

The role of Nature-based Solutions in a Nature-Positive Economy

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ICLEI Europe

Sustaining Cities Naturally webinar
13 October 2022



REGREEN
NATURE-BASED SOLUTIONS



CONEXUS
Urban nature connects us



INTERLACE
RESTORING URBAN ECOSYSTEMS
RECUPERANDO ECOSISTEMAS URBANOS



Nature-based solutions

*“NBS are actions to **protect, conserve, restore, sustainably use and manage natural or modified** terrestrial, freshwater, coastal and marine ecosystems, which address **social, economic and environmental challenges** effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits. The resolution further states that nature-based solutions **respect social and environmental safeguards.**”*

UNEA Resolution on Nature-Based Solutions

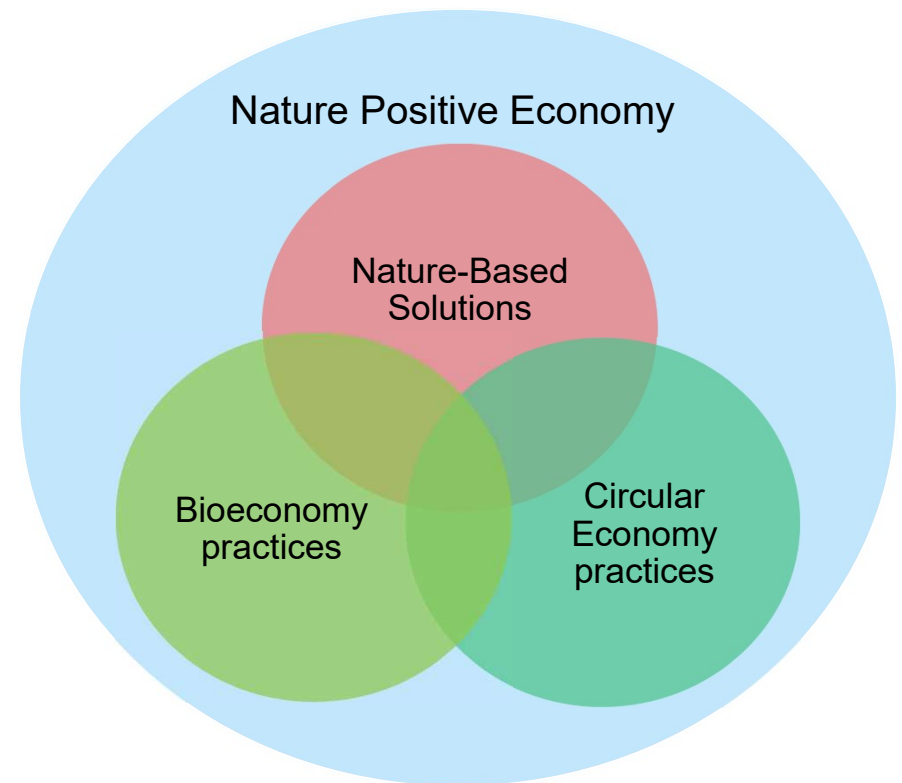


Source: WATG gifs

Nature Positive Economy

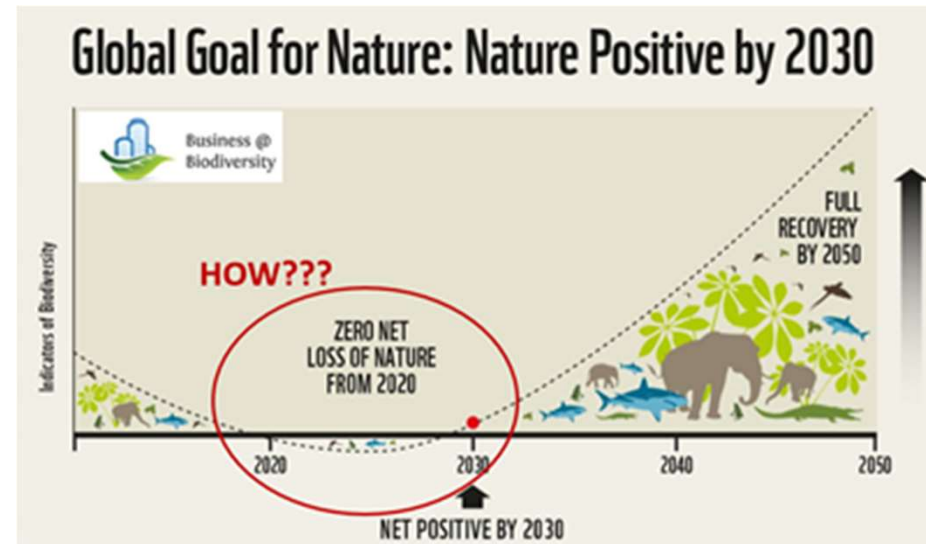
“A nature positive economy is one in which businesses, governments and others, take action at scale to reduce and remove the drivers and pressures fuelling the degradation of nature, and work to actively improve the state of nature and the ecosystem services it provides.”

