

UN Environment Management Group Nexus Dialogues

Investing in Natural Infrastructure

The Background

Infrastructure systems deliver essential services for society and the economy, providing for instance electricity, water, food, health care and education. Thereby, infrastructure is an essential component of global development, with significant potential to accelerate economic growth, create jobs and contribute to poverty eradication¹. However, troubling current trends - such as the triple planetary crisis of climate change, nature and biodiversity loss and pollution and waste - pose new challenges, including climate hazards and the resulting need to build resilience into infrastructure systems. These challenges are further amplified by the COVID-19 pandemic, which has led to economic disruptions, loss of employment among many other profound consequences².

In the face of these challenges, “business-as-usual” infrastructure development - which mainly relies on built, or “grey”, infrastructure - is no longer an option for providing reliable, resilient and economically viable solutions to infrastructure needs³. It has undermined ecosystems and consumed vast amounts of natural resources. This calls for a rethink in the way in which we plan and build infrastructure. In particular, designing sustainable infrastructure systems that are suited to address modern challenges requires recognizing the potential of nature-based solutions, including natural infrastructure.

Natural infrastructure (also sometimes called ecological infrastructure, environmental infrastructure or green infrastructure) refers to a “strategically planned and managed network[s] of natural lands, such as forests and wetlands, working landscapes, and other open spaces that conserves or enhances ecosystem values and functions and provides associated benefits to human populations”⁴. For instance, by delivering flood protection and water purification services, management and conservation of wetlands can augment the services provided by built infrastructure⁵. Under the right conditions, investments in natural infrastructure are a cost-effective means for enhancing infrastructure service delivery, while also empowering communities, driving job creation and building

¹ WWF and HSBC (2017). Greening the Belt and Road Initiative. <https://www.sustainablefinance.hsbc.com/-/media/gbm/reports/sustainable-financing/greening-the-belt-and-road-initiative.pdf>.

² WWF and ILO (2020). Nature hires: How Nature-based Solutions can power a green jobs recovery. https://www.panda.org/wwf_news/?943816/Nature-based-solutions-jobs-report.

³ WWF and HSBC (2017). Greening the Belt and Road Initiative. <https://www.sustainablefinance.hsbc.com/-/media/gbm/reports/sustainable-financing/greening-the-belt-and-road-initiative.pdf>.

⁴ Benedict, M. A. and McMahon, E. T. (2006). Green Infrastructure: Linking Landscapes and Communities. 2nd ed. Washington, DC, USA: Island Press.

⁵ WWF and ILO (2020). Nature hires: How Nature-based Solutions can power a green jobs recovery. https://www.panda.org/wwf_news/?943816/Nature-based-solutions-jobs-report.



resilience to changing climate conditions and other crises⁶. This also makes natural infrastructure projects well-suited to the recent COVID-19 recovery packages⁷.

However, projects may struggle to secure financing due to unfamiliarity with natural infrastructure solutions, perceived risks and increasingly constrained public budgets. There remains a lack dedicated financial instruments to scale up implementation. Even when financing sources are readily available, governments and financial institutions may lack technical or institutional capacity to develop and appraise bankable projects.

Infrastructure banks and Multilateral Development Banks (MDBs) have an important role to play in addressing financing barriers by providing no- or low-interest loans, in-kind engineering grants, funding earmarked for technical assistance or guaranteeing senior debt to municipalities to support local development programmes⁸. Concurrently, governments can deploy various risk mitigants, promote blended funds and green bonds and foster a wider enabling environment for investments in natural infrastructure. Other actors including those from civil society and the private sector are critical for ensuring that any infrastructure investment reflects the needs and preferences of local communities on the ground. Many natural infrastructure solutions are based on indigenous knowledge, which must be nurtured and integrated into plans early on.

