banks, a 3-Stage Approach to <u>Implement</u> a Nature-<u>Positive</u> Strategy".

- From a public planning or policy perspective, cost efficiency often relates to Cost-Benefit Analysis (CBA) or public expenditure effectiveness, where NbS may deliver multiple co-benefits (e.g., flood control, air quality, recreation) at a lower total cost than grey infrastructure alternatives.
- From a corporate or value chain perspective, cost efficiency could involve
  reductions in operational risks or input costs (e.g. water retention in agroforestry
  systems, soil stability), or long-term reputational and regulatory benefits that
  improve the return on investment. For infrastructure developers, it may relate
  to lower lifecycle costs, reduced need for hard engineering, or enhanced project
  bankability due to increased climate and biodiversity resilience.

The adoption of NbS becomes more attractive compared to alternatives when different business cases reinforce one another. For example, a meta-analysis of 87 studies, selected from a review of over 20,000 articles, found that 71 per cent of the studies identified NbS as consistently cost-effective. An additional 24 per cent found them to be cost-effective under specific conditions. This illustrates how the business case for risk mitigation is reinforced by cost-related benefits.

NbS projects may also introduce additional risks, and it is important for private investors and infrastructure developers to have awareness of those. These include increased contractual complexity, and the likelihood of higher transaction costs related to the need to coordinate multiple actors and objectives. These characteristics can make NbS less straightforward to implement and finance through traditional private capital channels. For a discussion on additional financing challenges faced by NbS projects, see Chapter 4 of the NAIAD publication Handbook for the Implementation of Nature-based Solutions for Water Security.

The balance may shift even further in favour of NbS if the benefits that are delivered are calculated in a manner that takes broader biodiversity, climate and livelihoods benefits delivered by NbS into account. Benefits such as carbon sequestration services, disaster risk reduction, improved ecosystem services and healthier employees (as seen in Table 2, below) can be linked to monetary gains, further strengthening the case for private sector support.<sup>27,0</sup> Benefits should be examined through a people-centered lens, incorporating inclusivity and just transition principles, as poorly implemented NbS can lead to negative social outcomes, such as green gentrification, displacement, or unequal access to benefits. See the NetworkNature Knowledge Brief <u>Leaving no one behind</u> for more information on inclusive NbS.

Financial institutions can encourage business uptake of NbS interventions to deliver cost-efficiency outcomes to help increase return on investment and reduce loan defaults. For example, asset managers and commercial banks could present potential and existing clients with information on NbS projects that could add value in their sector, and direct resources towards businesses that promote NbS integration within their operations. NbEs that specialise in NbS that displace or complement traditional infrastructure and practices (e.g. green densification, green health, regenerative agriculture) can also be supported through tailored credit lines, equity investments and other financial instruments.

Methodologies for calculating the financial value of such benefits have been outlined by Invest4Nature in D2.1 – Value categories and approaches to assess NBS economic and financial performance.

Table 2 - Generic and specific benefit categories of NbS. From Invest4Nature, <u>D2.1 - Value categories and approaches to assess NbS economic and financial performance</u>

| Generic benefits               | Specific benefits   |
|--------------------------------|---|
| Adaptation to climate change   | <ul> <li>Reduced flood risks (rivers, wetlands, sea-level)</li> <li>Heat mitigation (Urban Heat Island)</li> <li>Alleviation of storm impacts</li> <li>Reduced incidence of droughts and water scarcity</li> </ul>  |
| Mitigation of climate change   | Reducing impacts of climate change  |
| Disaster risk reduction        | Reduced damage from avalanches, landslides, earthquakes   |
| Improved environmental quality | <ul> <li>Reduced erosion</li> <li>Improved air quality</li> <li>Improved water quality</li> <li>Enhanced biodiversity</li> <li>Reduced noise pollution</li> </ul>   |
| Socio-economic benefits        | <ul> <li>Improved economic possibilities and jobs</li> <li>Increased awareness and education</li> <li>Reduced economic challenges</li> <li>Improved health and well-being</li> <li>Improved equality, integration, environmental justice, social inclusion, including improved security and reduced crime rates</li> <li>Reduced energy-related challenges, sustainable transport patterns</li> </ul> |

Businesses involved in infrastructure development and land use are well placed to integrate NbS into their operations on cost-efficiency grounds. The implementation of site-level cost-benefit analysis and economic valuation methods (e.g. through avoided damage and replacement cost estimation, value transfer and stated preference approaches) can help make the case for NbS to complement or displace traditional infrastructure and practices.

Table 3 below presents examples of NbS projects that improved cost efficiency over alternatives. For these projects, cost efficiency has served as a justification for private sector involvement. More examples can be found in Annex A.

## **II.3. NbS Ensuring Social License to Operate**

Financial institutions and businesses can harness NbS to strengthen relationships with local stakeholders and gain their approval. Social license to operate, or social license, is the "ongoing acceptance of a company's business practices by its employees, stakeholders and the general public", which is closely linked to trust.<sup>29</sup> NbS that are linked to social license have business cases that improve social resilience in addition to delivering environmental benefits. This includes through the creation of jobs and the provision of health benefits. It is fundamental for these projects to demonstrate the involvement and support of local communities. It is also essential for these projects to enhance the livelihoods of local communities in significant ways to reduce reputational risks.

Table 3 - NbS business models and improved cost efficiency

| Sector         | Challenges  | Examples of NbS for risk mitigation | Case studies and further reading   |
|----------------|---|-------------------------------------|--|
| Real<br>Estate | Poor air<br>quality in and<br>around built<br>environment,<br>affecting<br>health and<br>productivity | Green walls,<br>street trees        | In 2024, the Stockport Bus Interchange development has seen the integration of a 'blue-green roof' drainage system (a roof garden with integrated drainage control). Before project implementation, research from the EU IGNITION project has found that this system could deliver \$116,000 in capital cost savings by avoiding the need for deep digging in contaminated land to install storm attenuation tanks. The work was carried out by Wilmott Dixon, entrusted by Transport for Greater Manchester.  Read more: [EU-funded]: Case studies on financing Green Roofs The IGNITION project and Nature-based solutions to the climate emergency; The benefits to business and society. |
| Agriculture    | Reduction in<br>pollinators;<br>Increase in<br>pest insects   | Flower strips                       | Flower strips have been used in the Netherlands in farmers' fields. They attract pollinators and natural predators, which in turn reduces the need for chemical crop protection products, which saves on the cost of inputs.  Farmers in the Netherlands receive EUR 2000 to EUR 2500 per hectare flower strip. The Southern Agriculture and Horticulture Organization facilitates a platform where companies or other parties can sign up when they are interested in paying for flower strips.  Read more: [FABulous Farmers]: Business case studies (pg 21).  |

Where NbS projects are intending to improve the social licence to operate, they are likely to take place in proximity to companies' assets and operations. Companies across various sectors, from food and drink to technology, can work with local stakeholders to identify the NbS interventions and benefits that are considered most needed. For example, this could include watershed conservation, flood management, and/or increased access to green space. The NbS that are selected might also depend on the company's strategic priorities. For instance, strengthening social license to operate within one territory could also contribute to meeting a companies' climate and nature commitments.

It is essential for business models to clearly articulate how NbS can drive social development directed at local communities' needs. Project design should be informed and driven by meaningful stakeholder consultations and knowledge-sharing sessions. Table 4 presents two NbS projects that have strengthened companies' social license to operate. More examples can be found in Annex A.

## **II.4. Revenue Generation Through NbS**

Some NbS lead to revenue generation opportunities for financial institutions and businesses. This provides a business case that integrates NbS into income streams. Income streams that are generated by products and services linked to ecosystem services can provide a robust justification for private NbS finance. Table 5 and Box 4 provide information on some business models based on NbS revenue generation. These models can be combined as appropriate to diversify revenue sources and reduce operational, reputational and financial risks. More examples can be found in a paper produced by Connecting Nature on economic sectors that generate revenue from sustainable use of nature as a core part of their business.<sup>30</sup>

Table 4 - NbS business models and social license to operate.

| Table 4 - NDS business models and social license to operate. |   |   |   |
|--|---|---|---|
| Sector   | Challenges  | Examples of NbS for risk mitigation   | Case studies and further reading  |
| Water  | Sewerage<br>effluent<br>damaging<br>rivers and<br>streams | Wetland for water<br>treatment and<br>filtering   | Norfolk Rivers Trust, Anglian Water and the Environment Agency created a wetland water treatment facility to improve the quality of water being returned to River Ingol. The project is entirely funded by Anglian Water as part of its strategic commitment to act in affected rivers.   |
|  |   |   | While this project has a clear beneficial outcome for water quality, it has also built Anglian Water's social license too. The site is next to a footpath that is regularly used by the public, and primary and university students have been involved in planting and education efforts. The team has also utilised the site as a flagship project to promote the use of NbS to other water companies and land managers. |
|  |   |   | Read more: River Ingol Wetland Creation: A Partnership to benefit all   |
| Energy Pollution, Marine restoration biodiversity loss       | Marine restoration  | Ørsted and ARK Rewilding Netherlands are testing marine rewilding and biogenic reef restoration at two sites in the Dutch North Sea. Ørsted's involvement in NbS is linked to their onshore and offshore energy projects and their ambition to have a net-positive biodiversity impact. |   |
|  |   |   | Ørsted has a <u>dedicated policy</u> that informs their stakeholder engagement process. With relation to social license to operate, the policy states that "after due consideration of the expectations and opportunities within our project's area of operations, Ørsted will assess and implement community initiatives in compliance with applicable laws and tender rules."   |
|  |   |   | Read more: Ørsted's Biodiversity Projects and Partnerships  |

Table 5 - List of business models based on revenue generation

| Business Model                       | Example Description   | Revenue Streams  |
|--------------------------------------|---|--|
| Eco-Tourism Operations               | Companies invest in or manage eco-tourism destinations based on intact ecosystems.  | Revenue from park entry fees, guided tours and eco-lodging.  |
| Nature-Based Product Sales           | Businesses sell products harvested or derived from conserved, restored and sustainability managed ecosystems.   | Revenue from non-timber forest products, aquaculture and biomass.  |
| Payment for Ecosystem Services (PES) | Businesses or organisations receive payments for maintaining or enhancing ecosystem services.   | Payments from governments, utilities or downstream beneficiaries.  |
| Real Estate with Green Features      | Real estate developers integrate<br>NbS into projects to increase<br>property values  | Higher sales prices, rental premiums, or tax incentives.   |
| Certification and Branding           | Businesses brand and sell eco-<br>certified products linked to NbS<br>practices linked to sustainable<br>forestry, regenerative farming and<br>sustainable aquaculture. | Enhance product differentiation and premium pricing for certified timber, seafood, or agricultural products.                             |
| Carbon Markets                       | Businesses develop and manage projects that generate carbon credits for sale.   | Selling carbon credits to voluntary or compliance carbon markets.  |
| Biodiversity Markets                 | Businesses create and trade credits from biodiversity restoration or offsets.   | Selling credits to developers or corporations required to offset biodiversity impacts or voluntarily contributing to biodiversity goals. |

Private financial institutions can consider integrating NbS support into their lending and investment strategies. For example, specialised credit lines and financial products that support NbEs and the deployment of projects on the ground can be developed. More information on NbEs and their business models can be found in Box 5, along with resources for further information.

# Financial institutions can explore different means to assist businesses and project developers with setting up NbS projects that generate revenues and are bankable.

This assistance involves providing technical assistance grants and concessional finance. NbS financing mechanisms are discussed in Chapter III of this report. In Europe, there are a series of voluntary and compliance-based systems to incentivise financial institutions to support NbS. Many of these can be found in an academic paper published in Nature in 2025 (The current state, opportunities and challenges for upscaling private investment in biodiversity in Europe). Box 6 shows the example of a project that has conducted research on how regulated nature markets can lead to scaled-up private finance.

Box 4

## **Developments in voluntary biodiversity credits**

The <u>Biodiversity Credit Alliance (BCA)</u> defines voluntary biodiversity credits as "certificates that represent a measured and evidence-based unit of positive biodiversity outcome that is durable and additional to what would have otherwise occurred". These credits are generally understood as separate from environmental offsetting regulations. Instead, they provide a way for companies to support nature-positive actions after applying the mitigation hierarchy. In addition to providing a definition for voluntary biodiversity credits, the BCA has published additional <u>knowledge products</u> to "assist in the formulation of a transparent and trusted market". These include issue papers on building just partnerships and driving sufficient credit demand.

Voluntary biodiversity credits are mentioned as a potential source of finance under Target 19 of the Global Biodiversity Framework.<sup>31</sup> In addition to the BCA, France and the UK established the <u>International Advisory Panel on Biodiversity Credits</u> in June 2023 to facilitate the creation and growth of this mechanism globally. In October 2024, this initiative published a <u>Framework</u> for high integrity biodiversity credit markets.

In July 2025, the European Commission released their <u>Roadmap for Nature Credits</u>. This sets out the Commission's vision for nature credits as a tool to mobilise private finance to complement public funding for nature. The roadmap sets out an aim for the development of high integrity nature credits to "turn investment in nature into a reliable engine of value creation".<sup>32</sup> Within Europe, some countries such as <u>France</u>, <u>Finland</u> and <u>England</u> are designing mechanisms to issue voluntary biodiversity credits in addition to their compliance offset markets.

Voluntary biodiversity credits can become an additional source of income stream for NbS projects in Europe. However, challenges that characterise this nascent market include the creation of robust demand drivers, concerns over greenwashing risks and the potentially high costs of methodologies to calculate credits.



Box 5

#### **NbE** business models

NbEs are organisations that generate revenue through activities that restore, conserve or manage nature sustainably.<sup>33</sup> These entities, usually operating in the private sector, contribute to NbS design and implementation, due to their expertise in fields such as sustainable construction, water management and landscape architecture. A list of NbE typologies can be found in Connecting Nature's <u>Nature-based Enterprises Guidebook</u>.

Through actions such as setting up the <u>Connecting Nature Enterprise Platform</u> and projects such as <u>Invest4Nature</u>, <u>GoNaturePositive!</u> and <u>NbS EduWorld</u>, knowledge is being advanced on NbE business models that align economic development with ecological health. Links to the resources pages of these projects are provided below:

- GoNaturePositive! <a href="https://www.gonaturepositive.eu/resources">https://www.gonaturepositive.eu/resources</a>
- Invest4Nature <a href="https://invest4nature.eu/results/reports">https://invest4nature.eu/results/reports</a>
- NbS EduWorks <a href="https://nbseduworld.eu/learning-units">https://nbseduworld.eu/learning-units</a>

Given regulatory development, such as the EU Nature Restoration Regulation, there is an opportunity to channel more public and private finance towards NbEs. Investments into these businesses will make it possible for them to implement nature-based value propositions and capitalise on new market opportunities. At the EU level, NbE development can currently be supported through initiatives such as <u>Green Assist</u>, an advisory initiative under <u>InvestEU</u> and funded from the <u>LIFE Programme</u>.

The <u>Connecting Nature Enterprise Platform</u>, a spin-off from the Horizon Europe Connecting Nature project, is an NbEs-led knowledge-sharing community of practitioners addressing real-world challenges such as financing and business models. The <u>Invest4Nature</u> project has published a policy brief on measures to support investment in NbEs.

It is important that NbS revenue generation potential is properly forecasted within a project's business plan when targeting private sector funders. There are several resources that focus on identifying possible income streams and selecting methods to account for their economic value, including CONEXUS's step-by-step guide. Large scale EU-funded restoration projects, namely MERLIN, REST-COAST, SUPERB, and WaterLANDS have recently shared insights on revenue generation in a dedicated report, Supporting the development of national restoration plans.

Table 6 below presents three examples of NbS projects that have generated revenues from one or multiple nature-based products and services. More examples can be found in Annex A.

Box 6

# Peatland restoration through carbon markets: Insights from WaterLANDS

WaterLANDS is a EUR 23.6 million, 5-year EU-funded project that aims to restore wetland sites across Europe and lay the foundations for scalable protection across much wider areas. The project runs four action sites and 15 knowledge sites across Europe. The project has identified three key steps for mobilising finance for large-scale wetland restoration, namely building knowledge on financial and business models, designing and testing such models at site level and creating a legacy by identifying pathways to upscale financial instruments.

