

NATURE-BASED SOLUTIONS FOR CLIMATE ADAPTATION

2021 UNECE Expert Forum for Producers and Users of Climate Change-Related Statistics
Session 2: Measuring climate change vulnerability and adaptation
Sept. 1st 2021

NATURE-BASED SOLUTIONS

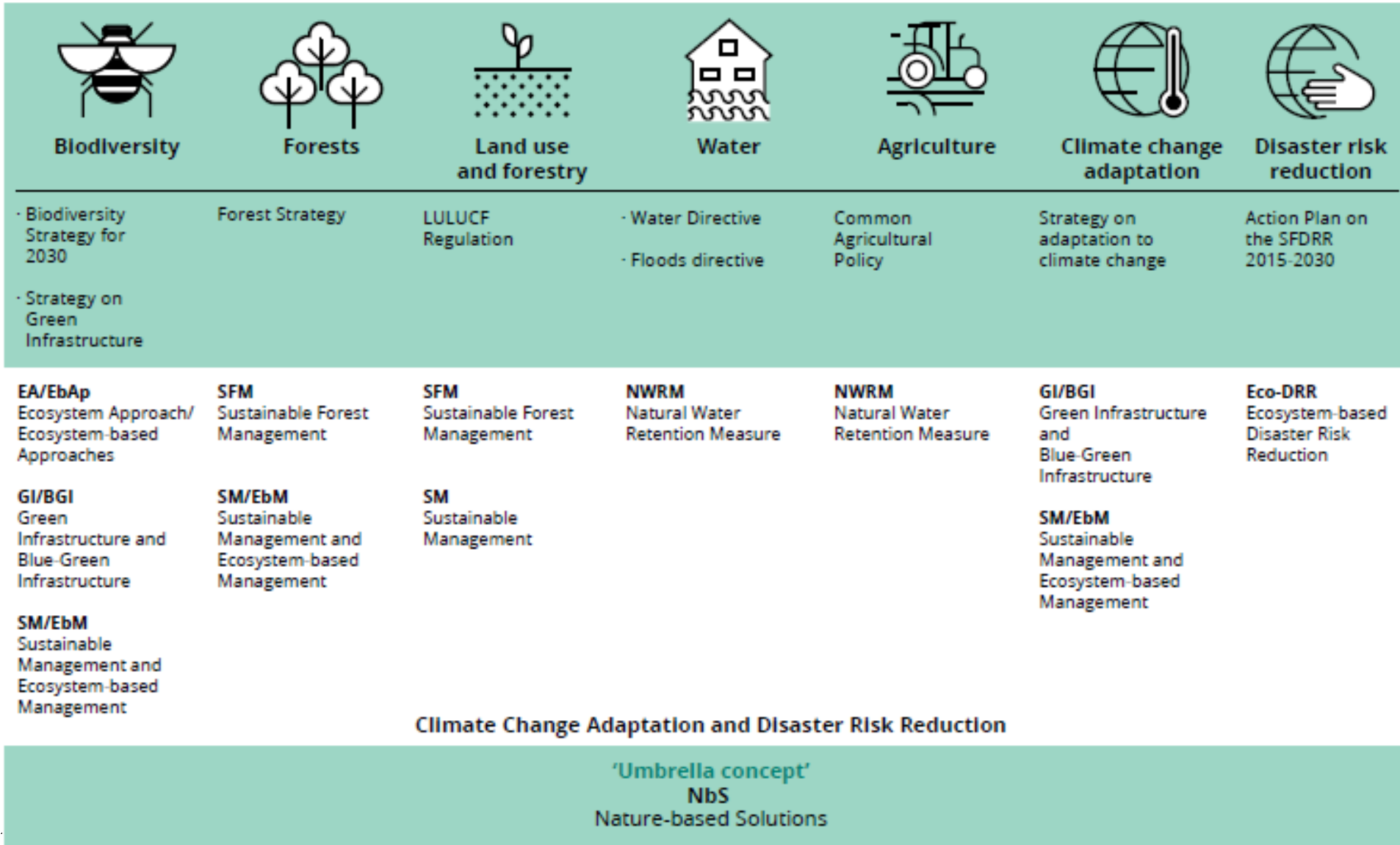
NBS are inspired and supported by nature, they are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience.

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.