Natural Infrastructure in the 2030 Agenda

Natural infrastructure, as a subset of nature-based solutions, is embedded within the 2030 Agenda and contributes to multiple of the Sustainable Development Goals (“SDGs”)⁹ either through primary, secondary, or tertiary system connections. It therefore lies at the *nexus* of economic, social, and environmental goals. As shown in the graph below, natural infrastructure influences the successful achievement of poverty eradication (1), zero hunger (2), good health and wellbeing (3) clean water and sanitation (6), decent work and economic growth (8), sustainable cities and communities (11), climate action (13) and life on land (15).

⁶ WWF and HSBC (2017). Greening the Belt and Road Initiative. <https://www.sustainablefinance.hsbc.com/-/media/gbm/reports/sustainable-financing/greening-the-belt-and-road-initiative.pdf>.

⁷ WWF and ILO (2020). Nature hires: How Nature-based Solutions can power a green jobs recovery. https://www.panda.org/wwf_news/?943816/Nature-based-solutions-jobs-report.

⁸ UNEP and AIIB (2021). Collaboration to deliver the infrastructure for tomorrow. <https://www.greengrowthknowledge.org/blog/collaboration-deliver-infrastructure-tomorrow>

⁹ WWF and ILO (2020). Nature hires: How Nature-based Solutions can power a green jobs recovery. https://www.panda.org/wwf_news/?943816/Nature-based-solutions-jobs-report.

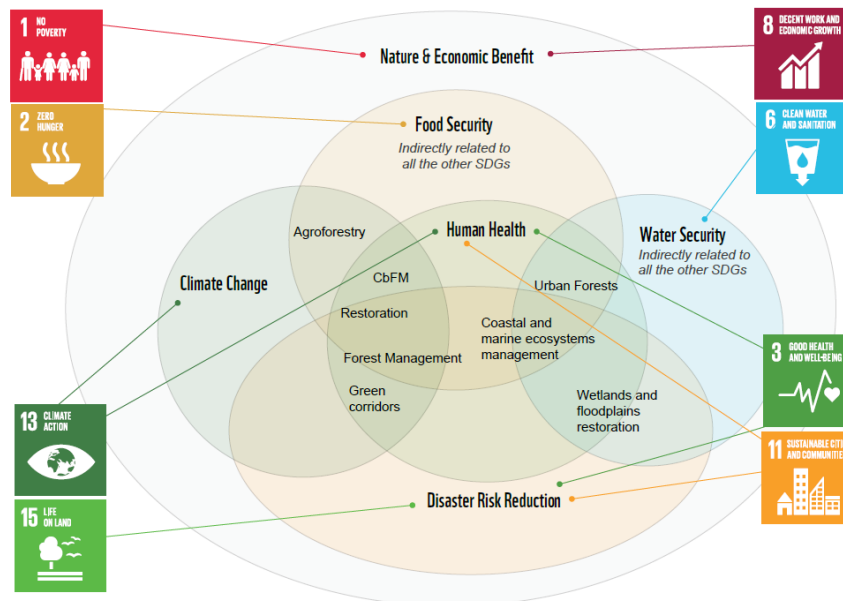


Figure 1: Natural Infrastructure and the SDGs (Taken from WWF and ILO (2020))

In addition to the SDGs shown in the graphic above, natural infrastructure holds significant potential to influence progress towards several other SDGs, such as SDG 16 on promoting just, peaceful and inclusive societies. By providing essential infrastructure services in a way that protects and restores ecosystems, natural infrastructure has the potential to reduce conflicts linked to the exploitation of natural resources. As such, natural infrastructure can also limit the risk of resource crises arising as a result of conflict, especially in the face of increased climate stresses¹⁰.