To contribute to the implementation of these steps, the project has drafted a series of resources on the contribution that compliance and voluntary carbon markets can have in raising nature finance in specific locations.

Examples of such national and regional compliance and voluntary carbon standards in Europe include the UK Peatland Code, MoorFutures in Germany, Valuta voor Veen in the Netherlands and Peatland Finance Ireland. More information on these systems and on specific peatland projects that have leveraged these standards to generate carbon revenues can be found in WaterLANDS' Deliverable <u>4.1</u> and <u>4.2</u>, as well as in Landscape Finance Lab's <u>Investing in Peatlands whitepaper</u>.



Table 6 - NbS business models and revenue generation

| Sector      | Challenges   | Examples of NbS for risk mitigation                                 | Case studies and further reading  |
|-------------|--|---|---|
| Agriculture | Finding a<br>sustainable,<br>and cost<br>efficient,<br>alternative<br>to chemical<br>fertilisers | Bi- and<br>companion crops<br>supporting a<br>premium wheat<br>crop | Leguminous plants fix nitrogen into soil through their roots, acting as a natural alternative to chemical fertilisers, and can also attract beneficial insects. They can be incorporated into a cropping rotation with wheat or other cereals, either as a companion crop (sown alongside), bi-crop (sown between the rows of main crop) or cover crop (sown then ploughed in before the main crop is sown).  |
|             |  |   | In the UK, food company <u>Wildfarmed</u> buys these crops at a premium price, to reflect the growing cost and environmental benefit resulting from regenerative agriculture practices. This business model aims to increase farmer profitability while also increasing biodiversity, soil health and ecosystem services. The Wildfarmed model has also been <u>supported</u> by corporate partners such as sport and entertainment caterer Levy's.  Read more: [EU – FABulous Farmers] <u>Business Case Studies</u>  |
| Forestry    | stagnation h   | Sustainable<br>harvest of wild<br>species                           | In the Iberian Highlands, Rewilding Spain aims to address land abandonment and economic stagnation through nature-based interventions. They are working with local communities to facilitate the sustainable use and trade of pine resin and edible mushrooms. Wild herbs can also provide an additional income stream. To increase the harvest efficiency and make it more profitable, Rewilding Spain are developing training for local people on pine tapping and other natural resource harvesting skills.  Wild mushrooms are already being sold to local restaurants, and Rewilding Spain are looking to identify |
|             |  |   | new and more profitable markets for the resin and other products. They are also implementing regulatory frameworks to ensure the harvesting of mushrooms remains sustainable.  Read more: Enhancing landscape restoration with sustainable use of wild species: Guidance for  |
|             |  |   | Practitioners.  |
| Tourism     | Local<br>development   | Rewilding and guided tours, glamping                                | Nature-based company La Maleza Wildlife Park, located in the Iberian Highlands rewilding landscape, received a loan from Rewilding Europe Capital to launch guided tours of areas where Tauros were introduced as part of the regional rewilding program. The loan was also used to make a glamping area for tourists.  |
|             |  |   | Read more: Safari Rewilding La Maleza: rewilding and ecotourism go hand in hand   |

## **Chapter III**

# NbS Finance Models



Given the variety of NbS initiatives and revenue generation options, it is no surprise that NbS can attract many different types of financing models.

Often, one NbS project may combine several different sources of financing and funding. This is commonly driven by public and private actors' interests in investing in NbS to enable the multiple co-benefits that these solutions provide.

This chapter explores the range of financing models and mechanisms that can directly support the development, implementation and scaling up of NbS. It provides an overview of the main public, private, blended and philanthropic models that directly mobilise or structure funding for NbS, with specific examples. The chapter also touches on how different financing mechanisms suit different growth stages of NbS projects.

When referring to NbS finance, transition finance should also be considered. Transition finance refers to investments that support sectors with a negative impact on climate, biodiversity and the environment as they work to become more sustainable.<sup>34</sup> Investing in NbS supports activities that reduce emissions, builds resilience and enhances ecosystems. As such, NbS finance models play a key role in transition finance. By addressing industries' exposure to nature-related risks and dependencies, NbS finance models can also enhance the resilience of the economy.<sup>34</sup>

# III.1. NbS Financing and Funding Strategies: an Overview

It is important to understand the distinction between financing and funding of NbS projects. Financing refers to the upfront money required to start an NbS initiative, which needs to be repaid over time. Funding is how the NbS initiative is paid for and financially maintained in the long run. Financing and funding can both be public, private or a mix of the two.<sup>35,36</sup> Sometimes, the financing can come from the same source as the funding - for example, a government can both finance and fund an NbS project.<sup>37</sup> It is worth noting, however, that while these are distinct concepts, they are sometimes used interchangeably.

# Financing can be categorised into three key models: commercial, concessional or public:

 Commercial finance is offered at or above market rates and typically originates from private businesses or financial actors. Its main objective is to generate revenues.<sup>38,39,40</sup>

- Concessional finance is offered below market rate or at conditions more favourable than commercial finance (e.g. with an extended payback timeline) and can be from public or private sources.<sup>38,39,40</sup>
- Public finance is provided by the public sector, in line with government policies.
   Both concessional and public finances can encompass objectives broader than pure financial return, including social and environmental returns.<sup>41</sup>

Funding typically comes from what the Organisation for Economic Co-operation and Development (OECD) defines as the "3T concept": taxes, tariffs or transfers. 42,43 Taxes are raised from society and help provide public funding. Tariffs are a payment from the user or polluter (mostly raised via private funding). Transfers are typically payments from external donors (e.g. ODA, philanthropy) that are not tied to a project outcome. Unlike taxes (public funding) and tariffs (mainly private), transfers support both public and private funding. 44 For example, public funding for NbS can be from national governmental budgets or utility fees, whereas private funding can be from user fees, insurance-based funding or carbon credits. The funding mechanism constitutes a core part of a project's revenue generation model. The clearer and more reliable the mechanism is, the more confident investors can be when they provide financing.

Financing and funding can combine private and public sources in different ways, as illustrated in Figure 1.<sup>45</sup> For example, an NbE aiming to develop green roofs in

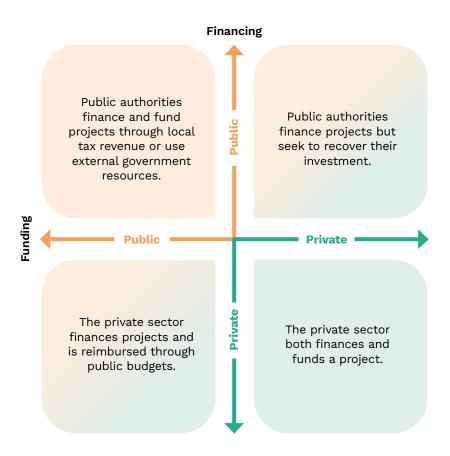


Figure 1 - Types of financing and funding models (adapted from Altamirano et al. 2021)

urban settings might be financed initially through a public concessional loan that is blended with a grant, with running costs funded through building service charges or user fees.

Further resources on financing and funding NbS:

- Paying for green: A scoping review of alternative financing models for naturebased solutions. Provides further analysis of different models of financing and funding with different combinations of public and private sources.
- NAIAD ("NAture Insurance value: Assessment and Demonstration") has developed a map of financing and funding options, focusing on NbS for disaster risk reduction: <u>Deliverable 7.1: Inventory of Nature-Based Solutions (NBS)</u> and their characteristics. This is disaggregated by public or private sources, and by type of NbS (climate, nature conservation, disaster risk reduction, infrastructure).
- The <u>DesirMED</u> project has been assessing the current status of NbS financing in Mediterranean regions, as well as business models and regional financial instruments for NbS. When the associated resources are published, they will be made available on the <u>DesirMED project website</u>.

The following sections of this chapter cover the different financing actors and the respective financing mechanisms and instruments they can mobilise to finance NbS. As most financing sources are used in combination with others, mixed financing examples will be used in each section. Bonds can be either public or private, and so are discussed in both sections.

### **III.2. Public Finance Models**

### III.2.1. An Overview of Public Finance

Public finance has been the main financing source for NbS, as nature is the foundation of economies and intrinsically a public good. 46,47 Public finance institutions can operate from local to global levels, for example, development finance institutions (DFIs) providing ODA (see Box 7), regional organisations (such as the EU), and national governments and municipalities. 48,49 Regional public funds relevant to NbS in Europe include the European Regional Development Fund, and some of the EIB's programmes relevant to NbS (e.g. Natural Capital Financing Facility (NCFF) – see Box 8). An example at a national level is Croatia's Bank for Reconstruction and Development, which invests in projects which conserve or restore biodiversity. 50 Figure 2 illustrates how the main types of public finance fit together.

Public finance institutions play an important role in regulating markets and bringing climate and nature into economic decision-making. Nevertheless, political constraints and the complexity of accountability tools can hinder the ability of financial institutions to address the negative externalities of the economic activity they support. 46,56 By adopting a market-based approach and collaborating with

Box 7

### Official Development Assistance (ODA) for NbS

Public finance includes ODA, provided through various types of DFIs (e.g. bilateral agencies or banks, multi-donor funds, or multilateral development banks). ODA channels investment to low- and middle-income economies. This is typically through concessional financing that is increasingly aimed at helping to build markets and catalyse private investments. ODA can be channelled through most of the instruments described in this section, with concessional modalities (e.g. low-interest loans with extended grace periods). While ODA has historically predominantly been issued through grants, the share of ODA grants has been decreasing recently in favour of loans. 53,54

ODA financing actors are particularly relevant to NbS in developing countries as their focus and expertise enables them to provide financing that is adapted to these contexts. ODA actors can therefore help with the emergence of context-specific NbS projects, develop new NbS financing mechanisms and ultimately demonstrate the case for investing in NbS in developing countries.<sup>55</sup>

private actors, governments can align incentives and drive fit-for-purpose public, private and blended investments towards NbS.<sup>57</sup> Nevertheless, public finance will remain crucial for supporting NbS as public finance instruments tend to be better suited for preserving and sustainably managing public goods where revenue generation is not possible or suitable.

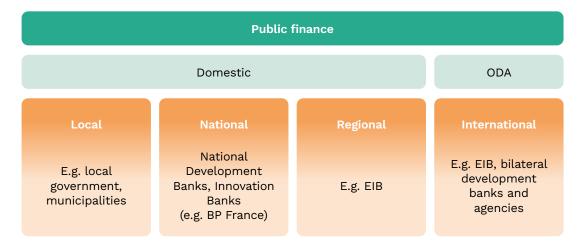


Figure 2 - Summary of public finance key actors based on geographic scope

Box 8

### **Natural Capital Financing Facility (NCFF)**

The NCFF was a joint financial instrument developed by the EIB and the EC under the LIFE Programme<sup>p</sup> aimed at promoting investments in biodiversity and climate adaptation through NbS. It ran from 2015 to 2022 and is no longer operating.<sup>50,58</sup>

The NCFF provided loans and investments to eligible products, which were backed by an EU guarantee and technical assistance grants both provided under the LIFE programme.<sup>59</sup> The loans ranged from EUR 2 million to EUR 15 million and were supported with EUR 10 million of technical assistance grants and EUR 50 million in guarantees. One example was a EUR 5 million loan from EIB to CDC Biodiversité for support to the rehabilitation and management of conservation sites around France, and make the necessary investments to register and market the credits of those sites to comply with regulatory requirements in France.<sup>58,60</sup>

The NCFF faced several challenges in its implementation. A significant limitation was the small scale of most supported projects, which made it difficult to scale up or replicate them across different regions. Additionally, many NbS initiatives lacked fully developed business models. This made them less attractive to private investors without considerable public backing. Regulatory frameworks also posed barriers, as they often prioritised conventional "grey" infrastructure over more innovative, nature-based approaches. This further limited the widespread adoption of NbS.

Despite these challenges, the NCFF served as a valuable pilot to test financing approaches for NbS. Lessons learned from its implementation have informed the design of more recent and ongoing financial mechanisms supported by the European Commission and the EIB, such as InvestEU and the Natural Capital Financing Alliance. These new instruments aim to address previous limitations by supporting larger-scale and more bankable projects, offering blended finance structures, and promoting better integration of NbS into mainstream financial planning and infrastructure development.

P For more information about the EIB, EC and LIFE Programme, see section III.2

### III.2.2. Main Public Financing Instruments and Mechanisms

Public finance can be distributed through a diverse range of financing mechanisms and instruments, including grants, concessional loans, guarantees and other derisking instruments. These are outlined in more detail below, with illustrative examples and an analysis of their associated challenges and opportunities. 62,63

#### **Grants**

Grants are non-repayable financial support, typically provided by governments, but also by other organisations (e.g., philanthropies or NGOs). 64 Repayable grants, acting like interest-free loans, can also be offered by public bodies. They are well-suited to smaller scale, harder to monetise projects, to help them face initial costs. At the EU level, the European Commission provides long-term grants via programmes like Horizon Europe including Horizon Europe Missions, LIFE or Interreg. 65,666

**Pros:** The grantee doesn't need to pay back the grant, so they face less pressure to generate revenue from the project, and there is no risk of loss of equity.

**Cons:** The investor doesn't get the funds back, so they can't recycle them to support other projects. The grantee often has to apply for funds within the boundaries of existing calls for proposals, so the scope of what can be funded is limited. However, this does mean the funder can use calls to shape developments in the sector. Grants often come with strict conditions<sup>r</sup> and reporting obligations. They are considered a form of investment in public or purpose-specific impact rather than financial return.<sup>67</sup>

**Example:** In Poznań, a Polish city, a series of nature-based playgrounds were developed in several pre-schools. The upfront design, planning and development costs were financed by a combination of government grants and community budgets. The running costs are covered by the pre-schools.<sup>68</sup>

- q De-risking instruments include any financial tools that reduce the risks in a project to attract investors. These include first-loss capital instruments (where public funds absorb initial losses before the private investors are affected) or blended finance models. These are discussed further below.
- r For example, there is a no profit rule for projects funded by Horizon Europe. However, generating revenue is technically allowed.

### **III.2.2.1. Public Debt Instruments**

#### **Green Concessional loans**

Green concessional loans are offered at below-market rate, or with more favourable conditions (e.g. a longer-term payback period, less stringent access conditions) than commercial loans.<sup>69,70</sup> These instruments are typically provided via regional development banks or global ODA actors.

**Pros:** They preserve the NbS project proponent's authority in decision-making and their structure is usually adaptable to specific project requirements. They also have a clearly defined payment schedule that makes it relatively easy to manage and preserve equity.<sup>71</sup>

**Cons:** They require repayment with interest, so they are only suited to projects that can generate a financial return. They may also have reporting requirements for the grantee to fulfil.