NBS must benefit biodiversity and support the delivery of a range of ecosystem services

([EU definition of NBS](#))

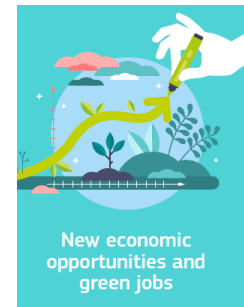
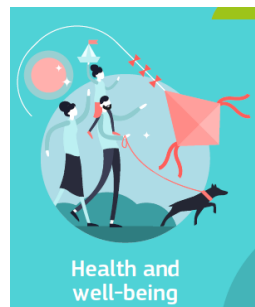
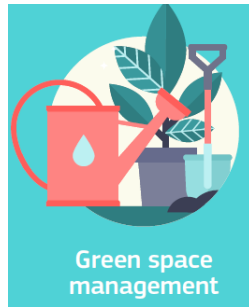
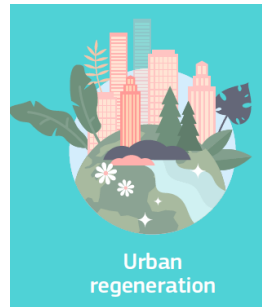
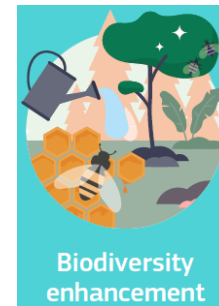
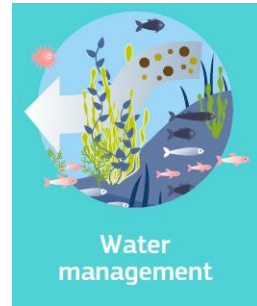
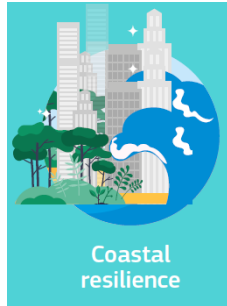
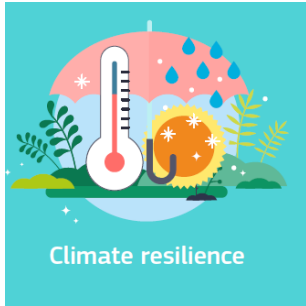
NBS – AN UMBRELLA CONCEPT



Source:
EEA Report 1/2021

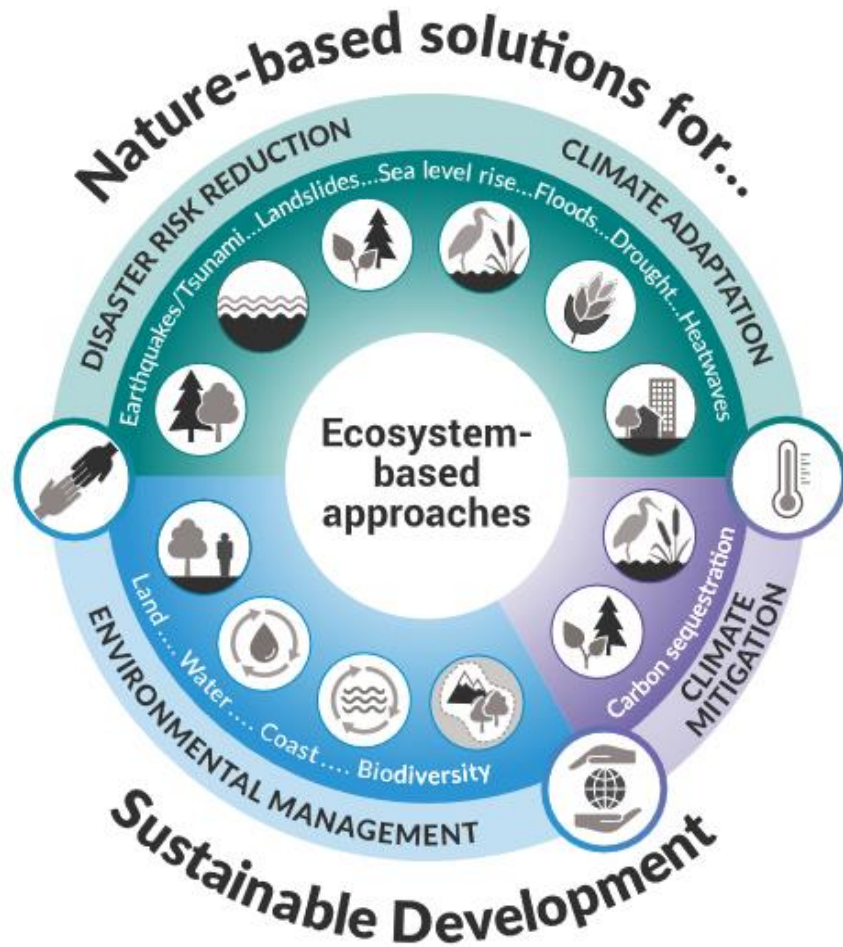


NBS ADDRESS MULTIPLE SOCIETAL CHALLENGES



Graphic source: EC (2020) doi:10.2826/055643

NBS : NATURE BASED SOLUTIONS



NBS measures:

- Restoration and planting of forests
- Restoration of wetlands
- Greening urban areas
- Climate-smart agriculture
- Blue infrastructure
- Green infrastructure
- Sustainable land management
- Integrated water resource management
- Integrated coastal zone management
- Protected areas

RELEVANT GLOBAL AND EUROPEAN REPORTS AND ASSESSMENTS

- EEA publication [Nature-based solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction](#)
- European Commission [NbS valorisation reports](#) (Biodiversity, Climate mitigation, Microclimate regulation & air quality, Improving water quality & waterbody conditions, Flood mitigation & coastal resilience, summary report State of the Art in EU-funded projects)
- [Urban Nature Atlas](#) from the NATURVATION EC H2020 project (online resource)
- H2020 projects' [handbook on public procurement of NbS](#)
- H2020 projects' NbS Impact Assessment [Handbook for Practitioners](#) & [Appendix of Methods](#)
- PEDRR & FEBA Working paper [Promoting NbS in the Post-2020 Global Biodiversity Framework](#)
- Convention on Biological Diversity [5th Global Biodiversity Outlook](#)
- [The Economics of Biodiversity: The Dasgupta Review](#)
- IPBES Reports (Regional & sub-Regional assessments of biodiversity and ecosystem services – multiple, [Land Degradation Assessment](#), [Global Assessment Report](#), IPBES/IPCC report due on 22 May 2021)
- Recent IPCC [reports](#) (multiple)
- UNEP [Adaptation Gap Report 2020](#) & synthesis report [Making Peace with Nature](#)
- World Economic Forum [Global Risks Report 2021: 16th Edition](#)

EUROPEAN KNOWLEDGE PLATFORMS ADDRESSING NBS FOR CCA & DRR

Mapping of online platforms with a

- European scope,
- focusing on knowledge directly related to NBS
- Political mandate related to CCA and/or DRR
- Supports policy-making
- Operative, up-to-date, continuously updated, maintained by an official institution

Source: EEA, 2021. Nature-based solutions in Europe : Policy, knowledge and practice for climate change adaptation and disaster risk reduction. European Environment Agency, Copenhagen. EEA Report 1/2021 doi:10.2800/919315

Platform	BISE	Climatescan	Climate-ADAPT	DRMKC	Natural Hazards — Nature-based Solutions platform	Nature-based Solutions Initiative	Naturvation Urban Nature Atlas	NWRM	OPPLA	Panorama	ThinkNature	weADAPT
Policy relevance / mandate												
The platform has a policy mandate or is directly linked to a policy regulation	✓		✓	✓		✓		✓				
Target audience/profile												
Governmental decision-makers (any level)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Scientists	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Practitioners (implementation)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Private/business sector		✓		✓	✓	✓			✓	✓		
General public	✓	✓		✓		✓			✓			
Content, geographical coverage and governance level												
Geographical coverage/ governance level	Local		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Regional		✓		✓	✓		✓		✓	✓	✓
	National	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Transnational		✓	✓	✓	✓				✓	✓	✓
	European	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Global		✓		✓	✓	✓				✓	✓
Functionalities and other features												
Capacity building/training (online help, webinars, fora)		✓	✓			✓	✓		✓	✓	✓	✓
Case studies (*)		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Communication (newsletter, news, events)	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓

EC HORIZON 2020 PORTFOLIO OF NBS PROJECTS & TASKFORCES

- 30 NbS-focused projects currently funded under Horizon 2020 programme
- Experts from H2020 NbS projects & related programmes/initiatives are dedicating significant effort to creation of a European knowledge base on NbS
 - NbS case studies currently stored in [Oppla.eu](https://oppla.eu)
 - Taskforce on financing for NbS
 - Taskforce on NbS impact evaluation
 - Taskforce on interoperability of data from H2020 projects