Furthermore, natural infrastructure contributes to SDG 7 on affordable and clean energy. By reducing energy consumption, providing bioenergy and contributing to carbon uptake and storage, natural infrastructure development can pave the way towards more sustainable energy production. For instance, natural-built hybrid infrastructure such as green buildings or roofs can reduce annual energy consumption by up to 45%, mainly by cooling urban areas¹¹. A final additional example concerns the significant potential of natural infrastructure to advance progress on SDG 14 on life below water. In this context, natural infrastructure solutions such as management of mangroves, wetlands, oyster reefs and sand dunes can foster increased resilience and restoration of coastal ecosystems by, for example, buffering from flooding and storms, minimizing erosion or decreasing wave energy and run-up¹².

¹⁰ IUCN (2021). Conflict and Conservation. <https://portals.iucn.org/library/sites/library/files/documents/NGW-001-En.pdf>.

¹¹ European Commission (2014). Green Infrastructure in the Energy Sector. https://ec.europa.eu/environment/nature/ecosystems/pdf/Green%20Infrastructure/GI_energy.pdf.

¹² United States of America Office for Coastal Management (2022). Natural Infrastructure. <https://coast.noaa.gov/states/fast-facts/natural-infrastructure.html>.



Rationale

In November 2020, the Senior Officials of the UN Environment Management Group (“EMG”) agreed to establish a [Consultative Process on Sustainable Infrastructure](#) to strengthen the coordination of UN-system support to Member States in this area of work. In this context, it was decided that there should be a follow-up to the [2019 EMG Nexus Dialogue](#) on Sustainable Infrastructure for the SDGs and advancing EMG Members’ shared interest and expertise in sustainable infrastructure.

For this follow-up event, **investing in natural infrastructure** has been chosen as a focus theme. This is not only due to the importance of investments in natural infrastructure for fostering progress towards the SDGs and for stimulating economies and building resilience in the COVID-19 recovery context, as outlined, but also given the prominence of this topic in the recent work of EMG Members. For example, it is highlighted in the International Good Practice Principles for Sustainable Infrastructure as Principle 4: Avoiding Environmental Impacts and Investing in Nature¹³, recently endorsed by EMG Members.

For leveraging the potential of natural infrastructure for fostering progress on the SDGs and a sustainable and resilient COVID-19 recovery, further upscaling of investments is essential. For example, a recent report of the [“State of Finance for Nature”](#) finds that investments in nature-based solutions need to triple by 2030, and to increase four-fold by 2050 from the current level, in order to combat the triple planetary crises¹⁴. This gap cannot only be filled with public funds, highlighting the need for significant increases in private sector investments in natural infrastructure, as well as other innovative financing mechanisms.

Against this background, the EMG, in close collaboration with the UN Environment Programme’s Sustainable Infrastructure Investment Team, the UN Development Programme and the Partnership for Action on Green Economy (PAGE), will organize a Nexus Dialogue on **“Investing in Natural Infrastructure”**, with a proposed focus on how natural infrastructure can deliver on the SDGs while stimulating economies and building the resilience of infrastructure systems in the COVID-19 recovery context.

Objectives

The **“Investing in Natural Infrastructure” Nexus Dialogue** will contribute to the EMG Consultative Process on Sustainable Infrastructure by focusing on investing in natural infrastructure as a specific priority theme. Specifically, the Nexus Dialogue seeks to:

¹³ UNEP (2021). International Good Practice Principles for Sustainable Infrastructure. <https://www.unep.org/resources/publication/international-good-practice-principles-sustainable-infrastructure>.

¹⁴ UNEP, WEF, ELD and Vivid Economics (2021): “State of Finance for Nature”. <https://www.unep.org/resources/state-finance-nature>.

- **Consider the potential of investment in natural infrastructure** as a priority for COVID-19 recovery packages, [including potential social, economic and environmental co-benefits](#) of investing in natural infrastructure
- **Discuss country implementation challenges and opportunities for mainstreaming natural infrastructure into national infrastructure planning and investment**, including fostering policy coherence across relevant ministries
- **Explore promising and innovative financing mechanisms for natural infrastructure**
- **Sustain political momentum post UNEA-5.2**, in light of UNEA-5's theme of "Strengthening Actions for Nature to Achieve the Sustainable Development Goals"
- **Contribute to widening the discourse surrounding natural infrastructure**, via a nexus understanding with linkages across sustainability, resilience, peace, etc.