**NbS Example:** The EIB provided a EUR 9 million loan to the Government of Luxembourg for river restoration. Sections of the Alzette and Pétrusse rivers were restored respectively in Steinsel and Luxembourg City. This included implementing NbS to reduce the risk of flooding, improve biodiversity and enhance water quality.<sup>s</sup>

### **Public Green and Blue Bonds**

Bonds are a form of debt financing where an issuer borrows a fixed amount from multiple investors through the capital market. In return, the issuer repays the principal over a set period, along with regular interest payments known as coupons.<sup>72</sup> Bonds can be public or private and can be used both as financing and funding mechanisms.<sup>73</sup> Public bonds are issued by public entities (e.g. national government, municipalities, DFIs), often to finance large-scale projects with environmental benefit. They are commonly used to finance NbS.<sup>74</sup>

Green bonds are used exclusively to fund projects with environmental benefits, such as reforestation, biodiversity protection and water conservation. Green bonds follow established frameworks to ensure transparency and credibility (e.g., Green Bond Principles (GBP), Climate Bonds Initiative's (CBI) standards and certification scheme). Blue bonds work similarly to green bonds, except that the proceeds are invested into sustainable activities in the ocean or marine-related areas.<sup>75</sup> Public

s See more information about the project here: https://www. eib.org/ en/press/ all/2023-160luxembourgbiodiversite-etadaptation-auchangement-<u>climatique-un-</u> financementeuropeen-pour-<u>la-renaturation-</u> de-l-alzette

green and blue bonds are issued by entities, like national governments and municipalities, for financing sustainable infrastructure and services.<sup>71,72</sup>

**Pros:** Bonds provide a sustained return over time to investors. This makes them useful for maintaining long-term initiatives. Compared to private bonds, public bonds represent lower risks for investors. This results in lower yields.<sup>75</sup>

**Cons:** Not adapted to all types of NbS investments as bonds require a relatively large-scale initiative, rely on strong regulatory frameworks and depend upon transparency. These enabling conditions can be more difficult for some markets and can increase transaction costs (e.g. certification, verification).<sup>76</sup>

**NbS example – Public Green Bond:** in 2017 France became the first country to issue a sovereign green bond. The EUR 7 billion (Approximately USD 7.6 billion) bond combined long-term public debt (25-year tenor) and green investment framework to fund environmental initiatives. The bond supports national objectives in climate adaptation, mitigation, biodiversity protection and pollution reduction. France developed a green bond framework, outlining how the bond will be scaled in future issuances, to support transparency, ministry-led project allocation and alignment with national environmental goals.<sup>77,78</sup>

**NbS example – Public Blue Bond:** The world's first sovereign blue bond was launched in 2018 for the Seychelles to support sustainable marine and fisheries projects. The issuance raised USD 15 million over 10 years with a reduced coupon rate thanks to a USD 5 million concessional loan from the GEF. The World Bank supported the bond with a USD 5 million guarantee. The bond's proceeds are distributed as grants and loans via the Seychelles' Conservation and Climate Adaptation Trust and the Development Bank of Seychelles to support marine conservation and sustainable fisheries. <sup>59,74,75</sup>

### **III.3. Private Finance Models**

### **III.3.1. Direct Investments in NbS**

### III.3.1.1. Why companies currently invest in NbS

As introduced in Chapter II of this report, there are different reasons why the private sector directly invests in NbS. This can include improving their resilience to nature related risks, recognising the market opportunity opened by NbS, meeting mandatory regulations and aligning with stakeholder expectations.<sup>79,80,81</sup>

Businesses from nature-dependent sectors have started to invest in NbS to mitigate their exposure to environmental risks. <sup>81</sup> For example, Rabobank provided long tenure loans to agricultural commodity producers in Brazil to transition to regenerative and sustainable agriculture. The loans were also supported by a guarantee from the AGRI3 Fund.<sup>t</sup> In the hospitality sector, businesses that depend on healthy coastal ecosystems are funding restoration efforts to protect these natural assets (See Iberostar example below in this section). <sup>82</sup>

Investing in NbS can help companies meet mandatory sustainability policies.<sup>81</sup> In Colombia, for example, the demand for biodiversity credits, facilitated through habitat banking, is largely fuelled by regulatory requirements tied to environmental permits. Sectors such as mining, oil and gas, and infrastructure must offset their ecological impact to obtain these licenses, prompting investment in restoration and compensation projects.<sup>83</sup>

Some companies invest in NbS for Corporate Social Responsibility (CSR) purposes.<sup>u</sup>

While insurers have limited options to invest directly into NbS, several initiatives emerge in the sector. Most existing insurance-related products connected to ecosystem services and NbS are illustrative of ESG strategies, developed in line with CSR in the insurance sector.<sup>84</sup> The <u>NATURANCE</u> project's <u>report on governance</u>, <u>policy enablers and barriers for scaling NbS</u> provides several examples of these emerging insurance's investments into NbS.

Social licence to operate can be a powerful reason for businesses to invest in NbS. Public support is vital for businesses to survive and thrive. Without it, permits may be withdrawn or not renewed and customers may move to competitors. NbS have the potential not only to deliver multiple benefits, but also to facilitate equitable distribution of benefits where they are designed and implemented appropriately. Many people may also simply 'like' that companies are implementing NbS, and that they are used in the local area.

### III.3.1.2. How companies invest in NbS

There are several ways in which business can invest in NbS, including through their value chain (often termed 'insetting'), through buying voluntary credits, investing in offset schemes or by including nature in company accounting.

Supply chain companies (businesses that manage the flow of goods and services from the point of origin to the end customer) are particularly well positioned to invest in NbS thanks to their aggregator role working directly with suppliers. 79,85

- t See "Risk Mitigation instruments" in Section III.4 for more information on guarantees.
- " With CSR. businesses incorporate social and environmental considerations into their operations and strategic planning. It extends beyond charitable giving to include responsible business conduct, placing sustainability efforts at the core of business operations

Sectors that manage large areas of land (e.g. cereals, livestock, palm oil, forestry) are particularly well positioned to invest in NbS. Other companies invest in NbS across their value chain to manage environmental risks, enhance supply chain resilience and secure long-term resource availability.

One example is the Landscape Enterprise Networks (LENs), a collaborative platform initially developed by Nestlé and 3Keel, with backing from companies like Diageo and PepsiCo. LENs links businesses that rely on healthy ecosystems with networks of farmers capable of delivering NbS. By facilitating investment in regenerative practices, such as tree planting and wetland restoration, LENs support sustainable agriculture and improve environmental outcomes across supply chains in Europe. Through multi-stakeholder collaboration, LENs also align with regional sustainability goals and contribute to the development of ecosystem service markets.<sup>86</sup>

This approach highlights how targeted investments in supply chain sustainability can contribute to broader environmental goals while supporting compliance and brand credibility.<sup>87</sup> However, companies need to be located at the right level of the value chain in order to influence their suppliers.

Compensation mechanisms such as voluntary credits, offset schemes and insetting associated with NbS offer companies a flexible way to advance their sustainability commitments and reputational goals. Nespresso's partnership with the Rainforest Alliance illustrates such an insetting scheme, through Nespresso's AAA Sustainable Quality Program to source coffee more sustainably. With financing from the IFC, the company supported a transition to agroforestry in East Africa, planting native shade trees, training farmers and promoting landscape-level reforestation. 87

It is important to highlight, however, that many offset systems fail to meet their stated environmental goals and could disincentivise efforts to avoid or mitigate negative impact on climate and biodiversity. Strict regulation and rigorous standards are therefore important to develop the potential of these mechanisms.

Some companies include nature directly in their balance sheets.<sup>87,88</sup> For example, hotel group Iberostar has been restoring coastal ecosystems such as reefs, seagrasses and mangroves at its resorts in the Dominican Republic, Mexico and Jamaica. These efforts, initially funded through the company's CSR budget, will eventually be integrated into each resort's financial reporting and are designed to protect against erosion and flooding.<sup>87</sup>

### **III.3.2. Private Finance Instruments**

As with public financing, there are a range of finance instruments through which private finance can be channelled to NbS projects. Some of these are the same instruments as for public finance but applied by different actors. Debt and equity instruments are discussed below.

v Insetting is the use of NbS within landscapes associated with a company's supply chain to address nature-and climate-related impacts that the company faces.

#### III.3.2.1. Private Debt Instruments

### Private green and blue bonds

These are issued by private sector companies or financial institutions and are usually project specific. While financial institutions lead on issuances, non-financial corporations, especially those working in the energy and buildings sectors, are increasingly issuing bonds.<sup>89</sup>

Private green bonds are typically used to finance company-specific environmental projects (e.g. predominately low carbon transition but could also be used for biodiversity) and can be aligned with internal ESG strategies. They also need to comply with the <u>Green Bond Principles</u>. Private blue bonds typically finance the acquisition, expansion or restructuring of marine and ocean focused projects with climate, biodiversity and economic benefits.<sup>48</sup> Their structure makes them well-suited for large-scale maritime or marine renewable energy infrastructure.<sup>90</sup>

**Pros:** Bonds are backed by clear environmental objectives, and verified by third parties, which reduces greenwashing risks and enhances transparency. Investors are generally familiar with bond structures and, because green and blue bonds are tradable, they offer liquidity. Project performance risks typically rest with the issuer, who repays the bond using broader revenue sources, not just project returns.<sup>91</sup>

Cons: Require substantial upfront and ongoing costs for certification, reporting and monitoring. This makes them more feasible for governments or large utility companies financing larger or bundled projects (a portfolio of projects grouped together for investment efficiency). Smaller initiatives may struggle to meet the required scale. Green and blue bonds can become more attractive when issued by entities with strong credit ratings. Lower-rated issuers often need support from development banks or credit enhancements to reduce investor risk and borrowing costs.<sup>91</sup> Bonds are quite complex financing structures that are not well adapted to all NbS projects.<sup>92</sup>

**NbS example – Private Green bond:** Goldman Sachs underwrote the first non-profit green bond in 2019 for The Conservation Fund (TCF). The USD 150 million green bond was financed by institutional investors and various private investors. The proceeds allowed the TCF to buy land where working forests are considered at risk of being developed or fragmented. TCF then sustainably manages those forests for timber, secures permanent conservation easement, and resells the land. In turn, this protected productive forests at risk of fragmentation and the ecosystem services that they provide (e.g. carbon capture, water purification, timber production).<sup>92</sup>

### Sustainability-linked bonds (SLBs)

SLBs are a relatively new instrument that emerged in 2019 through private issuance. SLBs tie an issuer's cost of borrowing to their achievement of specific ESG targets, including nature-related targets (e.g. land restoration, emission reduction).<sup>93</sup> Unlike private green or blue bonds, which finance specific projects, the proceeds from SLBs can be used for general corporate purposes but include a commitment to measurable sustainability outcomes.<sup>94,95,96</sup> Contrary to green bonds, which often require high capital expenditure related to infrastructure projects and are therefore out of reach for most companies, SLBs are accessible to a broad range of issuers.

**NbS example:** In July 2024, Natura Cosméticos SA in Brazil issued an R\$1.32 billion SLB with R\$200 million backed by IDB Invest, a member of the IDB. The targets for this SLB are tied to the Amazonia Forever programme, which builds on existing socio-biodiversity initiatives to halt deforestation by developing agroforestry systems and the bioeconomy in the Amazon.<sup>98</sup>

### III.3.2.2. Equity Instruments

Equity instruments mobilise financing by selling an ownership share of the NbS, potentially with a claim to some of its profits. This can be motivated by a desire to generate impact or it could be purely commercial. Key actors in direct equity markets are private equity firms, venture capitalists and impact investors. Venture capital firms tend to invest in early-stage projects, while private equity and impact investing firms invest in more mature companies or projects, under a mix of profit and purpose criteria for impact investors.

Equity instruments offer flexible returns for investors but are still rarely used for NbS.<sup>99</sup> For investors, equity instruments offer flexible returns but are still rarely used for NbS.<sup>100</sup> This is due to low scalability, limited liquidity and the high returns equity investors typically seek. Alternatives, such as hybrid loans with equity features, are gaining attention. They help balance risk and return while addressing ownership and liquidity concerns. Some investors have been testing mixed equity instruments (e.g. convertible loans, where debt investments can be converted into equity) to manage these risks.<sup>100</sup> A key challenge that remains is the small scale of most projects, which could be addressed through aggregation and portfolio-level de-risking.<sup>100</sup>

### **Private Equity (PE)**

PE firms invest in companies or initiatives. In return for this investment, they gain ownership and generate return through mechanisms such as dividend payments or value appreciation.<sup>101</sup>

With NbS, these firms typically invest in land for timber, real estate or mitigation banking. They then directly or indirectly implement restoration and/or ecological asset management activities.<sup>102</sup> The NbS economy attracts PE firms that seek to capitalise on the growth of project developers. Several PE firms have already built successful NbS investments (e.g. Mirova, Onex, KKR &Co).<sup>99</sup>

As the expertise of PE firms' grows, so too will the assets that they are managing. Nevertheless, growth is limited by the availability of investable opportunities. To expand the pipeline, early stage or more concessional forms of capital investment can help build a track record of successful projects and investment strategies.

**NbS example:** Resource Environmental Solutions (RES) is a private equity company that develops and manages diverse compensation schemes in the US in a regulation-driven business model. RES received angel investments<sup>w</sup> to develop its initial activity. It maintained its growth with further private equity investment to finance the upfront costs of establishing some of the compensation schemes, such as mitigation banks.

" Angel investment is a type or early-stage risk-seeking private equity investment. See Investopedia, Angel Investor: Definition and How it Works (2024)



### **Impact investing**

Impact investing refers to any investment that is intentionally designed to produce beneficial social or environmental outcomes, alongside financial returns.<sup>103,104,105</sup> Impact investment typically targets below- to market-rate returns, depending on how much priority is given to return versus beneficial outcomes of the investment.<sup>101,104</sup> Importantly, both public and private actors can provide impact investments, often in hybrid solutions.<sup>104,105</sup>

**NbS example:** Mirova, an asset manager, manages the Land Degradation Neutrality Fund. While not directly related to biodiversity, it channels public and private financing into impact investment in companies with a positive impact on sustainable land management and restoration. For example, the Fund acquired shares in forestry and timber companies implementing afforestation projects in Ghana and Sierra Leone. Mirova also developed the USD 120 million Althelia Climate Fund, through which it invested in the Sumatra Merang Peatland Restoration Project. The project prevents illegal logging and includes social components such as employment support and the establishment of educational activities. Revenue is generated by the sale of the project's certified carbon credits for about USD 15 million. Million.

### **Venture Capital (VC), angel investors and earlier-stage investments**

VC firms provide equity investment specifically in early-stage, riskier companies or projects. They usually only invest what they can afford to lose. They are motivated more by the potential to nurture innovative ideas than by short-term financial returns.<sup>107</sup> Their role is crucial for providing the continuum of capital investment that would contribute to developing the broader pipeline of investable NbS projects and initiatives.<sup>108</sup> These early-stage investments can take the form of seed finance, concessional investments and impact investments. They typically allow a project to grow to a more mature stage where it would be ready to receive investment from PE firms or impact investors focusing on more mature projects.<sup>109</sup>

**NbS example:** Aqua Spark, a Dutch holding company, provides early-stage investments to small and medium companies across the aquaculture value chain. It does this to reduce the overfishing of wild fish stocks. Aqua Spark acquires minority ownership of up to 40% with investments ranging between USD 250 thousand to USD 5 million. The company has attracted co-investments from established private investors.<sup>110,11</sup>

Mobilising finance for NbS often relies on utilising innovative financing instruments to address barriers to investment. Several of the instruments detailed in Section III.3. have increasingly innovative forms, for example with structural innovations, or performance-based evolutions. A few points are important to consider for the successful development of innovative financial solutions:

- 1. The localised nature of NbS may require financial innovation instruments to be specifically adapted to their local context if replicated.<sup>114</sup>
- 2. By supporting the emergence of larger projects, innovative finance could become more accessible as the NbS market matures.
- 3. Better availability, monitoring and comparability of data across NbS projects would also be important to enable innovative finance to scale for NbS.
- 4. Strong policy and regulatory frameworks can help to incentivise investments into NbS from public and private actors.<sup>114</sup>

A key innovation for NbS financing has been new green and blue bond structures and designs. These include Environmental Impact Bonds, which are a sub-category of green bonds based on pay-for-success mechanisms, which provide returns to investors when project performance metrics reach a certain threshold. Debt for Nature Swaps (DfNS) are also an innovative use of pre-existing debt instruments, whereby a portion of a country's foreign debt is exchanged in return for investing in environmental protection or conservation actions.<sup>115</sup>

There are still challenges to growing the private finance market for NbS. For instance, investors' familiarity with certain instruments or their application in certain sectors (e.g. carbon credits in agriculture or forestry), skews investments towards these sectors, at the expense of alternative forms of investment. Many NbS initiatives also lack standardised metrics and data that investors require to assess performance, risk, and return potential. This limits the flow of private capital, particularly in underfunded ecosystems such as wetlands, grasslands, or peri-urban areas, where strong ecological value may not yet be linked to market mechanisms.