**University of Cambridge,
Institute for Sustainability Leadership**



Nature Positive Economy

B@B is developing a 'working definition' in a business context and testing it with businesses @EBNS. The outcomes will aim to foster further alignment on interpreting what nature positive means in a business context.



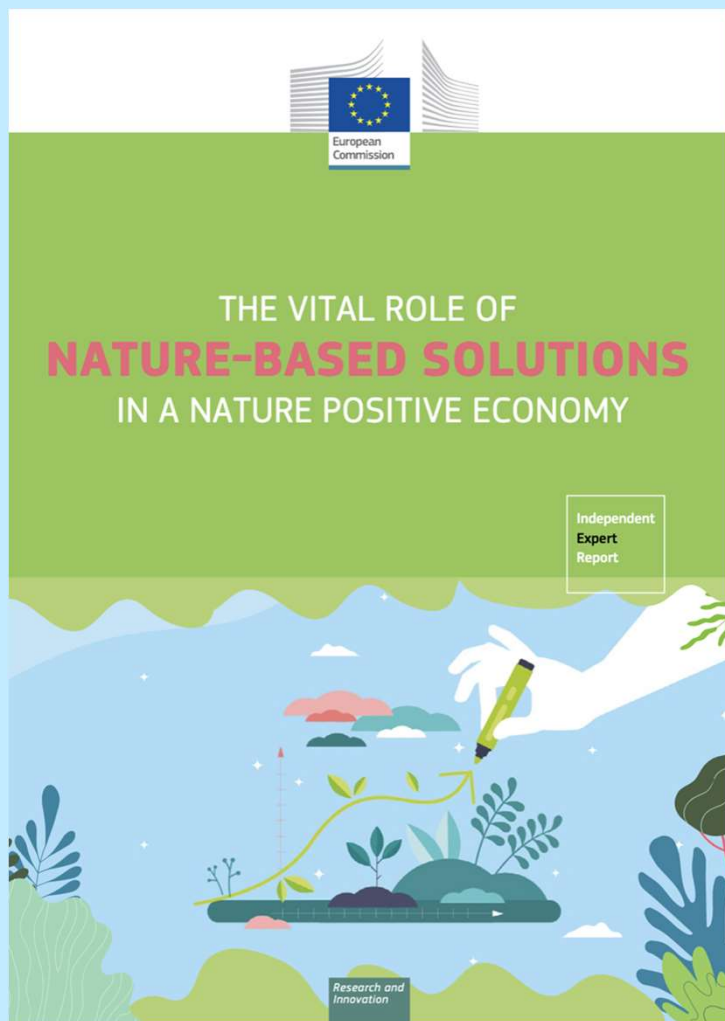


‘At the centre of the paradigm shift - towards a regenerative economy that is respectful of nature - are Nature-Based Solutions (NBS).

They are increasingly recognised internationally as a fundamental part of action for climate and biodiversity.

A growing number of businesses are making the case for NBS already, but it is time to move from a niche to a broader movement.’

**John Bell, *Healthy Planet* Director,
DG Research & Innovation, European Commission**



Authors:

Siobhan McQuaid, Esmee Kooijman, Daniela Rizzi, Thomas Andersson, Joanne Schanté

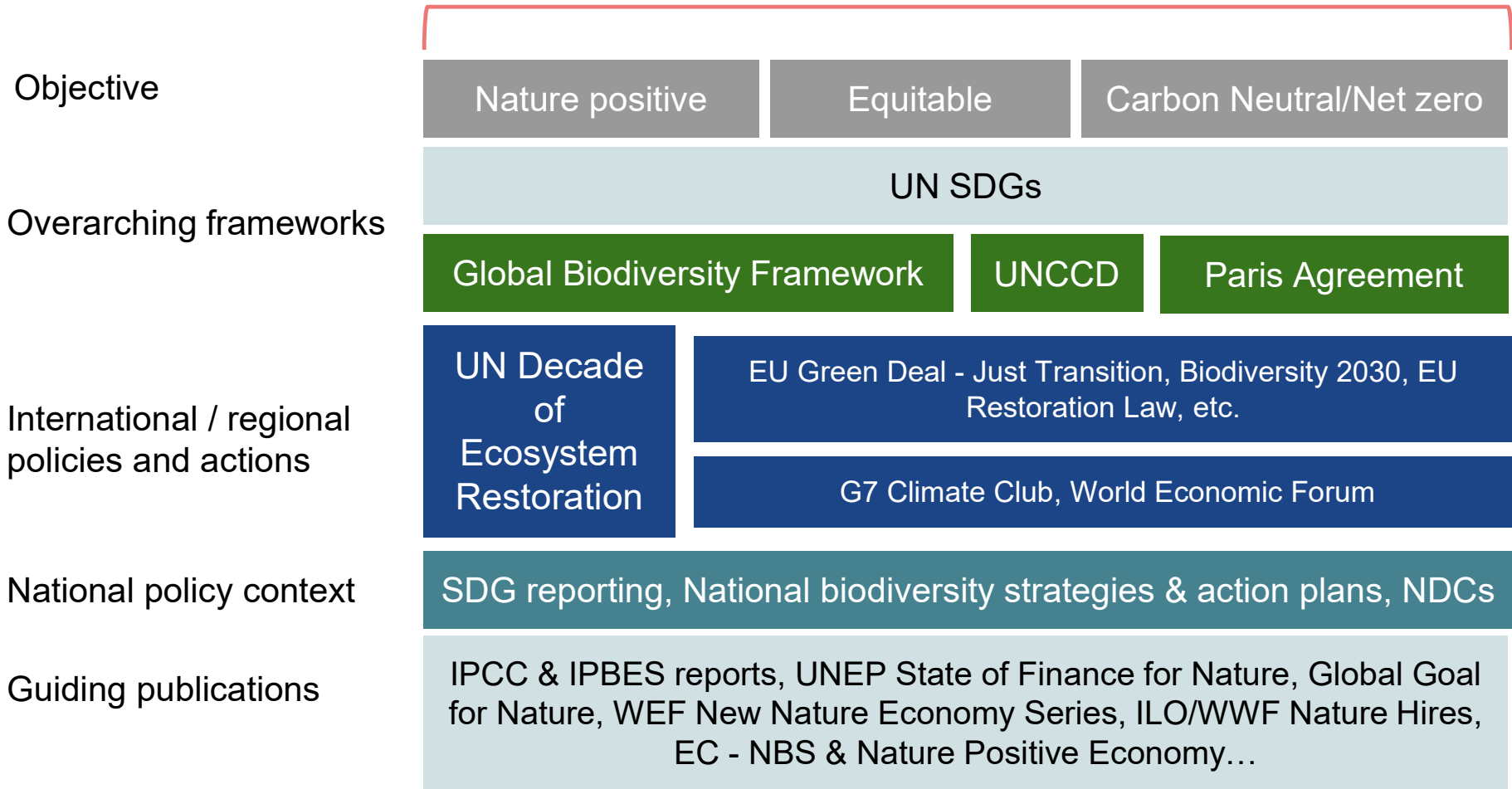
Process:

- *Global consultation process (170 respondents) consisting of an online survey, events (UN Habitat) & roundtable (TNO)*
- *Contributions from 17 NBS projects*



