



Network
Nature

**Nature-based solutions
and Standards**
Concept



NetworkNature is a resource for the nature-based solutions community, creating opportunities for local, regional and international cooperation to maximise the impact and spread of nature-based solutions. The project is funded by the European Commission under the Horizon 2020 programme.

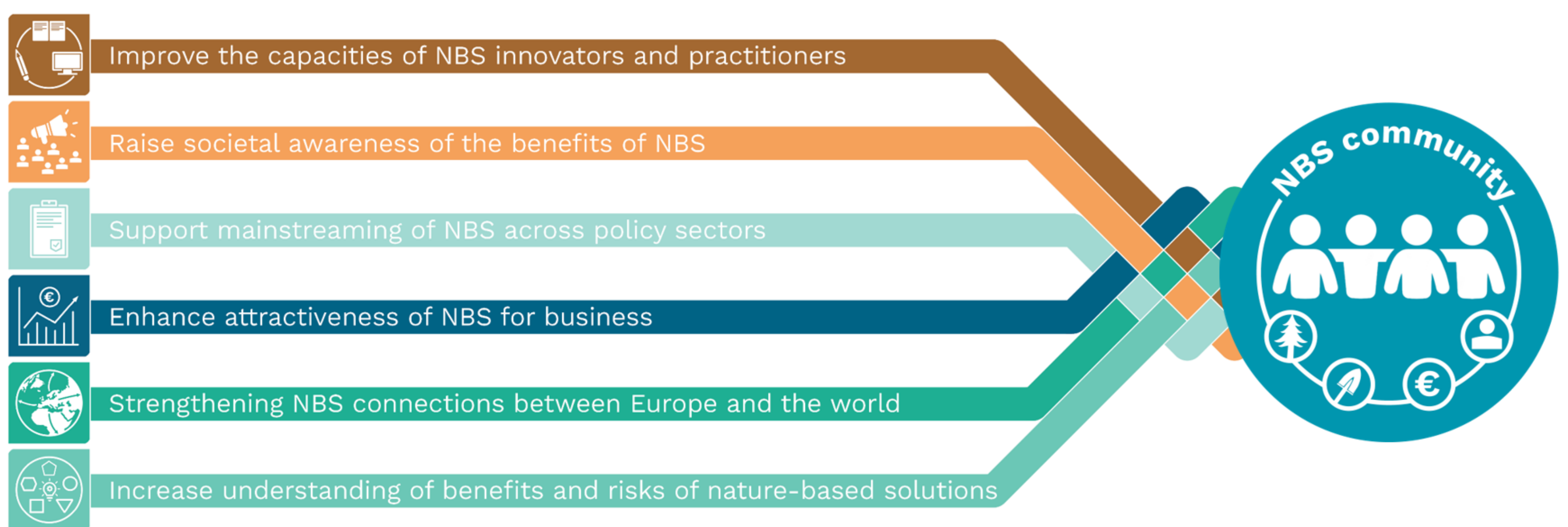


Image: NetworkNature pathways to maximise impact of NbS

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Notes

NbS - Nature-based solutions

NbS are defined by the European Commission as
“Solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. Nature-based solutions must therefore benefit biodiversity and support the delivery of a range of ecosystem services”

Nature-based solutions (NbS) have the potential to tackle the interlinked ‘triple crisis’ situation we are faced with, namely climate, biodiversity and land degradation crises while delivering on sustainable development goals (SDGs) and the many complementary goals on the European and international policy level such as the EU Missions, EU Green Deal, Post 2020 Global Biodiversity Framework, UN Decade on Ecosystem restoration. Infact, the recently published IPCC WGII report, Climate change 2022: Impact, adaptation and vulnerability mentioned “Nature-based Solutions” 457 times over the report’s 3675 pages, highlighting successes, limitations and recommendations for NBS for adaptation and resilience.

However, to meet this potential and to deliver a tangible impact towards the European/international/national policy targets, NbS need to be upscaled and embedded in all planning and implementation processes and practices and carefully scrutinised regarding the potential synergies as well as trade-offs..

Upscaling of NBS is very much at the core of discussions in the field of research and practice nowadays, nevertheless there is still a lack of (standard) technical and operational skills, knowledge, finances and market uptake as well as apt governance models for those wanting to implement and construct NBS (e.g. local governments) .