However, there are significant opportunities for growth in private finance for NbS, particularly by supporting early-stage, higher-risk projects. Helping these initiatives mature and build a track record can create a stronger pipeline of viable, investment-ready NbS projects and initiatives. Intermediaries, outcome-based financing instruments such as green or resilience bonds, and risk-sharing mechanisms can help reduce perceived risk and attract private capital. Supporting capacity building for both project developers and investors, along with clearer taxonomies and enabling regulatory environments, can further stimulate private sector engagement while safeguarding the integrity and impact of investments.

# III.4. Blended Finance Models and Structuring Mechanisms

Blended finance is defined as the strategic (and often combined) use of public or philanthropic capital, usually concessional, to reduce investment risks and attract private finance. Public or philanthropic actors can use concessional capital,

guarantees, and insurance to make investments more attractive to private investors by lowering risk or improving returns, for example through credit enhancement.<sup>118</sup> Concessional funding often means accepting higher risk for lower returns. While design-stage grants and technical assistance do not go directly into the capital structure, they can boost a project's viability by improving bankability and impact measurement.<sup>114,115</sup> Figure 3 presents some examples of common blended finance structures.<sup>115,119</sup>

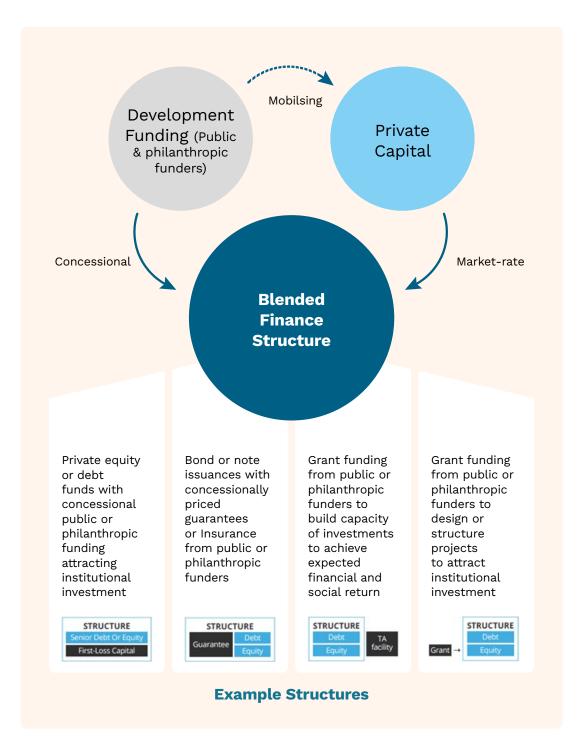


Figure 3 - Typical blended finance mechanisms and structure examples (adapted from Convergence, 2022)<sup>120</sup>

Blended finance has mainly been utilised where projects can deliver social, environmental and financial returns, for example in sectors like energy, infrastructure and the financial services.<sup>117</sup> A blended approach is particularly well suited for financing large-scale NbS projects in need of upfront investment to mobilise private capital, such as land restoration, ecosystem conservation or sustainable fisheries.<sup>116</sup> Blended finance is mostly used where private finance actors are held back from investing by the perception of high risk.<sup>121</sup>

Below are examples illustrating key blended finance models.

### **Risk Mitigation instruments**

Risk-mitigation instruments aim to reduce the risk of portfolio or fund level investments or improve the return for risk-averse investors. They can take various forms:

**Guarantees**\* (or credit guarantees) are a key risk-mitigation model for debt instruments. They are helpful for reducing the risks for private investors.<sup>115</sup> They can be provided by both public and private actors and are usually used to de-risk fund level or portfolio level investments.<sup>115,122</sup>

**De-risking instruments** are broader than guarantees and include financial tools that reduce the risks in a project to attract investors. For example:

- "First loss" capital absorbs early losses and makes the investment more attractive to risk-averse investors.
- Off-take agreements contracts with future buyers that help secure predictable revenue reduce uncertainty around product sales.
- Insurances or hedging tools transfer specific risks to third parties and can improve financing conditions by lowering perceived investment risk.<sup>123</sup>
- Loan guarantees cover all or part of a lender's loss in case of default. Credit guarantees improve a borrower's credit worthiness by guaranteeing the repayment of the principal.<sup>124</sup>

**Pros:** They allow capital to be mobilised. They potentially reduce borrowing costs, even when there is a lack of borrowing history or when investing in an innovative concept that could bear more risk.

NbS example: In 2014, the United States Agency for International Development (USAID) issued a 10-year, USD 133.8 million loan guarantee to Mirova's Althelia Climate Fund (ACF) climate fund, supporting REDD+, sustainable land use and conservation projects. USAID assumed 50% of the investment risk and helped mitigate market uncertainties like carbon price volatility. This backing enabled ACF to raise USD 120 million in a second funding round, including EUR 25 million from the EIB. Over its lifetime, the fund aims to cut 100 million tonnes of CO<sub>2</sub> emissions through tropical forest protection. The deal highlights how public guarantees can unlock significant private investment in conservation with minimal upfront public costs.<sup>125</sup>

<sup>\*</sup> To read further about Guarantees, the Horizon project MERLIN covered the instrument extensively in a <u>dedicated in-</u> depth factsheet (Connectology, 2025).

### **Technical Assistance (TA)**

Technical assistance tends to provide in-kind or grant-funded support to a project or NbE. This is typically aimed at capacity building, improving project performance or strengthening business models. TA can be given either before investment to boost readiness or after investment to improve outcomes.

**Pros:** TA usually allows the project developer to gain further skills, capability and experience in operational planning, financial planning and delivery.<sup>126</sup> The nature of the technical assistance will differ depending on the growth stage of the NbS project or the NbE.<sup>125</sup>

**NbS example:** The &Green Fund is a blended finance vehicle that supports sustainable and deforestation-free commodity production in tropical forest regions. It combines catalytic debt finance from private and public investors with a dedicated technical assistance facility. The facility provides grants to support clients to enhance their ability to meet specific conditions (like not engaging in any deforestation) and supports the implementation of Environmental and Social Action Plans.<sup>125</sup>

Mobilising private finance for NbS also depends on the use of financing structures and delivery mechanisms that enable risk-sharing, align incentives across stakeholders, and support long-term revenue generation. Models such as project finance and public-private partnerships (PPPs) play a critical role in this context, particularly for large-scale or infrastructure-style NbS investments. These mechanisms typically combine multiple sources of capital — private, public, and philanthropic — within structured arrangements such as special purpose vehicles (SPVs), long-term concession agreements, or performance-based contracts. See more information about PPPs below.

### Further resources:

- <u>European Investment Bank. Investing in Nature: Financing Conservation and Nature-Based Solutions</u> Provides practical advice on accessing conservation finance, including NbS, and especially focusing on the EIB's NCFF.
- European Investment Bank. Investing in Nature-Based Solutions: State-of-Play and Way Forward for Public and Private Financial Measures in Europe

   Provides a helpful stock take of NbS financing in Europe and outlines some proposed way forwards to scale.

### **Public-Private Partnerships (PPPs)**

PPPs can be defined as "long-term contracts between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility". Commonly used in infrastructure projects, PPPs can take various forms such as leases, concessions or private finance initiatives. Private companies involved in PPPs either earn revenue through asset use or receive payments based on performance. 126,129,130

PPPs require clear performance indicators to guide payments from the public to the private sector. They must also contain business models that are clearly defined.<sup>131</sup>

**Pros (for governments):** Access to private finance, access to private financial firm expertise and improved project management through the sharing of risks. 132,133

**Cons (for governments):** Reduced flexibility due to rigid contracts. There are potential transparency and accountability issues present as well. There are high upfront transaction costs. The modalities of PPPs need to be adapted to NbS investments, where smaller project sizes and unclear revenue models can hinder trust in financial viability.

**Pros (for private investors):** Long-term contracts that provide stable returns and strategic investment opportunities. They also grant private partners control over multiple project stages and provide access to larger infrastructure ventures that may not be available through standard procurement routes.<sup>131,132</sup>

**Cons (for private investors):** Financial risks are tied to project lifecycle responsibilities and are vulnerable to regulatory shifts. Additionally, the legal and financial complexity of PPP contracts requires careful management and can present substantial administrative burdens.<sup>129,132</sup>

**NbS example (Infrastructure):** The State Department of Parks and Recreation in California used a PPP to operate three recreational areas. In this PPP, the private partner was responsible for parks management, operations and maintenance. During the five-year agreement, the private provider generated a regular revenue stream by collecting user fees and making on site sales of goods like firewood, ice and food. The private provider was paying a minimal annual rent of about 3% of gross receipts from these revenues. These were earmarked by the State to be used for long-term maintenance and infrastructure investment in the parks.<sup>121</sup>

NbS example (flood control and wetland management): The <u>Broadland Flood Alleviation Project</u>, delivered as a Public-Private Partnership (PPP) between the UK's Environment Agency and a joint venture led by Jacobs and BAM Nuttall, is a compelling example of applying a delivery mechanism for delivering NbS at landscape scale. Under a 20 year PPP contract (2001–2021), the private partner was tasked with designing, improving, maintaining, and providing emergency response for 240 km of flood defenses across the environmentally sensitive Norfolk Broads, a nationally protected wetland ~30,000 ha in size.

### **III.5. Philanthropic Finance Models**

Philanthropic funds have historically been a major source of NbS financing, complementing public and private sector funding. Philanthropic models of financing NbS are particularly important for projects with high environmental and social benefits but low immediate financial returns.

Philanthropic donations (from corporates, foundations or private associations) are investments and other activities that a company voluntarily provides to manage or responsibly mitigate its impact on the environment. These are distinct from CSR (see in III.1). Nevertheless, CSR and philanthropy can coexist and are often integrated into an overall strategy.<sup>134</sup> Corporate donations offer non-repayable funding, raise awareness and can reduce project costs while opening doors to new partnerships. However, such donations come with uncertainties. For example, the amounts on offer can be unpredictable, they can require lengthy approval processes, can lead to the donor exerting unwanted influence and they can come with reputational risks if the donor has a negative public reputation.<sup>133</sup>

Corporate philanthropy donations for NbS can take several forms. Some financial donations can be made directly to selected recipient organisations, and do not need to be repaid. Alternatively, in-kind support can be loaned or given to the recipient organisation. For example, vehicles or machinery could help the recipient organisation's operations or ad hoc implementation needs. In-kind support could also take the form of pro-bono technical support from marketing or consulting teams.<sup>133</sup> Philanthropic funds can also be disbursed through some of the financing models presented in previous sections, such as green bonds and equity investments. Financial donations from philanthropies can be used as grants to support NbS projects. For example, Tiffany & Co. Foundation supported a water restoration programme in the eight Royal Parks managed by the charity with a USD 1.25 million donation.<sup>135</sup>

Philanthropic donations, if large enough, can also kickstart NbS projects that will then self-finance. For instance, the interest accrued from investing a large initial donation can be used for the ongoing maintenance cost of green infrastructure

without using the initial endowment.<sup>134</sup> For example, a partnership between Sheffield Endowment Fund, the National Trust and Sheffield City Council has led to the creation of an endowment fund to support parks and the maintenance of green spaces in Sheffield. The initial funding of GBP 100,000 has been provided by a joint funding programme that includes contributions from the Nesta foundation.<sup>134</sup>

Philanthropy can also use market-based mechanisms to finance NbS projects, including concessional loans and equity investment. For example, TerraFund was developed to manage impact and philanthropic finance that it provided through concessional loans and equity investment. The fund mobilises financing from philanthropic donors and impact investors, including the Bezos Earth Fund, Meta and the Good Energies Foundation. As of 2024, the Fund channelled roughly USD 26.4 million performance-based grants into small-scale forest landscape restoration and roughly USD 6.6 million of concessional loans into agroforestry SMEs. The loans and equity investments provided to the SMEs ranged USD 50,000 – USD 500,000. The fund also provides its investees with capacity building on technical and business-related skills and a robust monitoring system.

#### Further resources:

- Connecting Nature Financing and Business Models Guidebook. Provides a good introduction to the steps NBS initiatives can follow to meet their financing and funding needs. Note: This resource uses the term "financing" for both covering upfront costs (referred to as "financing" in this guide) and covering ongoing costs (referred to as "funding" in this guide).
- Financing Nature-Based Solutions for Adaptation at Scale: Learning from Specialised Investment Managers and Nature Funds. Provides an in-depth review of finance options for nature, focusing on mobilising private capital.
- GrowGreen Approaches to Financing Nature-Based Solutions in Cities.

  Reviews financing mechanisms for NbS, with a focus on urban NbS. Overview of existing mechanisms is presented with caveats on their pre-requisites and limitations, and completed by illustrative case studies.

# III.6. Key Considerations: Project Stage, Revenue Models, and Delivery Mechanisms

This section illustrates the relationship between the financing instruments reviewed in this chapter and the revenue model, or absence thereof, of NbS projects.

Broadly, factors both internal and external to the NbS initiative influence the type of instrument and the volume of investment. Internal aspects, such as the business model, sector, location and development stage of the project are critical to selecting the type of investments. External factors like the legal and regulatory framework, strength of the local financial market and knowledge-gap or risk-aversion of investors to NbS investments are also important for determining the best instruments for mobilising financing. The risks, scalability and proven track record of NbS projects or NbE's business models also influence the choice of the financing instruments.<sup>138</sup>

<sup>y</sup> See II.4. Revenue Generation through NbS. While agriculture, forestry and infrastructure can attract investment with their proven market track record, most NbS areas are still emerging and need further support to scale. However, while traditional commercial sectors offer scale, they may not guarantee high-quality NbS and can cause unintended consequences if they are not properly managed or mobilised. For example, monetisable outcomes like carbon sequestration attract more investment than other emerging, non-monetised NbS outcomes. These NbS without monetisable outcomes consequently tend to attract first-time funds from new managers without the track record that institutional investors typically seek. Additionally, many of these NbS projects are too small to meet their size and diversification requirements. 139,2

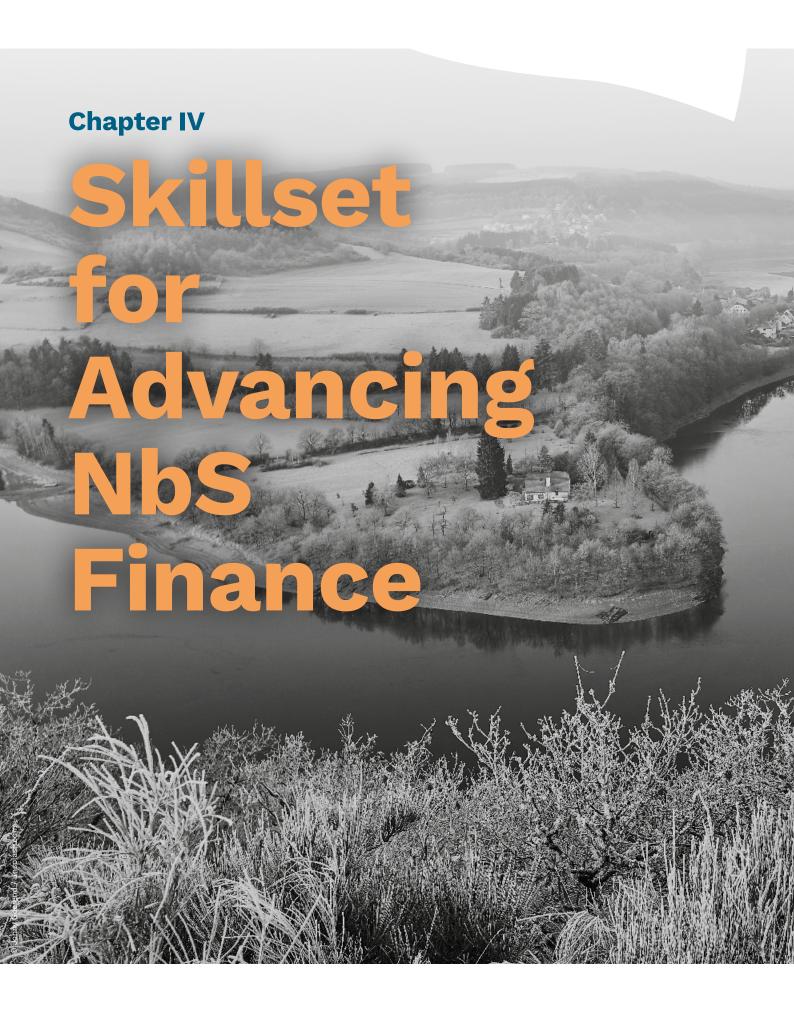
<sup>z</sup> See Tables B1, B2 and B3 in Annexes

The stage of growth of the NbS project is another essential criterion for identifying the most relevant financing model. Over time, NbS projects require a continuum of financing options, from early stage to mature and commercial level investment. Regardless of the development phase, the selected financial approaches may need to remain flexible throughout. Ultimately, financial instruments and mechanisms for NbS are frequently used in combination with each other, which is why blended finance is typically well suited to finance NbS projects. Table 7 provides a summary of the risk and maturity level of projects, matched with relevant financing mechanisms.