Outcomes

In advancing the current EMG Consultative Process on Sustainable Infrastructure and building on the 2019 EMG Nexus Dialogue, the Nexus Dialogue on **"Investing in Natural Infrastructure"** is expected to contribute to the following specific outcomes:

- **Identify specific financing structures and mechanisms to scale up natural infrastructure investments** in priority countries and regions, including through MDBs such as the World Bank
- **Propose long-term means of implementing the International Good Practice Principles for Sustainable Infrastructure¹⁵ among EMG members**, including PAGE agencies, as per the outputs of the EMG Consultative Process on Sustainable Infrastructure
- **Identify specific policy mechanisms through PAGE** to engage governments investing heavily in infrastructure, in order to strengthen infrastructure's alignment with the SDGs and the Paris Agreement through investment in natural infrastructure
- **Contribute to implementation of the UNEA Resolution on Sustainable Infrastructure ([UNEP/EA.4/Res.5](#))**, which calls to "promote nature-based solutions as key components of systems-level strategic approaches to infrastructure planning and development"

Structure and Content

Virtual format

¹⁵ UNEP (2021): International Good Practice Principles for Sustainable Infrastructure: <https://www.unep.org/resources/publication/international-good-practice-principles-sustainable-infrastructure>.

Length and date: 2 hours, 7 June 2022 (14:30 – 16:30, CET)

Investing in Natural Infrastructure

Time: TBC

<p>Time Zones</p>	<p>Introducing and welcoming by EMG Secretariat (Mr. Hossein Fadaei) and PAGE Secretariat (Mr. Asad Naqvi), outlining objectives and structure (10 minutes)</p> <p style="text-align: center;">Investing in Natural Infrastructure</p> <p style="text-align: center;"><i>An EMG Nexus Dialogue</i></p> <p><i>Convenor:</i> EMG Secretariat</p> <p><i>Facilitator:</i> Ms. Samantha Stratton-Short – Head of Strategic Initiatives, Infrastructure and Project Management, UNOPS</p> <p><i>Notetakers:</i> UNEP and UNDP</p> <p>Key Remarks:</p> <p>Mr. Ali Raza Rizvi - Head, Climate Change, IUCN (5 minutes)</p> <p>Initial Expert Remarks (25 minutes)</p> <ul style="list-style-type: none"> • Ms. Midori Paxton - Head, Ecosystems and Biodiversity, UNDP • Minister of Finance & Economic Planning, Rwanda - TBC • Ms. Carmel Lev - Strategy and Partnerships Specialist, Global Infrastructure Facility • Mr. Oliver Hillel - Programme Officer, Secretariat of the Convention on Biological Diversity • Mr. Todd Howland – Chief, Development, Economic and Social Issues Branch, OHCHR • Mr. Brenden Jongman – Lead, Nature-based Solutions, World Bank • Ms. Kantuta Conde – Representative, Network of Indigenous Youth of Latin America and the Caribbean <p>Panel Discussion</p> <p>Questions</p> <ol style="list-style-type: none"> 1. What are some specific financing structures and mechanisms needed to increase investments in natural infrastructure? 2. How can we integrate discourse around natural infrastructure into existing and future COVID-19 recovery packages? 3. What are the implementation challenges and opportunities to mainstream natural infrastructure into national infrastructure planning and investment policies?
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| | <ol style="list-style-type: none">4. Who are additional stakeholders we need to engage to increase the inclusivity and resilience of the recommended solutions?5. What are three actionable next steps that the UN system can work towards advocating for- and investing in- natural infrastructure? |
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Concluding Remarks and Next Steps: EMG, PAGE (10 minutes)