Policy context

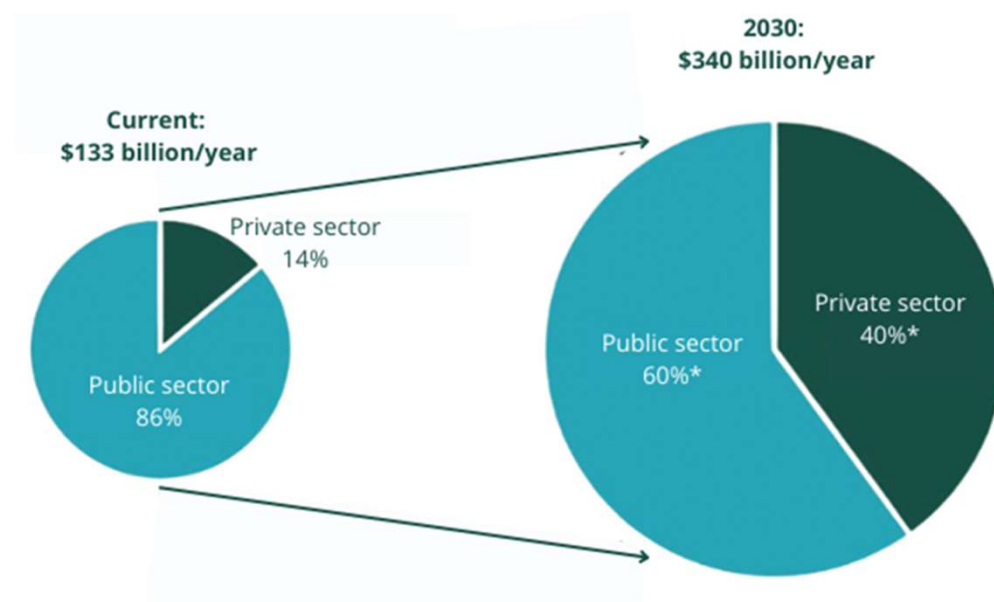
Nature-based Solutions



Adapted from The Measurable Nature Positive Goal for the CBD Mission www.naturepositive.org

NBS Market – Demand & Investment

- Growing demand for NBS to meet climate and biodiversity targets
- Need to increase ratio of private sector investment in NBS
- Leading to increased opportunities for private sector supply of NBS



Source: Adapted from UNEP, State of Finance for Nature, 2021, and *McQuaid et al., White Paper on Nature-Based Economy, 2022

Addressing Societal Challenges

Nature-Based Enterprises (NBEs) are driven by a mission to work with and for nature to address climate change and biodiversity challenges.



Biodiversity enhancement



Water management



Green space management



Climate resilience



Air quality



Coastal resilience



Urban regeneration



Health and well-being



Participatory planning and governance



Social justice and social cohesion



Knowledge building for sustainable urban transformation



New economic opportunities and green jobs

Images source: European Commission

Enterprises

Mission priority:

Economic goals first

Scaling objective:

To maximise economic benefits (while '*doing no harm*' to environment & society)



Biomass Processing for Energy
Source: Vecoplan

Nature-based enterprises

Mission priority:

Environmental (and social goals) **first**

Scaling objective:

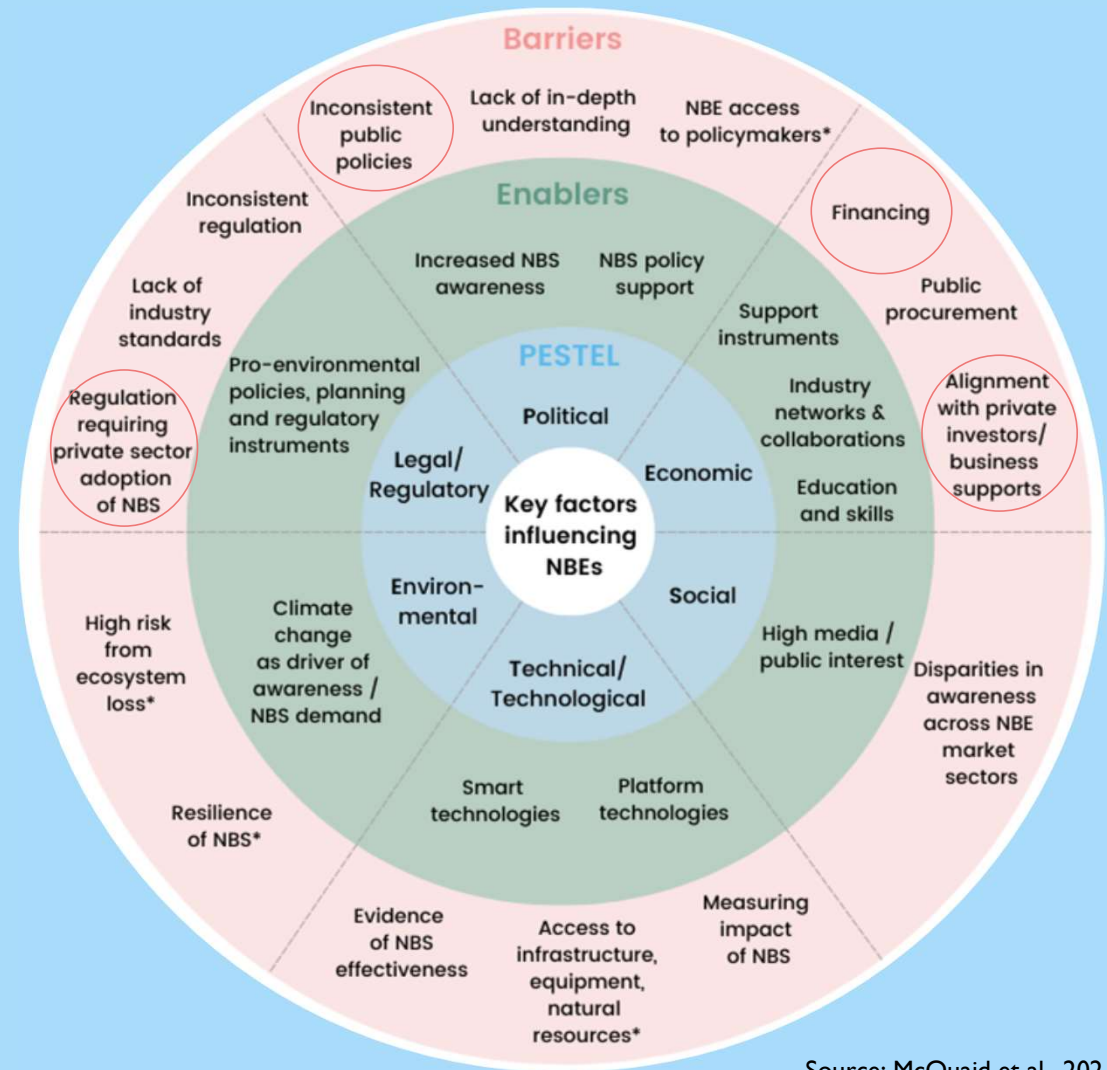
To maximise environmental and **societal impact**



Nature-based solutions for landscaping, backyards, noise barriers, building facades, plazas, which reduce the impact of noise, absorb dust and pollutants, and help biodiversity.
Source: Helix Pflanzen

Framework conditions

- Political, financial, legal / regulatory barriers were found to be among the most important challenges
- Political leadership also a key enabler alongside pilots and experimentation to raise awareness and specific support measures such as networks and capacity building.



Source: McQuaid et al., 2021

NBS Market – Supply

Nature-Based Enterprises (NBEs) are driven by a mission to work with and for nature to address climate change and biodiversity challenges. They are engaged in economic activities, for example:



Water Management



Green Buildings



Sustainable Agriculture



Sustainable Forestry



Smart Tech



Ecosystem Restoration & Management



Sustainable Tourism, Health & Wellbeing



NBS for Public Spaces



Advisory Services, Community Engagement



Research, Education & Innovation



Financial Services

Source: Kooijman et al., 2021

Examples of Enabling Actions



International Perspectives

- Embrace local contexts considering
 - Natural environments
 - Economic contexts
 - Cultural contexts
- Acknowledge different actors perspectives on NBS, inclusion of indigenous communities and vulnerable groups



Networks, partnerships, platforms

- [Connecting Nature Enterprise Platform](#) – supporting global networking **thematically**;
- [UrbanByNature](#) building **regional** NBS knowledge hubs globally;
- [Grünstattgrau](#) – holistic competence centre at the **national** level (Austria)
- [Connecting Nature Guidebooks](#) - supporting cities to develop **strategies** to stimulate and accelerate NBEs



Connecting Nature Enterprise Platform



- The world's largest community of nature-based enterprises.
- We are a network, we are a marketplace, we build skills. We raise awareness of the vital role of nature-based enterprises in the nature-positive economy.
- Led by industry pioneers who raise awareness, share knowledge and best practice.