As seen in this chapter, increasing NbS finance also relies on non-financial aspects such as technical capacity and investor awareness of NbS specificities. These require specific skills, which are detailed in the next chapter.

Table 7 - Finance models compatibility with development stage of projects (adapted from World Bank, 2024)<sup>143</sup>

|                                    | NbS project / NbE Growth Stage   |  |   |   |
|------------------------------------|--|--|---|---|
|                                    | Seed   | Early stage  | Growth  | Expansion   |
| Bottlenecks                        | Lack of proven<br>business model,<br>technical expertise<br>and blueprint for<br>success | Lack of supportive regulatory and fiscal environment, difficulty monetising benefits, absence of business model, limited local markets | Investors face higher<br>transaction cost<br>due to small scale,<br>difficulty replicating<br>companies' growth<br>models | Lack of successful<br>track record and<br>benchmarks at scale |
| Typical<br>financing<br>instrument | Grants   | Blended finance,<br>impact investment  | Equity (venture capital, private equity)  | Traditional debt and equity                                   |
| Use of funds                       | Technical assistance,<br>feasibility studies   | Pilots for revenue<br>model  | Establish track<br>record and<br>benchmark, prove<br>scalability and<br>replicability                                     | Support further growth  |



Creating risk-return models for NbS investments that are appropriate for private investors often entails a complex mix of revenue streams. NbS projects themselves are hugely varied and diverse. This means that expertise on finance instruments for one NbS, such as private finance models for sustainable agriculture, does not easily map onto others, such as introducing green walls into urban settings.

Across the breadth of NbS types there is a consistent need to build skills across many professions to grow the investment pool. Skills required vary between the profession, the type of NbS and the geography. However, there is a core grouping of skills that reoccur:

- The ability to identify the multiple benefits and trade-offs of NbS. Paired with ability to communicate about these benefits and trade-offs in ways that resonates with different stakeholders.
- Ability to work in an interdisciplinary manner and communicate clearly between disciplines (e.g. between environmental workers, the financial sector and policymakers).
- People skills to build strong consortiums and engage with local stakeholders to develop robust projects built on trust.

The International Labour Organization (ILO), UNEP and IUCN report <u>Decent Work in Nature-based Solutions 2024</u> outlines a framework for the types of skills that will be needed to meet the growing demand for NbS projects.

Skills are split into technical skills, which will broadly vary by biome and type of NbS, and core skills, which tend to remain constant, as can be seen below in Figure 4. Core skills encapsulate expertise in stakeholder management and project management. They are broadly transferrable. Technical skills are more specific. They often involve understanding ecosystem function, designing and implementing NbS and using NbS to manage societal challenges. In general, technical skills are much more niche and will require more capacity building for the sector to grow.

The remainder of this chapter provides a deeper dive into the skills required by the three key groups of people involved in implementing NbS: project developers, financial sector stakeholders and policymakers. Key resources are signposted throughout.

### IV.1. Project Developers

Project developers are at the cutting edge of building effective, investible NbS. They can be NGOs or commercial entities, that take projects from idea to reality, building on local knowledge and experience. They are the glue that brings projects together.

As such, they must be masters of people management. They must be able to bridge cultural and communication differences between local people (including Indigenous People in some areas), ecologists, investors, and, in some cases, policymakers.

Skills that are important for project developers to be able to promote investment in NbS can be grouped broadly into the following areas:

- A. The ability to develop a robust business model and make an investment case for the NbS project, which considers and articulates the potential and actual trade-offs associated with NbS projects.
- B. The ability to understand the different needs of the public and private financial sectors, and the ability to match project needs with the correct financing model/s and instrument/s.
- C. The ability to bring all relevant stakeholders together, facilitate multistakeholder planning and decision-making and secure buy in to reduce project risks.
- D. The ability to create practical processes to monitor and report impact.

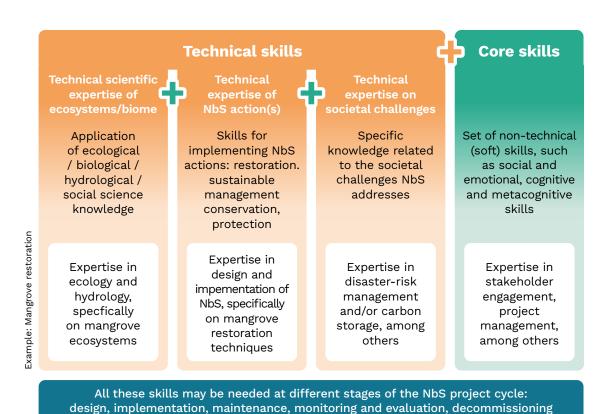


Figure 4 - Types of skills needed for NbS using mangrove restoration as an NbS example (adapted from ILO and IUCN, 2024)<sup>144</sup>

These skill requirements broadly align with the results of a survey of enterprises engaged in designing, developing and delivering NbS in urban areas executed by UNP+, where respondents were asked to rank the areas where additional support was required to bolster job creation. Priorities were evenly split between technical knowledge, business and market acumen, and communications and marketing skills. Equal emphasis was also placed on understanding financing and business models, as well as methods for measuring impact.<sup>145</sup>

Given the breadth of co-benefits that NbS can provide, growth in the number of project developers who can design and implement NbS projects should be stimulated. For example, environmental, climate and social-justice driven charities could consider the role of NbS projects and NbEs in driving investment that can improve nature, climate and livelihoods. Urban planners and civil engineers should also consider if they can integrate more NbS into their work, particularly considering nature as infrastructure. The <u>Guidance for using the IUCN Global Standard for Nature-based Solutions</u> is a key resource for project developers looking to design and implement NbS.

### IV.1.A. Develop a Strong Business Case

To attract private finance, project developers must present a comprehensive business case, clearly detailing the project's strategic, economic, commercial, financial, and management dimensions. This includes a well-defined business model, expected revenue streams, and identification of beneficiaries. Developers should also provide a detailed cashflow analysis, outline the risk profile, and support the project with robust contractual arrangements. As demonstrated in earlier chapters, NbS can generate multiple co-benefits, some of which are more easily monetised than others. These benefits should be clearly specified, along with who captures them and when they are expected to materialise. Just as important, all capital and operational costs associated with the NbS intervention must be accurately identified.

The synergies, trade-offs, benefits and costs of NbS need to be carefully considered, as with any intervention. Designing and implementing NbS to maximise certain benefits, such as carbon sequestration, could mean they have fewer benefits for biodiversity (and vice versa). As stated in UNEP's Nature-based Solutions: Opportunities and Challenges for Scaling Up "The use of NbS entails choices, including whether to prioritise NbS over other approaches, how to effectively combine NbS and other approaches, and, overall, how to increase synergies and co-benefits while reducing costs and trade-offs. Trade-offs for grey infrastructure may be perceived to be better understood than NbS, but these assessments may to always fully consider the associated negative externalities of these approaches.

Project developers who are more used to grey infrastructure may struggle to identify the direct benefits, the indirect benefits and the financial flows across the lifespan of NbS projects. The multifunctional nature of NbS, the multiple cobenefits and the limited libraries of associated cost-benefit analyses compared to those available for grey infrastructure can complicate the development of business models. Projects working on cost-benefit analysis and related topics include Invest4Nature, Nature4Cities and REGREEN.

Further resources on building a strong business model:

The Nature-Based Solutions Business Model Canvas - a customised business model canvas tool specifically for NbS. This tool has been deployed directly in 11 cities in Connecting Nature and by municipalities in multiple other countries in Invest4Nature and UNP+.

- <u>Business Model Puzzle for urban NBS</u> a dialogue tool for understanding what values can drive the realization of an urban nature-based solution, and which stakeholders may be willing to pay for this value.
- Nature4Cities Business Model Canvas generator gives users suggestions of financing and governance models after they input characteristics of their desired NbS project, and then pre-fills a business model canvas.
- <u>The Restoration Explorer</u> a free, online platform that helps project developers to build restoration enterprises and develop customised business models.
- The <u>REXUS Framework</u> provides step-by-step guidance to identify key water, energy, food and ecosystem challenges, the links between them, and the potential contribution of different solutions to address these challenges in landscape-scale strategies.
- Business Models for Financing Nature-Based Solutions in Urban Climate Action

   a knowledge resource for NbS project developers in the public and private sectors.
- State of the Art and Latest Advances in Exploring Business Models for Nature-Based Solutions - an open access paper that explores and provides more information on various business models for NbS.

An article published in 2021, titled <u>State of the Art and Latest Advances in Exploring Business Models for Nature-Based Solutions</u>, reviews key advances from EU-funded projects in developing business models for Nature-based Solutions (NbS), particularly in urban contexts. Some of the resources above are summarized in this publication.

### IV.1.B. Understanding of the Needs of the Financial Sector

While project developers should not be expected to be as fluent in financial structuring as financial institutions are themselves, it is important that developers can understand the sorts of funding and finance that will be most suited to a given project. As discussed in Chapter III, there are a variety of different instruments for project financing, with different pros and cons, which may suit projects at different levels of development. Project developers should aim to build some understanding of this variety of financing sources and instruments and consider how best to articulate what a project has to offer different types of financial institutions. With this understanding, project developers can ensure they target the right sources when it comes to securing financing.

More individuals and/or organisations are needed that can connect local project developers (with unique access to local stakeholders and solutions) to potential investors. To ensure effective projects, an open dialogue is needed between investors, project developers and local communities to make sure that projects align ecological, social and financial priorities. To achieve this alignment requires skilled facilitation across sectors and stakeholders, by communicators who can adapt their messaging to both commercial and non-commercial audiences. 154

#### Further resources on finance:

- PONDERFUL Sustainable Finance Inventory 22 financing instruments for NbS, with concrete examples of the financing instruments in action. The Inventory aims to support pondscape developers to understand financing options and identify the finance instruments best suited to their pondscape NbS project.
- The MERLIN Funding Freshwater Restoration: an Off-the-Shelf Instruments
  (OTSIs) Portfolio short instructions on how to prepare access and implement private finance solutions and blended finance strategies.
- Restoration Project Developers' Playbook on Private Finance (Europe) the
  playbook provides examples for restoration project developers of how other
  projects have structured themselves to appeal to private investors. It also runs
  through different investment structures that have worked to secure private
  finance for such projects.



### IV.1.C. Convening Stakeholders to Build Effective Projects

As highlighted above, building effective collaborations across varied stakeholders is vital for ensuring the longevity of NbS projects. Not only must project developers keep an open dialogue with potential investors, but they must also ensure that they fully engage with stakeholders within the local community. This must include women, marginalised communities and Indigenous Peoples (where present) as these groups are often key managers of landscapes and seascapes, and highly reliant on their ecosystem services. Such groups should be involved in the design and implementation of NbS with Free Prior and Informed Consent sought from Indigenous Peoples and local communities.

Further resources on convening:

- MERLIN Marketplace the marketplace enables suppliers and users of ecological restoration solutions to connect and collaborate. Additionally, they have guidance on <u>Just Transformations</u>: <u>Sectoral Stakeholder Engagement</u>, <u>Processes and Perceptions of Mainstreaming Nature-based Solutions</u>.
- GrowGreen nature-based solutions co-design guide. This guide is developed for practitioners responsible for the design and implementation of NbS projects. It provides a comprehensive guidance tool to develop climate adaptation projects based on NbS.
- Nature4Cities Step-by-step guide for co-production and co-creation of Nature-based Solutions. This guide attempts to connect the conceptual, ideal concept of NbS with the institutionalised planning and decision-making structures of the real world. It offers guidance and support to practitioners responsible for NbS interventions.
- The <u>CLEVER Regional Solutions Catalogue</u>. As well as profiling successful NbS project, the Catalogue has a chapter on 'Putting communities at the heart of NbS'.

### IV.1.D. Monitoring Impact

Effective impact monitoring throughout the lifetime of the NbS can help project managers assess if the project is delivering what it set out to do. It can also make it possible for a course correction (if required) to be made to maximise impact from the project. This is important not only to prove to funders/financiers that the project is generating the expected values and co-benefits, but also to help reveal the benefits of NbS more broadly, to contribute towards the body of data on NbS performance. A wider body of data on NbS effectiveness can help other project managers, developers and funders to assess the likely impact and risk associated with an NbS and understand how this may vary compared to the grey infrastructure alternatives. The second set of the second sec

As NbS generate a range of positive impacts – social, environmental and financial - it is important to think broadly about how to monitor these. Some positive impacts will be possible to measure quantitatively, while others may only be captured in

qualitative anecdotes. Impact measurement can be expensive, so it's important to focus on the most valuable impacts to track and to measure them in a way that is both cost-effective and reliable.

Further resources on monitoring impact:

- Evaluating the impact of nature-based solutions A handbook for practitioners. Developed as a collective output from many EU-funded projects under the NbS Task Force 2 on Integrated Assessment Framework, this handbook represents the work of over 150 European researchers and more than 60 European cities and regions. It aims to provide decision-makers with a comprehensive NbS impact assessment framework, supported by a robust set of indicators and methodologies to evaluate the multiple impacts of NbS.
- Connecting Nature Impact Assessment Guidebook. This guidebook presents the Connecting Nature process of developing robust monitoring and evaluation plans for NbS.
- Attracting Investment in Nature Based Solutions: How NbS Projects Can Apply
  the TNFD Reporting Framework. This report aims to help NbS projects apply the
  TNFD framework, and assess or review their own nature-related dependencies,
  impacts, risks and opportunities.
- Aligning Accounting Approaches for Nature. Provides a variety of guidance on natural capital accounting and biodiversity measurement.
- Land Use Finance Impact Hub Positive Impact Indicators Directory. A shortlist of environmental and social impact indicators that project developers and investors can use to track the positive impacts of a sustainable land use intervention.

# IV.2. Financial Sector Stakeholders: Awareness and Risk Perceptions

While project developers need to build skills to better communicate value with financial stakeholders, it is also important for financial stakeholders to build their own understanding of NbS and the values that they can generate. Key skills for financial stakeholders can be divided into three areas, which will be discussed below:

- A. Build greater understanding of what NbS are, and the multiple benefits that they can create. This includes going beyond financial values. Consider which types of NbS could be best suited to the investment or lending aims and the shape of the portfolio.
- B. Become familiar with the variety of financial models that can support NbS. Consider which of these models could fit within the institution's strategy.
- C. Understand the landscape of partners who can help you build a pipeline of NbS projects that are investable and start strengthening networks in this space.

### IV.2.A. Understanding NbS and their Multiple Benefits

The term NbS encapsulates a wide range of projects and interventions, as discussed in Chapter I and Chapter II. Financing NbS should not be thought of as a standalone business strand. Instead, it should be considered an integral part of addressing a financial institution's nature-related impacts, nature-related dependencies and climate-related risks.

Building internal capacity on the role that NbS can play in risk management is a critical first step. When it comes to managing risks from climate change, NbS are vital for both mitigating and adapting to climate change. They also provide a key tool for investors to manage their nature-related risks and access nature-related opportunities.