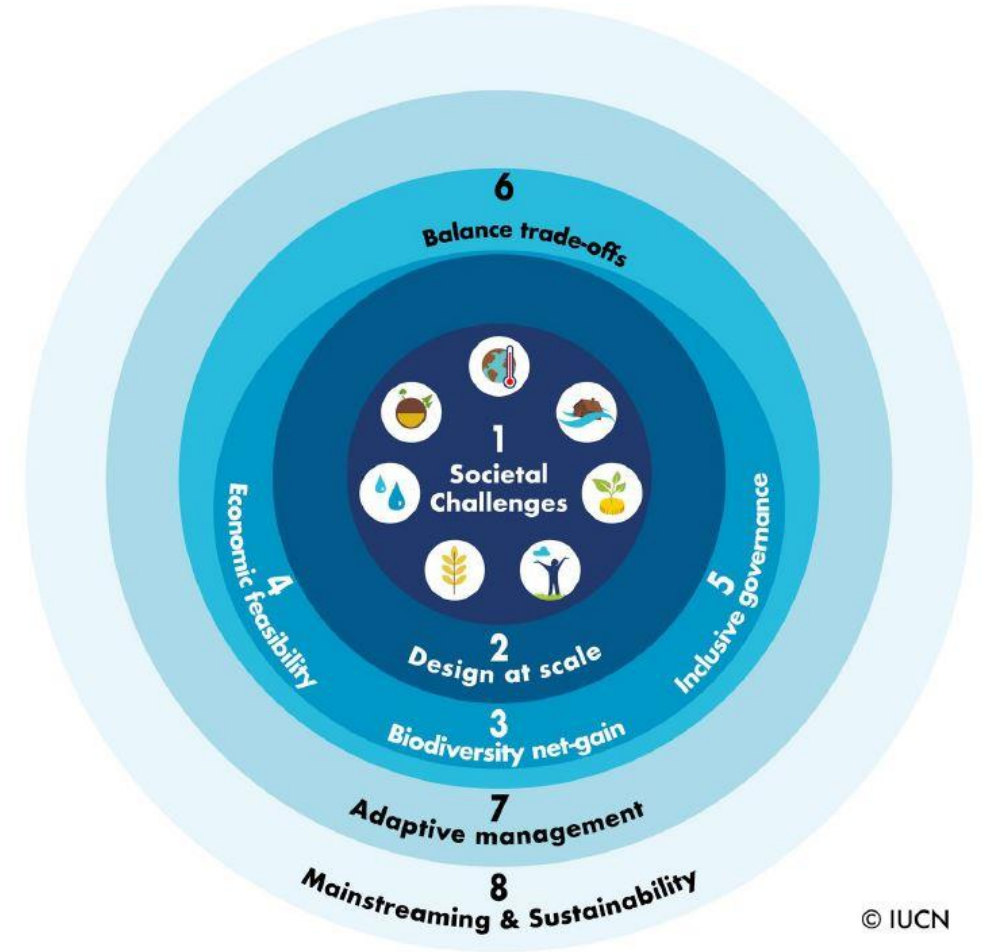
HANDBOOK ON NBS IMPACT EVALUATION & APPENDIX OF METHODS

- a guide to development and implementation of scientifically-valid monitoring and evaluation plans
- to support the adoption of common indicators and methods for assessing the performance and impact of diverse types of NBS
 - reference for relevant EU policies and activities
 - To practitioners for robust impact evaluation frameworks for NbS at different scales
 - Provides a comprehensive set of indicators and methodologies
- [Appendix of Methods](#): brief description of each indicator determination method. Guidance for end-users



IUCN GLOBAL STANDARD ON NBS

- Developed to support design, implementation and validation of NbS ([IUCN, 2020](#))
- *“Funders, investors and decision makers need to be confident that NbS initiatives they support are effective and scalable, and consider potential externalities. Yet, many may not have the expertise or resources to help them analyze and evaluate NbS projects. The IUCN Global Standard helps fill this gap.”*
- Eight main criteria, each with sub-indicators
- Guidance related to
 - Design of new NBS projects
 - NBS upscaling
 - NBS assessment



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HOWEVER, MORE KNOWLEDGE IS NEEDED

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- Complete evidence on NBS multi-functionality & multiple benefits across key societal challenge areas
 - Role of NBS in enhancing biodiversity
 - Economic data from NBS cost-benefit analyses
 - Ecological and/or technical aspects of NBS design
 - Performance optimisation, adaptation to different contexts, management of dis-benefits, supporting governance models, etc.
 - Standardised guidance on NBS (co-) design, implementation & maintenance
 - NBS resilience to climate change
 - Effect of scale on NBS performance and impact
 - NBS and water scarcity

ACKNOWLEDGEMENTS



European
Environment
Agency

European Topic Centre on
Climate Change Impacts,
Vulnerability and Adaptation

REGREEN Horizon 2020 project (www.regreen-project.eu)



*Webinar: Nature as a solution for
resilience, mitigation and sustainable
development May 27th 2021*

Nature-based solutions in Europe:
Policy, knowledge and practice for climate change
adaptation and disaster risk reduction

EEA Report | No 12/2020

Urban adaptation in Europe: how cities
and towns respond to climate change

