

# Nature-based solutions knowledge gaps

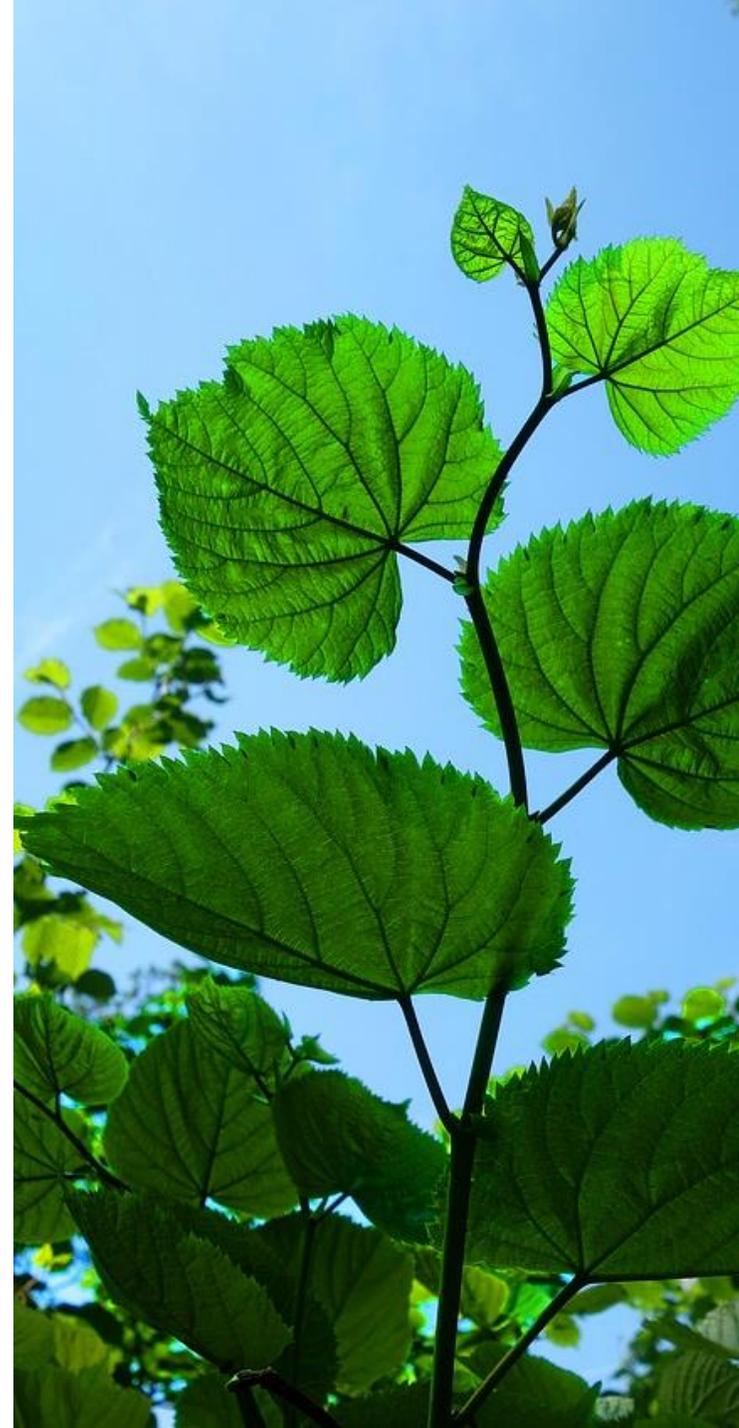
## PERFORMANCE & IMPACT EVALUATION

Dr. Laura Wendling, VTT Technical Research Centre of Finland

[laura.wendling@vtt.fi](mailto:laura.wendling@vtt.fi)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 730052 | **Topic: SCC-2-2016-2017: Smart Cities and Communities Nature based solutions**



# Establishing a comprehensive evidence base

Mainstream adoption of NBS and their incorporation within multi-level policy instruments is hindered by the fragmented & largely discipline-specific nature of existing evidence of NBS performance and impact

There is an urgent need to develop an in-depth, common understanding of the benefits of NbS and any associated trade-offs