Although research has built vast evidence on the co-benefits and relevance of NBS to support climate adaptation and mitigation measures and enhance resilience, there needs to be a leapfrogging of NBS from Research to Market, from niche to mainstream as well as strengthening maintenance and governance aspects. There is a need to create market conditions to match the growing demands with good, suitable and, where helpful, standardised quality supply of NBS. But what is this ‘quality’ we are talking about and why? And how can we define it?

What do we mean by the quality of NbS?

To ensure NbS effectively and efficiently meet the growing demand for procuring and implementing them at local and regional level, there is a need to ascertain a reliable, fitting and sustainable quality of NBS. When we talk about the quality of NBS, we mean that the actual NbS is a good fit based on the local context within the right framework conditions and ascertaining relevant criteria for good practice in which NbS are deployed. They should be cost effective, provide long-term social, environmental and economic benefits and help build local resilience while being biodiverse. NbS should be constructed, developed and integrated in the surrounding landscape to help protect, restore and sustainably manage natural and modified ecosystems in the process. This is in alignment with the definitions proposed by the European Commission (see EC Definition [here](#)) and the IUCN (see IUCN Definition [here](#))

NbS should be multifunctional, if designed and implemented well, to produce several environmental, social, and economic benefits at the same time (Dushkova, D. and Haase, D., 2020). This is the most important characteristic of NbS and that is where they diverge and position themselves as compared to several other similar yet distinct concepts of ecosystem services, ecosystem based adaptation and green infrastructure to name a few. Nevertheless, the benefits are often interdependent and can be an intentional or accidental by-product of the core intended impact. For instance, “NbS can be deployed to improve air quality (environmental benefit), which allows a decrease of diseases related to air pollution (health benefit), which in turn allows savings in healthcare (economic benefit). NbS also provides local benefits for disaster risk reduction and increasing resilience. Healthy ecosystems are important for hazard prevention and post-disaster recovery. Moreover, they provide local benefits for climate change adaptation and regional-global benefits for climate change mitigation.” ([TN Handbook](#))

NbS is not a panacea to all adaptation and mitigation efforts for addressing the climate and biodiversity crises. It should be considered in conjunction with decarbonisation actions. NBS should also not be regarded as a means to do greenwashing by corporations to keep doing business-as-usual while pledging for NbS to ‘offset’ carbon emissions. Moreover, NbS should not lead to green gentrification, muting the voices of local and indigenous communities or in the environmental domain, be based on monoculture crops or vegetation ([Joint GYBN-Y4N-YOUNGO Information Brief](#)).



Which approaches exist to safeguard NbS quality?

Under the leadership of the Nature-based Solutions Initiative ([NbSI](#)), several environmental non-profits and research institutions have together developed four guidelines to help shape the NbS discourse. The objective of these guidelines is to “[deliver] successful, sustainable NBS with long term benefits for people and nature.” They are as follows (Seddon et. al 2021):

1. NbS are not a substitute for the rapid phase-out of fossil fuels and must not delay urgent action to decarbonize our economies.
2. NbS involve the protection, restoration and/or management of a wide range of natural and semi-natural ecosystems on land and in the sea; the sustainable management of aquatic systems and working lands; or the creation of novel ecosystems in and around cities or across the wider landscape
3. NbS are designed, implemented, managed and monitored by or in partnership with Indigenous peoples and local communities through a process that fully respects and champions local rights and knowledge, and generates local benefits
4. NbS support or enhance biodiversity, that is, the diversity of life from the level of the gene to the level of the ecosystem

The effective implementation of NbS to address the environmental, economic and societal challenges is linked to the construction of comprehensible and harmonised principles, where standards and guidelines for decision-makers and practitioners can be developed (Cohen-Shacham, E. et al.; 2019)

To clarify the NbS concept, the IUCN Global Standard (IUCN 2020) elicits eight criteria to frame green/blue interventions as NbS actions. These criteria are built upon the concept's principles as well as feedback from consultations with stakeholders and refer to the following aspects: (1) address societal challenges; (2) landscape scale of intervention; (3) biodiversity gain; (4) economic viability; (5) governance capability; (6) equitably balance trade-offs; (7) adaptive management; (8) mainstreamed within an appropriate jurisdictional context. Furthermore, the latest EC document on NBS (EC, 2021) proposes five questions to define whether an action can or cannot be framed as NBS: (1) Does the NBS use nature/natural processes? (2) Does it provide/improve social benefits? (3) Does it provide/improve economic benefits? (4) Does it provide/improve environmental benefits? (5) Does it have a net benefit for biodiversity?