Second, it is important to build understanding with investment and lending teams of what constitutes an NbS and how to invest in them. This could begin with the help of an external consultant, but it is something that should ultimately be brought in house, either through staff training or recruitment.<sup>159</sup> Bringing NbS expertise inhouse is the first step to developing an NbS strategy. This is essential for identifying the sorts of NbS that are best suited to an institution's business model and existing portfolio.<sup>160</sup>

Further resources on understanding NbS:

- Why nature-loss is material for your financial institution: An introductory briefing on screening for nature-related impacts and dependencies. This short guidance from the SUSTAIN project is aimed at non-nature experts in private financial institutions and aims to strengthen their understanding of the need to screen for material nature-related issues.
- Investing in Peatlands. This paper outlines the importance of strategically investing in the conservation and restoration of peatlands, illustrating the varied positive impacts of such investments for climate, nature, local communities and investors.
- Markets, financing and incentives for NbS. This report outlines some of the key barriers to greater flows of private capital to NbS, including skills and knowledge gaps.
- Methods for assessing risk reduction and co-benefits by nature-based solutions. This deliverable from Naturance discusses NbS for risk reduction and presents a literature review of methods for assessing the co-benefits of NbS.
- WRI Financial Sector Guidebook on Nature-Based Solutions Investment. This Guidebook provides a clear framework for financial institutions to understand, invest in and leverage NbS effectively. It addresses key knowledge gaps and offers practical guidance.

### IV.2.B. Understanding Financial Models for NbS

It is also important for investment teams to consider the breadth of financial models to finance NbS (as outlined in Chapter III), and develop internal thinking on which best suit their risk-return appetite and wider ways of working. It is important to note that many nature-based projects are not financed by a single financial product, but rather a combination of different products. Tailored structures often combine a number of different funding, financial and revenue streams. They are the most effective strategy for supporting NbS.<sup>161</sup>

Further resources on financial models for NbS:

- Investing in nature-based solutions: State-of-play and way forward for public and private financial measures in Europe. This report highlights the challenges involved in financing nature-based projects and draws on the European Investment Bank's experience in implementing the Natural Capital Financing Facility pilot programme in Europe and interviews with key players across the field.
- Innovating with Nature: From Nature-Based Solutions to Nature-Based

  Enterprises. This paper outlines a number of business models for NbS, including many that relate to NbEs.
- Markets, financing and incentives for NbS. This report from Invest4Nature
  provides an overview of the financing landscape for NbS and the potential
  for enhancing private sector involvement. It identifies key barriers and drivers
  influencing NbS investments and offers recommendations to scale NbS
  projects.
- A Market Review of Nature-Based Solutions; An emerging institutional asset class. This guidance from the Green Purposes Company and Finance Earth is aimed at institutional investors seeking to understand the international market for NbS, the emerging opportunities for investing within this asset class, as well as recommendations for supporting market development.

### IV.2.C. Building Partnerships for Success

It takes many stakeholders to develop, fund and finance an NbS project. Therefore, collaboration is key, and having the right partners can be a shortcut to increased competitiveness.

By working closely with project developers, investors and financiers can help shape the sorts of projects that are developed. They can also help ensure that they have a suitable risk-return profile and generate a first mover advantage. Many nature-related risks are inherently local, meaning the best people to help a financial institution manage these risks are local stakeholders, both communities and scientists. Inclusive, place-based investment approaches can help investors to distinguish between perceived risks and actual risks.<sup>162</sup>

As NbS investing is a relatively new field, there are still relatively few fund managers with the required specialist expertise in both delivering financial returns and delivering impact outcomes, although this is increasing. With many NbS projects

originating in the Global South, but with most investment interest coming from the Global North, there is an added complication in that specialist fund managers are not always located in the country where the project is to be delivered. This makes trusted local stakeholders who can help with origination and monitoring particularly valuable to risk management.<sup>163</sup>

Further resources on building partnerships:

• GeoIKP Platform – allows investors and businesses to find other NbS partners, and also access funding opportunities for NbS.

### IV.3. Policymakers

When it comes to encouraging more private investment in NbS and supporting NbEs and other businesses that deliver NbS, policymakers have two main roles. These require different skillsets, which we will consider in turn in this section:

- A. Building capacity on mainstreaming NbS into public sector delivery
- B. Streamlining policy and regulations to incentivise more private investment into NbS.

An additional role that policymakers could consider is to provide government support to build the necessary skills within the working population to enable NbS to be rolled out across different sectors. This could include, for instance, facilitating and funding training for farmers and other land stewards to manage land for multiple benefits and integrate more NbS into their businesses.

# IV.3.A. Building Capacity on Mainstreaming NbS into Public Sector Delivery

Policymakers have a role to play in mainstreaming the use of NbS in their procurement processes, particularly when it comes to infrastructure solutions. Green infrastructure solutions should be considered as valid, if not more desirable than grey infrastructure due to the multiple co-benefits that NbS can deliver. However, this is frequently not the case, since rigid procurement systems favour the 'known' grey infrastructure options that often have lower upfront costs and well-evidenced outcomes.<sup>164</sup> This often leaves NbEs unable to access public infrastructure contracts.

Greater cooperation between departments, to make the most of the multiple benefits of NbS, can help open up further public funding opportunities.<sup>165</sup>
Additionally, running challenge-based procurement, led by the challenge that needs to be solved (rather than the suggested solution), could provide opportunities for more NbEs to access public procurement tenders.<sup>166</sup> Public sector skills gaps on the benefits of NbS, particularly green infrastructure, are a key challenge to overcome here.<sup>167</sup> However there are an increasing number of tools that can help public policymakers match their challenge with a potential NbS, as listed below.

Public sector support for the uptake of green infrastructure would not only facilitate the many co-benefits which such infrastructure provides (such as increased

biodiversity, more habitats and better wellbeing) but also help develop a viable pipeline of NbS projects. This would help bring green infrastructure into the mainstream and make it more appealing to private investors. There is also a role for the public sector in supporting the growth of NbEs. The goal of such nurturing growth is for a pipeline of NbEs to ultimately be available that are large and stable enough to receive private sector financing.<sup>168</sup>

### Further resources on:

Understanding NbS and how they can be applied in cities:

- GrowGreen's training programme for cities helps them develop strategies for NbS. Most relevant within this programme is the 'Nature Based Solutions Financing Assessment', which guides city policymakers through the financing that NbS strategies in cities require.
- Nature4Cities Implementation handbook aimed at helping policymakers understand how to get NbS set up. This is aimed at practitioners responsible for climate adaptation and mitigation policies in municipalities.
- **UrbanByNature Programme**. This global capacity-building and facilitated peer-learning programme empowers local governments to harness nature's potential for sustainable urban development. The programme offers a structured approach to integrating NbS into urban planning.
- The Connecting Nature Governance Guidebook explains how to align NbS with city visions, strategies, planning policies and programmes and secure political support.
- CleverCities Policy and Planning resource hub. Includes tools and approaches to advocate the value of NbS to decision-makers help integrate NbS into policies and planning processes.
- NetworkNature Factsheet 4 Financing nature-based solutions in cities:
   Exploring opportunities from municipal funding lists possible options for municipalities to fund NbS to ensure financial viability when implementing NbS in cities.
- Online course "Nature-based Solutions: How to regenerate nature to make neighbourhoods more liveable, biodiverse, and resilient to climate change"

Better integrating NbS within procurement processes:

- Public Procurement of Nature-Based Solutions: Addressing barriers to the procurement of urban NbS: case studies and recommendations. This report provides an overview of the major challenges facing NbS procurers in the EU, along with case studies of success with addressing those barriers across nine European cities.
- ICLEI Europe Discussion Paper: Barriers and recommendations for strategic procurement

Tools to match NbS with public needs:

- REGREEN's decision support tool helps SMEs and policymakers decide which NbS might be best suited to the needs they have.
- GrowGreen's NBS Business Models search engine aims to offer a first orientation and inspiration to decision-makers on the type of interventions using NbS may be most appropriate for them, considering the specific problems they want to solve in their cities or companies, or the objectives they intend to achieve.

Co-creating projects with citizens:

• Connecting Nature Co- Production Guidebook. This explains how to engage citizens and stakeholders in the bottom-up co-production of NbS which respond equitably to community and stakeholder needs.

### IV.3.B. Creating an Enabling Policy Landscape

Policymakers have a key role to play in incentivising more private investment and financial services support for NbS, by creating a more supportive enabling environment. The policy landscape to incentivise greater uptake of NbS has the potential to span multiple layers of policy and governance, from global multilateral agreements to national tax rules and financial regulations, to the actions of subnational planning agencies. It is beyond the scope of this report to cover this multilevel policy landscape, but it will signpost a number of key resources on this topic. For a more extensive assessment, see NetworkNature's <u>NbS Policy Screening and Analysis of Needs and Gaps for 2024-2030</u>.



At the international level, policymakers could aim to improve and align the representation of NbS in planning documents required by multilateral agreements.

For example, commitments in all three Rio Conventions have the potential to be supported by NbS, and so governments could be encouraged to mainstream NbS into their National Adaptation Plans (NAPs), National biodiversity strategies and action plans (NBSAPs). Nationally Determined Contributions (NDCs) and Land Degradation Neutrality Targets (LDNs). 169

UNEP FI identify five key actions<sup>170</sup> that G20 countries could take to "create the necessary enabling environment and support markets to scale NbS and leverage private finance":

- Encourage a regulatory enabling environment to support the alignment of economic activities with the Kunming-Montreal Global Biodiversity Framework, Paris Agreement, and other global agreements, for example through the integration of nature objectives into green taxonomies.
- 2. Support the development of innovative and credible investment products and markets for NbS.
- 3. Support a credible market for biodiversity credits through enhancing uptake and reducing transaction costs.
- 4. Prioritise Indigenous Peoples and local communities in the design and implementation of NbS actions.
- 5. Redirect public spending towards nature-positive activities to complement private sector efforts, including the elimination or reform of harmful subsidies, and support developing countries in meeting their financial obligations under the UN Rio Conventions—the Convention to Combat Desertification (UNCCD), the Convention on Biological Diversity (CBD) and the Convention on Climate Change (UNFCCC).

At a national level, governments have a unique role to play in facilitating nature markets that can support NbS. For example, they can develop clear frameworks for good practice, implement floor prices and create mandatory nature markets. Additionally, they can support NbEs and NbS projects though bespoke blended finance funds and catalytic capital.<sup>171</sup> The devolved governments of the UK have already taken action on a number of these fronts.<sup>172</sup>

Invest4Nature has developed a comprehensive set of policy recommendations, divided into local, national and EU levels, which are clearly articulated in <u>Markets</u>, <u>financing and incentives for NbS</u> (page 72 onwards). Additionally, a snapshot of policy recommendations arising from interviews with public sector stakeholders is given in Figure 5, below.

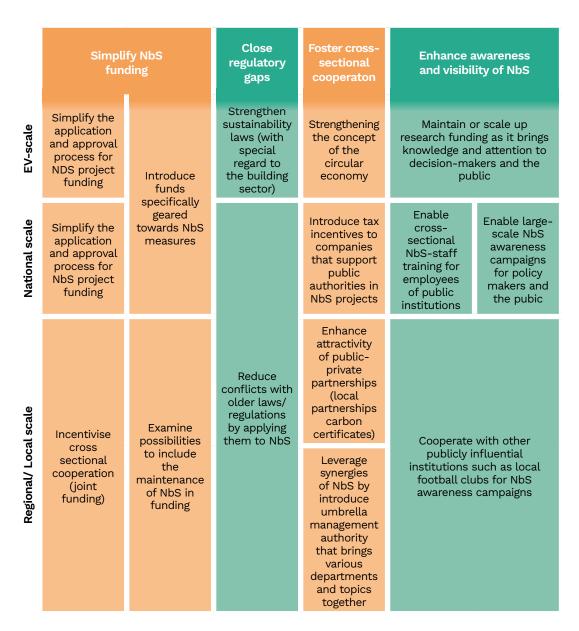
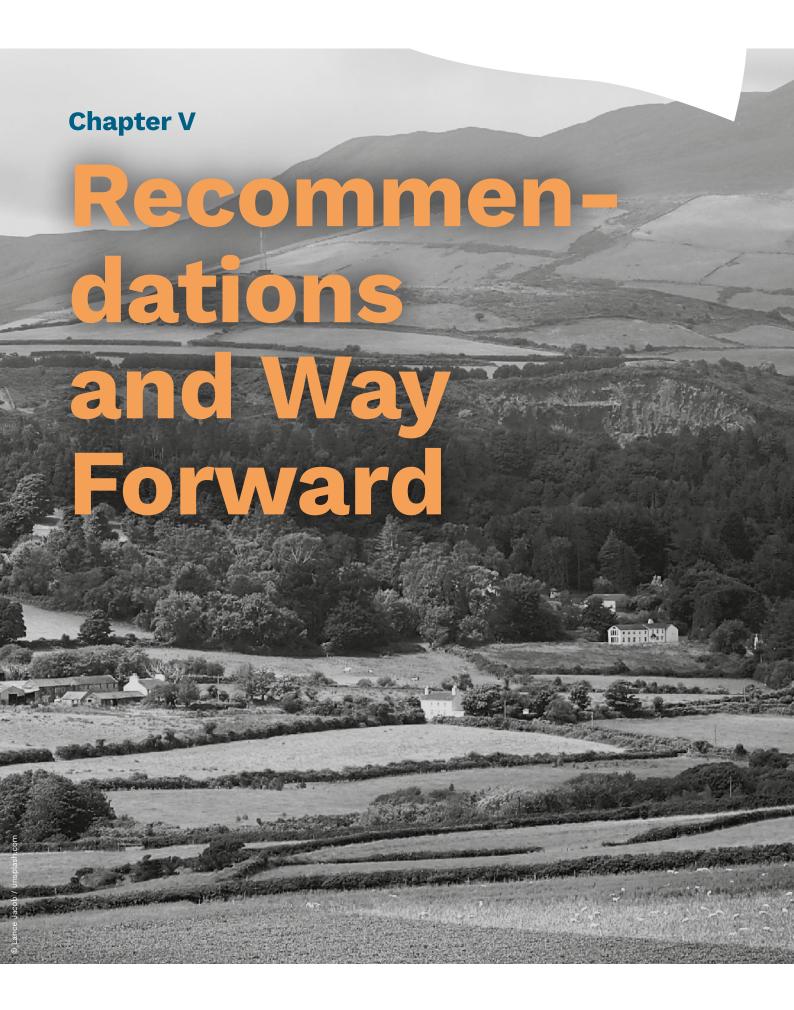


Figure 5 - Policy recommendations from public sector interviews, from Invest4Nature report, <u>Markets, financing and incentives for NbS</u>

Further resources on strengthening the policy landscape for NbS:

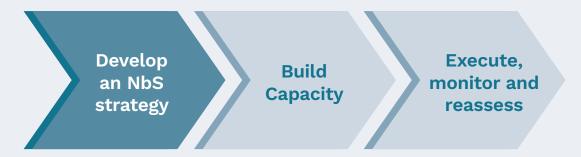
- Changing the Rules of the Game: Reforming targets, regulations and incentives to promote Nature Positive outcomes. This report from SUSTAIN provides policymakers and businesses with an understanding of which instruments can support Nature Positive and which instruments need to be reformed to transition towards an economic system aligned with Nature Positive.
- Recommendations for Scaling Finance for NbS. Input Paper for G20 Sustainable
   Finance Working Group. This paper, developed by UNEP FI, provides the
   G20 Sustainable Finance Working Group (SFWG) with regulatory and
   policy recommendations for financing NbS projects with high integrity and
   positive impact.
- Characterising supportive governance and policy WaterLANDS. Literature
  review to explore the conditions for successful governance of wetland
  restoration projects. Provides 25 recommendations complemented by more
  than 50 possible concrete actions and more than 20 examples of good
  practices.
- Strategies for mainstreaming nature-based solutions in urban governance capacities in ten European cities. This paper the analysis identifies three strategies, associated stepping stones and changes in governance conditions, to mainstream NBS in governance capacities.
- Accelerating Financing for Nature-based Solutions to Support Action Across the Rio Conventions.