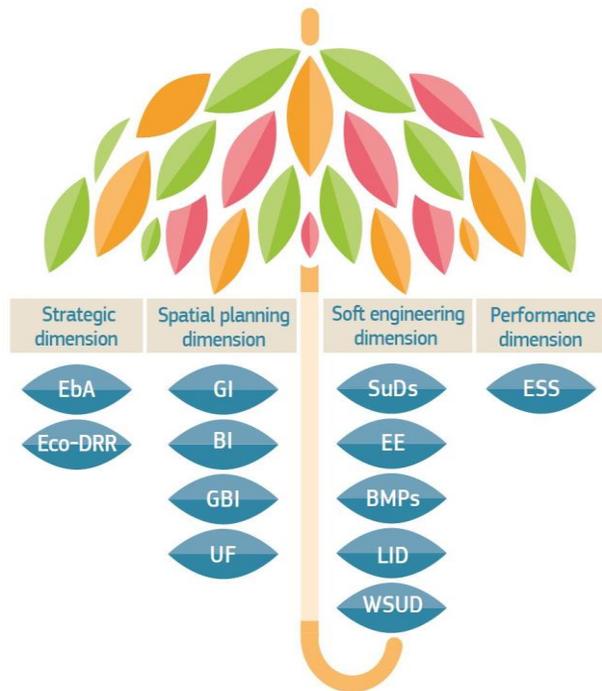


Image source: Sgrigna et al. 2021. Chapter 1, [Evaluating the Impact of Nature-based Solutions: A Handbook for Practitioners](#)

## How are we working to address this?

- Global and European reports and assessments
- Horizon 2020 portfolio of NBS projects
  - Dedicated taskforces, including those focused on NBS impact assessment & development of an online European reference base on NBS, & the NetworkNature knowledge platform
- Projects under the Biodiversity & Climate Change COFUND Action ([BiodivERsA](#))
- Horizon Europe programme and its [Mission on Adaptation to Climate Change including societal transformation](#)
- [IUCN Global Standard on NBS](#)
- [NBS Initiative](#) from the University of Oxford and its [evidence based guidelines](#)

# What more would we like to know?

## **Complete evidence on NBS multi-functionality & the full range of benefits or trade-offs across major societal challenge areas**

- Systematic analyses of social impacts, & health & well-being impacts
- Realised & potential economic impacts, e.g., via NBS cost-benefit analyses & assessments of market potential
- Effectiveness across social-ecological contexts, incl. social equity & justice
- Effective governance systems & approaches to support NBS implementation
- Stakeholder engagement, awareness & capacity building
- Standardised guidance regarding ecological and/or technical aspects of NBS design, implementation, monitoring & management
  - Performance optimisation, adaptation to new contexts, managing trade-offs
- Impacts of NBS on biodiversity & ecosystem services
- NBS role in climate mitigation & NBS resilience to climate change
- Effectiveness of NBS in ameliorating water scarcity
- Effect of geographic scale on NBS performance and impact
- Longer-term assessments of NBS effectiveness, including adaptive monitoring & maintenance



# Integrated NBS Assessment Framework

- Collaboration between 17 EU-funded projects and related programmes to develop [Evaluating the Impact of Nature-based Solutions: A Handbook for Practitioners](#) & [Appendix of Methods](#), + [Summary for Policymakers](#)

The [Handbook](#) serves as a guide to development and implementation of scientifically-valid monitoring and evaluation plans for the evaluation of NBS impacts

The [Appendix of Methods](#) provides a brief description of each method, along with guidance about the appropriateness, advantages and drawbacks of each in different contexts

Framework of common indicators and methods for assessing the performance and impact of diverse types of NBS:

- A reference for relevant EU policies and activities
- Orients practitioners in developing robust impact evaluation frameworks for NBS at different scales
- Comprehensive set of indicators and methodologies
- Key points highlighted in [Summary for Policymakers](#)



# Evaluation of NBS in a Nature-Positive Economy

- Contributions from 16 EU Horizon 2020 & LIFE projects to develop [The Vital Role of Nature-Based Solutions in a Nature Positive Economy](#) (McQuaid et al., 2022)
- Addresses knowledge gaps in the potential economic benefits of NBS and the challenges facing Nature-Based Enterprises (NBE)
- Highlights the vital role of NbS in the shift towards a nature-positive economy & raises awareness of the increasingly important role of Nature-Based Enterprises in delivering NbS

*“Based on extensive consultations, the report profiles some of the economic activities where NBE are engaged in the delivery of NBS – generating new jobs and skills, innovations, and wider economic impacts through a nature-based approach that respects the needs of the environment and communities. It examines some of the key issues confronting stakeholders, including ‘greenwashing’. Such challenges are addressed head-on, informing recommendations on how to realise the transition to a nature positive economy with NBS and NBE at the core.”*