Thus, to critically evaluate all the consequences of deciding on certain kinds of NbS, NbS should be explored holistically, i.e. considered at different scales (temporal, spatial, social, etc.) whilst ensuring local knowledge is taken into account. Metrics and (pre-) standards (IUCN Global Standard, European standardisation body CEN workshop agreement, etc.) for NbS, underpinned by a consistent concept and agenda, can strengthen the positioning of NbS (in relation to traditional solutions) in the emerging market. In combination with NbS quality assurance criteria of the IUCN Global Standard, this will help ascertain NbS typologies and processes along their value chain, and thereby also support the development of a European NBS “quality brand” as a quality seal towards a European, ideally also global market, for NbS. The IUCN Global Standard and European CEN/CENELEC standardisation activities (ISO) provide complimentary entry points with the former providing guidance and quality assurance and the latter standardised ingredients and approaches for those seeking to plan and implement NbS on the ground.

Following the IUCN Global Standards on NbS, checking along the 5 questions proposed by the European Commission to define an action as NbS and keeping in mind the 4 guidelines by the NbSI should be a good place to start. Nevertheless, as NbS becomes much more prominent in the policy arena, the policy integration of climate and biodiversity agendas as well as the inclusion of standards on the ISO/CEN/CENELEC level might support further in distinguishing the appropriate NbS fit for the context. Not to forget, NbS should not be mistaken as a ‘one solution to all’ but rather as a solution that is multifunctional and provides co-benefits for people, nature and economy. And all of this in conjunction with other adaptation and mitigation measures to stay within the planetary boundaries with just transition at the centre.

Is new/additional knowledge needed to ensure good quality NbS?

The potential of NbS to provide the intended benefits has not been rigorously assessed (Seddon et.al 2020). According to Seddon et. al, “for NbS to effectively serve as an umbrella framework, it will be critical to incorporate key knowledge gaps such as the need for adaptive management and governance, refer more clearly to ecosystem complexity, temporal scale, effectiveness, and uncertainty in operational documents” and hence in the policy arena at large.

An analysis of knowledge gaps was conducted by NetworkNature based on the vast amount of literature on nature based solutions till date, which resulted in identifying and clustering of key knowledge gaps . Some of the key knowledge gaps are in the following areas:

- 1.Approaches and governance systems for implementation
- 2.Awareness, communication and capacity building
- 3.Cost/benefit evaluation
- 4.Effectiveness along different scales (temporal, spatial and social)
- 5.Planning and policy frameworks
- 6.Social cohesion and environmental justice
- 7.Technical references, design standards and guidelines

For more detail and a comprehensive list on identified knowledge gaps intended to drive further research and investment to ensure quality assurance for NbS, please check the NetworkNature website [here](#).

“It is critical that the right nature-based solutions are pursued in the right places, with local nature stewards front and center.” Vanessa Pérez-Cirera, WWF global deputy lead for climate and energy (WWF 2021)



- Sowińska-Świerkosz, B. and Garcia, J.; (2022) What are Nature-based solutions (NBS)? Setting core ideas for concept clarification
- IUCN; (2020) Global Standard for Nature-based Solutions. A User-Friendly Framework For the verification, Design and Scaling Up of NbS
- Science Communication Unit, University of the West of England (UWE), Bristol; (2021) Science for Environment Policy, The Solution is in nature Future Brief 24. Brief Produced For the European Commission DG Environment.
- Seddon et al. (2021) Getting the message right on nature-based solutions to climate change
- WWF; (2021) New WWF Guidance Details High-Quality Nature-Based Solutions for Climate Mitigation”
- Dushkova, D. and Haase, D. (2020) Not Simply Green: Nature-Based Solutions as a Concept and Practical Approach for Sustainability Studies and Planning Agendas in Cities
- Cohen-Shacham, E., Andrade, A., Dalton, J., Dudley, N., Jones, M., Kumar, C., Maginnis, S., Maynard, S., R. Nelson, C., G. Renaud, F., Welling, R., Walters, G.; (2019) Core principles for successfully implementing and upscaling Nature-based Solutions”
- IPCC WG II Report, Climate change 2022: Impacts, adaptation and vulnerabilities, see [here](#).





**It is in our nature to network –
we will expand the wider NBS community
and support maximise the impact of
nature-based solutions.**

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