# V.1. Summary of Key Recommendations for Investing in NbS

NbEs, other businesses, and financial institutions will all have different starting points when it comes to investing more in NbS. However, all groups should first assess their impacts and dependencies on nature, in line with the recommendations of the <u>Taskforce on Nature-related Financial Disclosures</u> (TNFD). Such an assessment is vital to help identify where NbS can provide most added value and address the most material risks to the organisation, and the most salient opportunities. EU-funded projects such as <u>SUSTAIN</u>, <u>CircHive</u>, and <u>Align</u> have resources to help with assessing impacts and dependencies on nature.

After this, there are three steps broadly applicable to each type of organisation:



Below, recommendations lay out how businesses, NbEs and financial institutions, respectively, can take these steps forward to increase their investment in NbS. Through increasing investment in NbS, organisations can mitigate nature- and climate-related risks, improve cost efficiency, ensure social licence to operate and generate revenues (see more in Chapter II).

#### V.1.1. Recommendations for Businesses and NbEs

Businesses and NbEs have the ability to implement NbS directly within their business actions. NbEs might be further along that journey than a more traditional business, but they are still a type of business. NbS projects may be funded by the business itself, or with support from public sources. Financing might need to be secured from financial institutions to support cash flow. Whatever the funding or financing situation, the steps below set out how a business or NbE can approach utilising more NbS.

Many NbEs are likely to already be implementing NbS within their business model and ways of working. However, it is still worth reviewing if NbS could be implemented anywhere else within the NbE, or if suppliers could be incentivised to implement NbS.

## Develop an NbS Strategy

- Identify which actions already being implemented within the business that could be considered as NbS.
- Consider where else NbS could help tackle existing or emerging issues for the business.
- Could an NbS provide a new product or service line for the business?
- Consider how NbS could be used to build resilience within business operations (ie. through insetting). Are there business risks that could be mitigated by NbS?

# Build capacity

- Increase employee understanding of NbS and the opportunities that they provide.
- Enable teams to consider how to apply NbS to their own challenges.
- Empower teams to create NbS strategies to shape how NbS will be rolled out to meet business needs.

### Execute, monitor and reassess

- If possible, track the actions to increase NbS utilisation, and the resulting impacts.
- Consider what is working well, and which NbS could be adjusted to improve positive imacts.
- Consider showcasing your use of NbS in public-facing communications materials. This can increase public interest in the business and increase the social license to operate.
- Make the case to current and potential investors or financiers of how NbS are providing your business with additional benefits.



#### V.1.2. Recommendations for Financial Institutions

Working through their clients, financial institutions have a large role to play in financing NbS. They have limited capacity to implement NbS themselves, aside from perhaps around their offices. How NbS can be financed will depend on the type of financial institution, as discussed further in Chapter III, but can include loans, equity, insurance solutions, and other innovative financial products. The recommendations below lay out steps that financial institutions can take to effectively increase their investment in NbS.

### Develop an NbS Strategy

- Identify what opportunities there could be for increasing investment in NbS. Consider:
  - Which nature-related impacts and dependencies are most material to your portfolio? Are there NbS that you could incentivise investees to utilise that could be used to reduce these impacts? Are there NbS that strengthen the ecosystems upon which your investments depend?
  - Are there high impact or dependency sectors that you already service that could be good candidates for encouraging the use of NbS for example, agriculture or mining?
- · Could you create a new fund or product to provide greater financing or funding for NbS?

# Build capacity

- Upskill key staff members on what NbS are and their benefits. Ensure
  that the understanding of NbS and their co-benefits extends across the
  organisation including client-facing sales teams, due diligence and risk
  management teams, as well as sustainability teams.
- Empower teams to create NbS strategies to suit the portfolio and the emerging needs of clients.

# Execute, monitor and reassess

- Build impact measurement into the roll out of any new NbS products or services.
- Ask teams to track the reception of new NbS products and services and note reasons for hesitancy from clients in taking up the new products.
- Ask clients to track the impacts of their actions.
- Use this information to evaluate how to improve the NbS offering to enable greater uptake, and greater impact.

#### V.1.3. Resources to Support Implementation

There are a wide range of EU-funded projects which can help businesses, NbEs and financial institutions to invest more in NbS. To guide implementation of the recommendations, key projects are summarised below.

| Develop an NbS Strategy   | Build capacity   | Execute, monitor and reassess                         |
|---|--|---|
| <ul> <li>Invest4Nature</li> <li>NATURVATION</li> <li>Naturance</li> <li>Grow Green</li> <li>Clever Cities</li> <li>REGREEN</li> </ul> | <ul> <li>Connecting Nature</li> <li>BIO-CAPITAL</li> <li>REST-COAST</li> <li>MERLIN</li> <li>WaterLANDS</li> <li>SUPERB</li> <li>FABulous Farmers</li> </ul> | <ul><li>GoNaturePositive!</li><li>Nature-3B</li></ul> |

### V.2. Signalling Ways Ahead for Policy

The world economy relies on nature – for food, health, water, jobs, economies and beyond – but it also impacts nature. These impacts are growing, leading to global crises like climate change, biodiversity loss and desertification that affect every aspect of the economy and the planet.

Investors, businesses and NbEs operate in the context of a policy and regulatory environment. Although not the key focus of this report, the sections below synthesise some of the considerations for policymakers that are being identified through EU-funded projects. These are actions that are seen as having potential to increase the flow of finance towards NbS and facilitate investors, businesses and NbEs to scale up their work on NbS:

- Examine tax and subsidy structures to enable the private sector to capitalise
  on nature-based opportunities and remove unintended negative consequences
  and barriers.
- Require consideration of NbS as an alternative or complementary approach in public procurement.
- Explore mechanisms to de-risk investment in NbS for the private sector, for example through public private partnerships or guarantees.
- Ensure that policies that aim to increase the uptake of NbS include relevant social and environmental safeguards, and that these safeguards are applied when the policies are implemented.
- Explore the role of innovative financial mechanisms, supported by both public and private sources, to mobilise more financing for NbS.

- Support the growth of the insurance and reinsurance market for NbS.
- Provide financial support to NbEs to scale up the supply of services related to NbS.
- Support financial decision-makers to understand the risks and opportunities for NbS in their policy portfolios.
- Encourage and enable businesses and financial institutions to regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, in line with Target 15 of the Global Biodiversity Framework.

These potential considerations for policymakers will be expanded on, developed and refined through further work by EU-funded projects including NetworkNature (see Box 9).

Box 9

### How NetworkNature is responding to needs and gaps

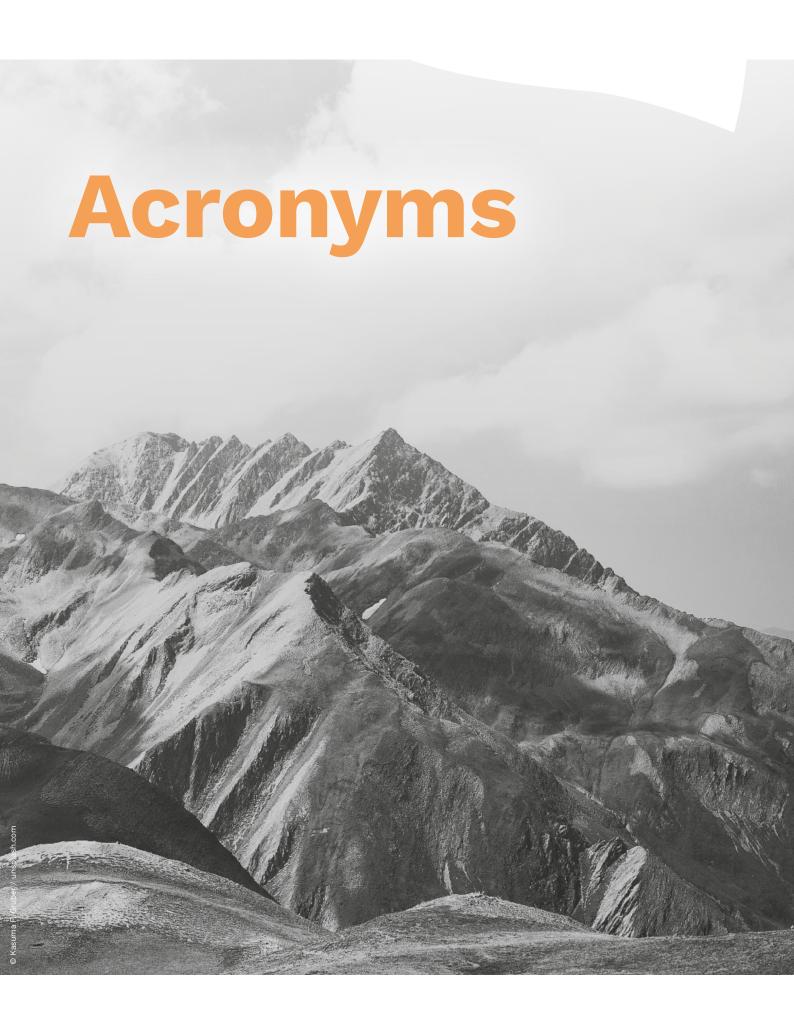
As the European platform for NbS, NetworkNature serves as a coordination and support action (CSA), bringing together the diverse landscape of EU-funded NbS projects and stakeholders. It plays a central role in responding to the needs and gaps identified in this report, particularly those faced by investors, businesses, and NbS. NetworkNature supports this through:

- <u>Online workshops</u> and associated briefs on topics including integrating nature into specific sectors like infrastructure.
- The <u>NbS Business Forum</u>, a network uniting organisations, enterprises, and SMEs interested in the business potential of NbS.
- Developing courses to support greater understanding and uptake of NbS, while strengthening the capacity of local governments to implement a mission-driven approach to investment planning. All with the goal of supporting the development of a transformational and financially viable pipeline of NbS projects that can attract sustained investment.
- Bringing EU funded project partners, including researchers, non-governmental
  organisations, businesses and other stakeholders, together to discuss their work,
  identify synergies and gaps, and plan activities to respond to key needs through the
  NetworkNature Task Forces.

### **Box 9 (continued)**

- The <u>NetworkNature Annual Event</u>, for everyone involved or interested in NbS to come together and explore urgent and important NbS-related topics.
- Supporting the launch of <u>NbS Hubs</u> in partnership with local actors. These hubs bring together researchers, policymakers, businesses and public sector institutions to foster capacity building, knowledge exchange and long-term collaboration. They address context-specific barriers and opportunities for NbS uptake. Two types of hubs are supported:
  - Member State Hubs, engaging actors from across regions within a single country
  - European Regional Hubs, bringing together networks from multiple Member States sharing similar landscape or planning contexts.

For more information on the activities listed above and how you can get involved, visit the NetworkNature website.



| Acronym    | Full term  |
|------------|--|
| ACF        | Althelia Climate Fund  |
| ADB        | Asian Development Bank   |
| AIIB       | Asian Infrastructure Investment Bank   |
| BCA        | Biodiversity Credit Alliance   |
| CBI        | Climate Bonds Initiative's   |
| CSR        | Corporate Social Responsibility  |
| DfNS       | Debt for Nature Swaps  |
| DFIs       | Development finance institutions   |
| ESG        | Environmental, Social and Governance   |
| EC         | European Commission  |
| EIB        | European Investment Bank   |
| EU         | European Union   |
| FSC        | Forest Stewardship Council   |
| GABV       | Global Alliance for Banking on Values  |
| GBP        | Green Bond Principles  |
| IDB        | Inter-American Development Bank  |
| IFC        | International Finance Corporation  |
| IUCN       | International Union for Conservation of Nature   |
| LDNs       | Land Degradation Neutrality Targets  |
| LENs       | Landscape Enterprise Networks  |
| NAPs       | National Adaptation Plans  |
| NBSAPs     | National biodiversity strategies and action plans                                      |
| NDCs       | Nationally Determined Contributions  |
| NAS        | natural assurance schemes  |
| NCFF       | Natural Capital Financing Facility   |
| NbEs       | Nature-based enterprises Nature-based Solutions  |
| NbS<br>ODA |  |
| OECD       | Official Development Assistance Organisation for Economic Co-operation and Development |
| PPPs       | Public-Private Partnerships  |
| R&I        | Research and Innovation  |
| SDGs       | Sustainable Development Goals  |
| TNFD       | Taskforce for Nature-related Financial Disclosures                                     |
| TA         | Technical Assistance   |
| UKRI       | UK Research and Innovation   |
| UNEP       | UN Environment Programme   |
| UNEP-WCMC  | UN Environment Programme World Conservation Monitoring Centre                          |
| UNEP FI    | UNEP Finance Initiative  |
| UK         | United Kingdom   |
| UN         | United Nations   |
| CBD        | United Nations Convention on Biological Diversity                                      |
| UNFCCC     | United Nations Convention on Climate Change  |
| UNCCD      | United Nations Convention to Combat Desertification                                    |
| UNEA       | United Nations Environment Assembly  |
| USAID      | United States Agency for International Development                                     |
| \          |  |

World Business Council for Sustainable Development

Value at risk

Venture Capital

World Wide Fund for Nature

A Guide to the Nature-based Solutions (NbS) Finance Landscape in Europe

VaR

VC

WBCSD WWF

WP4 - Deliverable 4.1

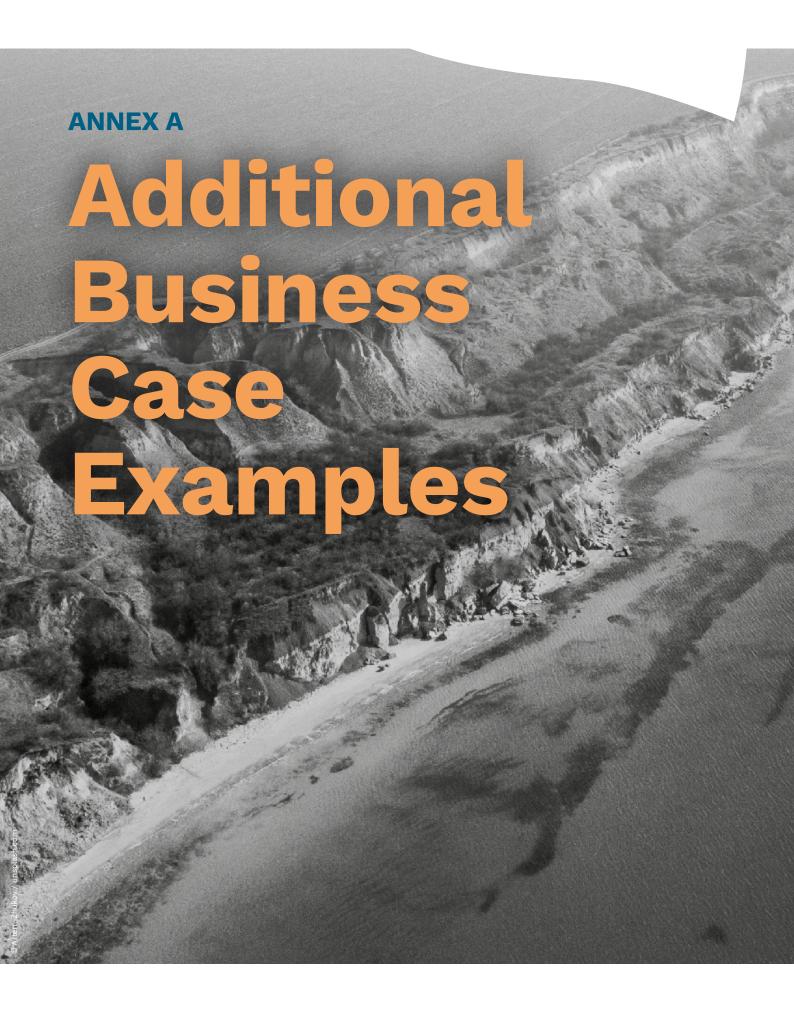


Table A1 - Examples of NbS business cases for risk mitigation, by sector

| Sector         | Challenges   | Examples of NbS for risk mitigation  | Case studies and further reading  |
|----------------|--|--|---|
| Tourism        | Floods,<br>erosion, loss<br>of tourism<br>activities | Coastal<br>and marine<br>restoration   | Iberostar Group has included "restoring ecosystem services for risk reduction and mitigation" within its <u>sustainability strategy</u> . In particular, the company is "expanding their multi-country program to restore reefs, mangroves and coastal dunes in the Caribbean." For instance, they built a nursery in Mexico that grew 4000 sand dunes plans in 2023. In their report, they state that by the end of the same year they "will have planted 16,116 mangroves and donated another 3,500."  Read more: [World Travel and Tourism Council] <u>Coastal</u> & Marine Tourism Quantifying Its Footprint and Funding Requirements for Mitigation and Adaptation |
| Energy         | Floods,<br>erosion                                   | Wetland, oyster<br>and coral reef<br>restoration                                 | The Zephyr Wind Farm in Pakistan invested USD \$352,400 in mangrove restoration, including initial cost for baseline studies, staff costs for monitoring growth, and direct costs for regeneration. Mangrove restoration aims to improve site stability, reduce soil erosion and build up ecological assets.  Read more: [International Finance Cooperation] Catalogue of Nature-based Solutions for Infrastructure Projects  |
| Real<br>Estate | Heat stress, floods                                  | Stormwater<br>management,<br>urban vegetation,<br>green roofs and<br>green walls | The Private Property Retrofit Incentive Program was introduced in 2021 in New York City to install green infrastructure, including rain gardens, permeable pavements and filtration basins, to strengthen stormwater management practices. The project attracted \$0.9 billion in private funding, in addition to \$2.4 billion in public funding. Additional benefits are estimated to be \$139-418 million, taking into considerations health benefits, increased property values and reduced energy bills.  Read more: [International Finance Corporation] Nature-Based Solutions in Cities: Solutions and Examples for Municipalities and the Private Sector        |