To join: www.naturebasedenterprise.eu/

Our Communities



Community Engagement



Nature-Based Organisations



NBS for Green Buildings



NBS for Health and Wellbeing



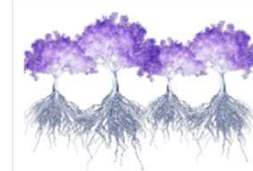
NBS for Tourism and Recreation



NBS for Urban Landscapes



NBS for Water Management



Smart Technologies for NBS



Sustainable Agriculture & Food Chain

UrbanByNature Programme



- Regional NBS hubs, partnerships and networks around the world to bring players together for NBS knowledge exchange in local languages. Local collective action on NBS through regional NBS hubs (9 active hubs)
- Tools and approaches for NBS available to the hub communities (1000+ registrants from +100 countries with +70 published videos (almost 10,000 clicks))

<https://urbanbynature.eu/>



THE VITAL ROLE OF NATURE-BASED SOLUTIONS IN A NATURE POSITIVE ECONOMY

Key Issues and Recommendations



- **Policy makers (international vs. national, regional, local)**
- **Public sector professionals**
- **Civil society / NGOs**
- **Corporates, NBE, industry bodies**
- **Investors, financial institutions**
- **Researchers**
- **Other stakeholders**

Take home messages

- Need for a paradigm shift in economic thinking and policy – prioritise environmental and social impact first!
- Large scale investment in nature-based solutions presents a significant - but largely unexplored - potential to deliver a just transition to a nature-positive economy. Measures to increase demand should be accompanied by measures to stimulate supply such as targeted support for nature-based enterprises.
- Urgent action is needed on development of industry standards and codes of practice: while some evidence emerged of national standards in more mature industry sectors, urgent action is needed to develop codes of practice and sector specific standards at European/international level.
- This transition can meet manifold societal challenges and must equally value communities, culture, and traditions and above all, lead to the conservation and **restoration of nature and biodiversity.**

THE VITAL ROLE OF NATURE-BASED SOLUTIONS IN A NATURE POSITIVE ECONOMY



Read / download here!



Publication's Recommendations



References

NBS & Nature Positive Economy

- McQuaid, S.; Kooijman, E.; Rizzi, D.; Andersson, T. and Schanté, J. (2022) The vital role of nature-based solutions in a nature positive economy. *Publications Office of the European Union*, 2022. ([Link](#))
- United Nations Environment Programme (2021). State of Finance for Nature 2021. *Nairobi*. ([Link](#))

Nature-Based Enterprises

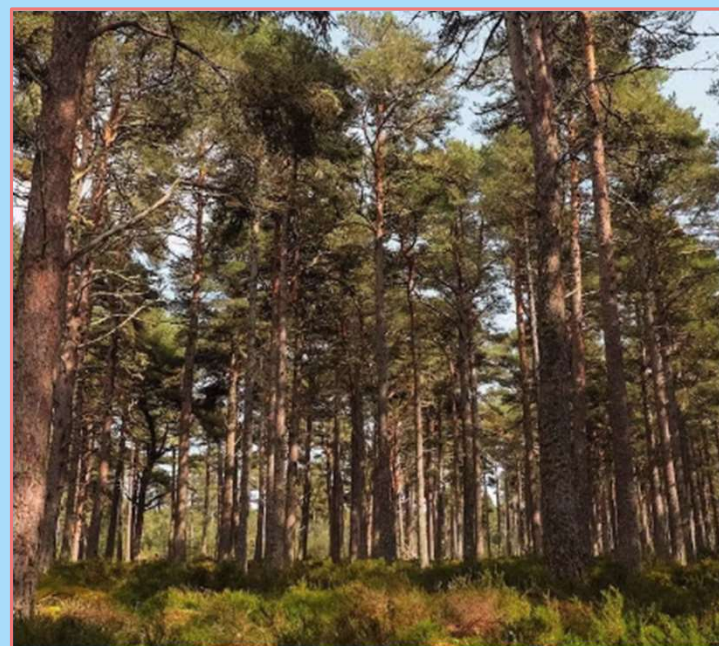
- Kooijman, E.D.; McQuaid, S.; Rhodes, M.-L.; Collier, M.J. and Pilla, F. (2021) Innovating with Nature: From Nature-Based Solutions to Nature-Based Enterprises. *Sustainability* 2021, 13, 1263. ([Link](#))
- McQuaid, S.; Kooijman, E.D.; Rhodes, M.L. and Cannon, S. (2021) Innovating with Nature: Factors influencing the success of Nature-Based Enterprises. *Sustainability* 2021, 13, 12488. ([Link](#))

Tools

- Connecting Nature Enterprise Platform - www.naturebasedenterprise.eu
- UrbanByNature - www.urbanbynature.eu