Table A2 – Examples of NbS business cases for cost efficiency, by sector

| Sector   | Challenges   | Examples of NbS for risk mitigation                            | Case studies and further reading  |
|----------|--|--|---|
| Forestry | Environmental<br>degradation,<br>biodiversity<br>decline | Continuous cover forestry                                      | In 2018, asset manager SLM Partners established a new fund that purchased over 1900 hectares of forest land in Ireland to implement a continuous cover forestry management regime across most of them. Among the economic benefits of this method, they list five reasons: 1) bringing forward cash flows, 2) producing more valuable timber, 3) avoiding replanting costs, 4) reducing timber price risk, and 5) balancing capital value and income yield.  Read more: [SLM Partners]: Investing in Continuous Cover Forestry in Europe  |
| Mining   | Pollution  | Water<br>management<br>methods (e.g.<br>treatment<br>wetlands) | In Oman's Nimr Oil Fields, water flows via gravity into reed beds where algal and bacterial biofilms attached to the submersed leaves and stems of the reeds trap the oil and break down hydrocarbon molecules, cleansing the water. This water filtration method was cheaper than conventional ones, with a 98 per cent reduction in energy costs.  Read more: [International Finance Cooperation] Catalogue of Nature-based Solutions for Infrastructure Projects   |
| Energy   | Deforestation,<br>land<br>degradation                    | Reforestation  | The Itaipu Dam in Brazil is a hydropower plant that incorporates a NbS component. In particular, it provides USD9 million for reforestation and restoration activities. The protection of land upstream of the dam, as well as the planting of trees in company-owned area and the restoration of watersheds led to a series of financial benefits. In particular, it created USD45 million in direct benefits, including the decreased costs that would have resulted from implementing traditional dredging practices.  Read more: [The Resilience Shift]: How natural ecosystems support one of the world's largest hydroelectric dams |

Table A3 – Examples of NbS business cases for social license to operate, by sector

| Sector      | Challenges  | Examples of NbS for risk mitigation   | Case studies and further reading  |
|-------------|---|---|---|
| Agriculture | Peatland<br>degradation,<br>with<br>associated<br>carbon<br>emissions | Peatland<br>restoration,<br>funded by<br>whiskey<br>companies                       | The whisky industry has been exploring how to address its responsibility and dependency on peat for production. Suntory Global Spirits (SGS) has committed USD 4 million to restore the amount of peat they use by 2030, aiming to then double this amount by 2040. SGS has a partnership with RSPB Scotland, funding the restoration of 160 hectares of peatland in East Ayrshire, and 80 hectares on Islay.                                       |
|             |   |   | Further projects are being explored and SGS is working to bring other whiskey companies on board. This investment by SGS has been driven by the need for the industry to protect the peatlands upon which it depends, as well as increasing scrutiny by consumers of company's actions in this regard.  Read more: [UNEP-WCMC]: Restoration Project   |
|             |   |   | <u>Developers Playbook</u>  |
| Technology  | Environmental degradation, water scarcity                             | Ecosystem restoration   | The collaboration between Microsoft and the Society for Ecological Restoration (SER) focuses on implementing ecological restoration projects in areas where Microsoft has data centres. In Europe, these projects are in Denmark and Sweden.  Read more: The SER and Microsoft Collaboration  |
| Tourism     | Flood,<br>erosion, loss<br>of tourism<br>activities                   | Sustainable<br>management   | Marriott Hotels & Resorts has partnered with the Nai Nang Apiculture Group in Thailand aims to advance mangrove protection efforts and provide support to the local communities that harvest honey around the mangroves. Community members are able to diversify their income by selling honey and other derived products to Marriott Hotels & Resorts.  Read more: [Global Center on Adaptation] Three ways tourism can support climate adaptation |
| Mining      | Deforestation,<br>land<br>degradation                                 | Ecosystem conservation and restoration, sustainable management of natural resources | Vale created the Vale Fund in 2009 as a voluntary initiative to strengthen businesses with a positive social and environmental impact and offer financial instruments to enterprises that drive forward restoration and conservation action. The fund operates in Brazilian biomes, especially in the Amazon.  Read more: Fundo Vale  |

Table A4 – Examples of NbS business cases for revenue generation

| Sector         | Challenges   | Examples of NbS for risk mitigation  | Case studies and further reading  |
|----------------|--|--|---|
| Water          | Water<br>abstraction,<br>contamination<br>of site from<br>runoff from<br>rural and<br>urban land | Runoff<br>management;<br>introducing buffer<br>strips, ponds soil<br>management<br>practices | The Norfolk Water Strategy Programme was launched in February 2021, funded by the Norfolk County Council, Anglian Water, The Nature Conservancy and WWF-UK. Core partners also include Water Resources East. One of the main recommendations was the establishment of a Norfolk Water Fund that is aiming to implement a £30 million NbS portfolio. Private contribution is expected based on regulations such as Nutrient Neutrality and Biodiversity Net Gain, aiming to drive demand.  Read more: [UNEP-WCMC]: Restoration Project |
|                |  |  | Developers' Playbook on Private Finance: Europe   |
| Real<br>Estate | Grey<br>infrastructure,<br>heatwaves   | Green spaces<br>leading to<br>increased<br>property prices                                   | In Mongolia, the Misheel Botanical Garden was established in 2021 by Misheel Group LLC in cooperation with public stakeholders. The projects aims to have positive environmental and social impact, for instance increasing the flow of the Tuul river basin by planting trees each year and providing citizens with more leisure and recreation opportunities. On the Urban Nature Atlas, the project listed "increase in property prices" as intended economic impacts.   |
|                |  |  | Read more: [Urban Nature Atlas]: "Misheel" botanical garden   |

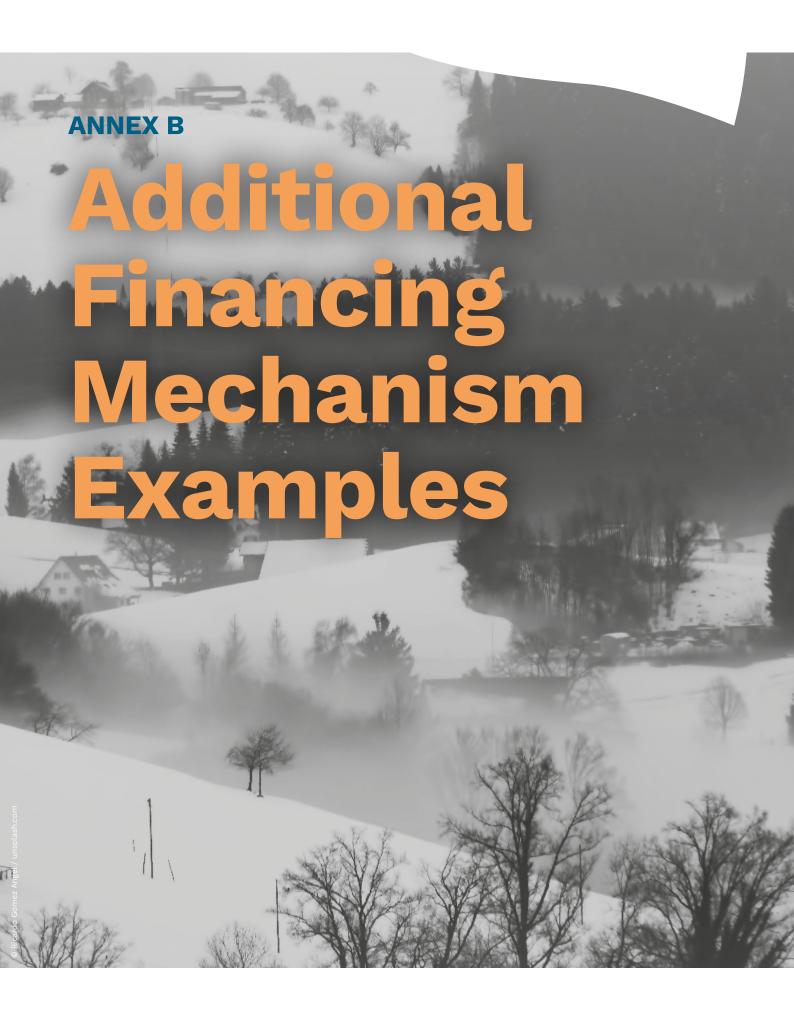


Table B1 combines insights from Chapter II and Chapter III and shows typical financing mechanisms for more established NbS markets with clear revenue streams, usually commodity based.<sup>173</sup> Solutions are being developed to support more early stages NbS markets, as illustrated in Table B2.

Table B1 - Example of financing mechanism and revenue model for established NbS sectors

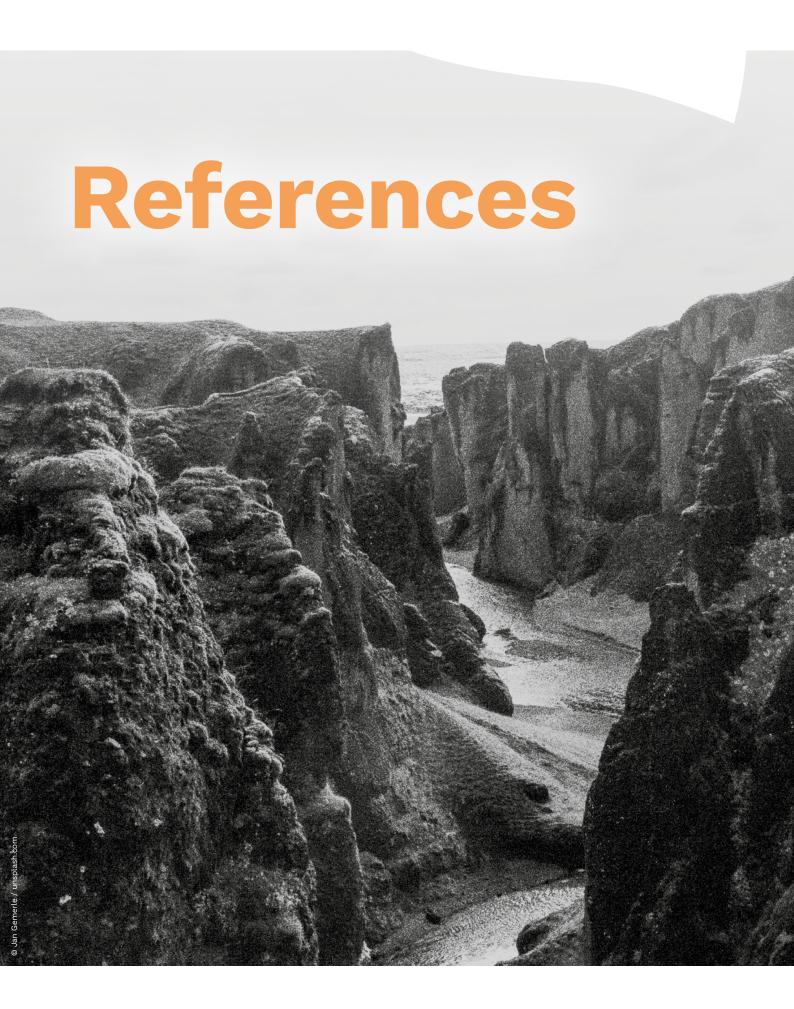
| Sector  | Sector Characteristics  | Type of financing mechanism   | Revenue model opportunity  |
|---|---|---|--|
| Sustainable<br>agriculture <sup>174,175</sup> | Already linked to established commodity markets.                                      | Equity, sustainability linked loans, stacking of several smaller projects to provide an investable portfolio size for private and public investors (e.g. local governments, institutional investors). | Premium pricing for sustainable produce, reduced input costs, greater resilience to environmental shocks, PES.   |
| Sustainable forestry <sup>172</sup>           | Requires significant upfront investment for land, planting, and longterm maintenance. | These are typically funded through equity, such as specialised land management funds, or debt financing, such as green bonds.   | Although returns take time to materialise, revenue can eventually come from timber sales and additional benefits like carbon credits or ecosystem services, making it a viable long-term investment. |
| Urban NbS <sup>176,177</sup>                  | Usually large investment for the public good.   | Public actors (e.g. ODA, national and local governments) are best placed to provide financing through loans, blended finance and grants.  | Investors' return would<br>be perceived through<br>loan repayment,<br>increase in tax revenue<br>or location value, and<br>reduced risks of claim<br>(for insurers).                                 |

Table B2 - Example of financing mechanism and revenue model for early stage NbS sectors

| Sector                                     | Sector Characteristics  | Type of financing mechanism  | Revenue model opportunity   |
|--|---|--|---|
| Sustainable<br>aquaculture <sup>178</sup>  | Involves significant initial costs for infrastructure and stock.                            | Financing usually comes from equity investors interested in marine conservation. | Over time, revenues grow from product sales, and successful operations can become profitable enterprises with the potential to attract new investors or partners. |
| Rivers and lakes <sup>176</sup>            | Private investment is limited due to the public nature of ecosystems benefits.              | Water utilities may invest in NbS to meet regulations and recover costs.         | Water user fees and levies.   |
| Marine and coastal<br>areas <sup>176</sup> | Private investment is<br>low due to ownership<br>barriers and limited<br>data.              | Public investment<br>(loans, bonds, grants)<br>could reduce coastal<br>risks.    | Payment for Ecosystem services (e.g. Reduce coastal risks and restore habitats like seagrass and kelp for carbon and biodiversity benefits).                      |
| Green infrastructure <sup>176</sup>        | Green roofs or urban<br>green corridors require<br>high initial capital for<br>installation | Often supported by concessional debt financing.                                  | Although they may not generate direct income, they provide long-term savings through reduced energy use, stormwater management, and operational efficiencies.     |

Table B3 - Financial mechanism and project stage

| Stage                   | Example Activity                            | Potential Finance Source/Mechanism                   |  |
|-------------------------|---|--|--|
| Project Initiation      | Feasibility studies, stakeholder engagement | Grants, philanthropic funding, or concessional loans |  |
| Implementation          | Planting, monitoring, and certification     | Blended finance, impact investment, and PES          |  |
| Revenue Generation      | Carbon sequestration and credit sales       | Advance credit sales, long-term offtake agreements   |  |
| Scaling and Maintenance | Expansion or upkeep of forest projects      | Green bonds, reinvestment from carbon credit revenue |  |



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