Example: NBEs in Ecosystem Restoration

- Policy alignment, e.g.
 - UN Decade of Ecosystem Restoration
 - UNCCD Land Degradation Neutrality (LDN) Targets
 - G7 pledge to conserve/restore 30% of global land and 30% of global oceans by 2030
- Enterprises working on rewilding, reforestation, landscape restoration (e.g. deserted land), habitat restoration (flora and fauna), biodiversity
- Challenges: lack of evidence of results especially in the short term (monitoring, indicators), lack of public awareness, difficulty finding partners / land, financing



Example: Mossy Earth restores Scottish pinewoods and supports biodiversity and native species

Example: NBEs in Marine Ecosystem Restoration

- Objective: To combat hazards induced by climate change, improve marine ecosystems and natural capital assets, and associated ecosystem services and values
- Activities: Restoration of coral reefs, kelp forest ecosystems, oyster reefs, etc.
 - Provides biodiversity, habitat and resources (food), coastal protection, carbon sink, decontaminates water, economic opportunities, cultural traditions
- Challenges: fragmented and short-term funding, high initial investment, poorly defined property rights, lack of evidence on success (especially in the short term)



Case study “Kelp forest in Norway”
H2020 MERCES project in
EC publication, 2022 (Photo: NIVA)

Example: Smart City Rooftop Farming in Graz

- Food production close to consumers
- City cooling (temperature), water retention, biodiversity
- Social integration and economic opportunities (jobs, training programmes)



Source: REGREEN Project

Example: Smart Tech for NBS

- To help better understand, monitor, and manage NBS, and to reconnect citizens to nature
- Satellite imagery, spatial tools, environmental sensors, data analytics, virtual reality etc.
- Challenges: data availability & quality, lack of successful pilots and business cases



TreeMania's sensor technology

Example: NBS for Green Buildings

- To reduce pollution, urban heat island effect, and increase biodiversity
- Living green roofs, façades, walls, and interior greening
- Well developed sector in some countries (e.g. Germany, Austria)
- Challenges: lack of knowledge about impact, lack of industry standards



A green façade developed
by Helix Pflanzen

Global feedback

Uganda



Isaac Mugumbule &
Rhoda Gwayinga,
City of Kampala

“The concept of Nature-based Economy is **new** to the City of Kampala and to most cities across the globe. In the past, we have had **a lot of dialogue around NbS and impacts of Climate change on a country’s economy but never on the same platform....** Governments, policy makers, experts and private sector need to **collaborate and develop nature-based economic indicators**. These could explore factors like urban forestry cover, air quality, blue infrastructure, population growth, green technology. NbE indicators would then be used as a **basis for driving key economic policy decisions as opposed to the norm.**”

South Africa



“Most of Africa is far from reaching an advanced or developed economy status, so **defining the development pathway can still be done**. Nothing is set in stone, needs to be reversed, or needs to be redone. Instead, we can look at green fields and design a nature-based future”

Peru



Taícia H.N.
Marques,
UNALM &
PERIFERIA

“**Environmental policies are a novelty** - the Ministry of Environment was only created in 2008. **Nature and economy had traditionally taken different paths**, as well as social inclusion, but a possible shift of the business-as-usual model is being recently proposed. The National Policy of Competitiveness and Productivity of the **Ministry of Economics and Finance is being complemented by specific roadmaps designed by the Ministry of Environment to guide each one of the most representative economic sectors of the country (industry, agriculture, fishing, and aquaculture)....** The design of business models to support and scale up NbS in Peru is challenging as it encompasses a **range of actors and sectors that usually are not used to collaborating.**”

Marc Watum, Kgalema Motlanthe Foundation

NBS Market Sectors - one size does not fit all!

- **Different types of value created in urban v rural areas:**
 - Rural - high potential economic value creation e.g. regenerative agriculture
 - Urban - high potential for social and environmental value creation e.g. urban trees, allotments
- **Implication for different types/scale of financing:**
 - Rural - larger scale investments, clear ROI and investment interest e.g. sustainable forestry
 - Urban - smaller scale investment, ROI less clear (compared with other land use propositions) e.g. community gardens v social housing, more dependence on public funding
- **Highly fragmented market at different stages of development e.g.**
 - Green buildings sector well developed in Germany and Austria but not elsewhere
 - NBS for Health and Wellbeing - more recognised in Asian culture than Western culture
 - Regenerative agriculture practices - wealth of indigenous knowledge but value not recognised or replicated