



ECCA 2021 Webinar

Nature as a solution - For resilience, mitigation and sustainable development

Resources and further reading

Key Projects, Platforms and Initiatives

Project, platform or initiative	Website
BiodivERSA	http://www.biodiversa.org/
Biodiversity Information System for Europe (BISE)	https://biodiversity.europa.eu/
CitiesWithNature	https://www.citieswithnature.org/
CLEARING HOUSE project	http://clearinghouseproject.eu/

CLEVER Cities project	https://clevercities.eu/
CONNECTING Nature project	https://connectingnature.eu/
CORDIS results pack on nature-based solutions. A thematic collection of innovative EU-funded research results. Unlocking nature's potential	https://op.europa.eu/en/publication-detail/-/publication/5bd86975-084f-11eb-a511-01aa75ed71a1
EC Disaster Risk Management Knowledge Centre (DRMKC)	https://drmkc.jrc.ec.europa.eu/
EdiCitNet project	https://www.edicitnet.com/
EKLipse	http://www.eklipse-mechanism.eu/
EnRoute project	https://oppla.eu/groups/enroute
European Climate Adaptation Platform Climate-ADAPT	https://climate-adapt.eea.europa.eu/
European Commission	https://ec.europa.eu/info/research-and-innovation/research-area/environment/nature-based-solutions_en including: Evaluating the impact of nature-based solutions - A handbook for practitioners https://op.europa.eu/en/publication-detail/-/publication/d7d496b5-ad4e-11eb-9767-01aa75ed71a1/language-en/format-PDF/source-206665393 Evaluating the impact of nature-based solutions - Appendix of methods https://op.europa.eu/en/publication-detail/-/publication/6da29d54-ad4e-11eb-9767-01aa75ed71a1/language-en/format-PDF/source-206666027
Green City Accord	https://ec.europa.eu/environment/topics/urban-environment/green-city-accord_en
GREENPASS	https://greenpass.io/
GROW GREEN project	http://growgreenproject.eu/
Inspiration project	http://www.inspiration-h2020.eu/
INTERLACE project	https://interlace-project.eu/
IUCN Nature-based Solutions theme	https://www.iucn.org/theme/nature-based-solutions
Mapping and Assessment of Ecosystems and their Services (MAES)	https://ec.europa.eu/environment/nature/knowledge/ecosystem_assessment/index_en.htm
NAIAD project	http://naiad2020.eu

	Including NAIAD's eGuide , an online resource that summarises the main tools, methods and results produced by the project.
Natural Water Retention Measures NWRM platform	http://nwrn.eu/
Nature4Cities project	https://www.nature4cities.eu/ Including the Nature4Cities platform , with extensive knowledge base on NBS, new business, financial and governance models for NBS projects, as well as tools for the impacts assessment, valorisation and follow-up of NBS projects.
Nature-based Enterprises (NBE) platform	https://connectingnature.eu/nature-based-enterprises-0
NATURVATION project	https://naturvation.eu/
NetworkNature	https://networknature.eu/
OpenNESS project	http://www.openness-project.eu/
OPERAs project	https://www.operas-project.eu/
OPERANDUM project	https://www.operandum-project.eu Including its GeoIKP Platform to facilitate community data access, collaboration, and interaction for NbS
Oppla platform	https://oppla.eu/
PEDRR platform	https://pedrr.org/ Including its Partnership for Disaster Risk Reduction Europe/North America Network (https://pedrr.org/connect-and-network/europe-and-north-america/) and Massive Open Online Course Nature-based Solutions for Disaster and Climate Resilience https://pedrr.org/MOOC
PHUSICOS project	https://phusicos.eu
proGReg project	www.progireg.eu
RAMSES project	www.ramses-cities.eu
RECONNECT project	http://www.reconnect.eu/
REGREEN project	https://www.regreen-project.eu/
RESIN project	www.resin-cities.eu
Smart Mature Resilience project	http://smr-project.eu

Think2030	https://think2030.eu/
ThinkNature platform	https://www.think-nature.eu/
UNaLab project	https://unalab.eu/en
URBAN GreenUP project	https://www.urbangreenup.eu/
URBiNAT project	www.urbinat.eu
University of Oxford Nature-based Solutions initiative	https://www.naturebasedsolutionsinitiative.org

Some Key References

Author	Publication (link)	Content
Altamirano, M.A., de Rijke, H., Basco Carrera, L., Arellano Jaimerena, B. (2021)	<i>Handbook for the Implementation of Nature-based Solutions for Water Security: guidelines for designing an implementation and financing arrangement</i>	The handbook provides guidance on developing an investable business case for nature-based solution projects for water security, climate mitigation and adaptation and other key societal challenges: it explains how to choose a mode of governance for the project, as well as a funding, financing and procurement strategy
Browder, G., Ozmet, S., Rehnberger Bescos, I., Gartner, T., Lange, G.-M. (2019)	<i>Integrating Green and Gray: Creating Next Generation Infrastructure</i>	Report from World Bank and World Resources Institute addressing the effective integration of natural infrastructure into mainstream infrastructure systems to yield cost-effective, resilient delivery of services.
Bulkeley, H. (2020)	<i>Nature-based solutions for climate mitigation</i>	Addresses NBS primarily as measures that conserve, restore or enhance forests, wetlands, grasslands and agricultural lands to either reduce CO ₂ emissions or sequester and store atmospheric CO ₂ , and how NBS can reduce energy demand.
Bulkeley, H. (2020)	<i>Nature-based solutions towards sustainable communities</i>	Examines how NbS can contribute to transformative action for sustainable communities. The focus is on the ways in which such initiatives enable participation and inclusion in the design and implementation of sustainability at the local level, and the extent to which the outcomes of NbS are transformative for communities.
Bulkeley, H & Davis, M (2020)	<i>Nature-based solutions: Harnessing the potential for ambitious post-2020 biodiversity outcomes</i>	Addresses NbS contributions to the Convention on Biological Diversity, including brief summaries of selected case studies.
Calfapietra, C. (2020)	<i>Nature-based solutions for microclimate regulation and air quality</i>	Focuses on the role of NBS in local climate regulation and air quality improvement, and the implications of NBS impacts on the local climate and air quality to human health and well-being.
Dasgupta, P. (2021)	<i>The Economics of Biodiversity: The Dasgupta Review</i>	Reviews economic growth and sustainable development, and Nature as an asset. Demonstrates that to judge whether a particular path of economic development is sustainable, nations

		need to adopt a system of economic accounts that records an inclusive measure of their wealth that includes Nature as an asset.
Davis et al. (2018)	Nature-based solutions in European and national policy frameworks. Deliverable 1.5, NATURVATION. Horizon 2020 Grant Agreement No 730243, European Commission, 50 pp. https://www.ecologic.eu/15856	To what extent do current policy frameworks support or hinder NbS implementation? This report examines if and how the concept of NbS is addressed in selected EU and Member State policies and funding instruments.
de Luca, C.; Naumann, S.; Davis, M.; Tondelli, S. (2021)	Nature-Based Solutions and Sustainable Urban Planning in the European Environmental Policy Framework: Analysis of the State of the Art and Recommendations for Future Development. <i>Sustainability</i> 2021, 13, 5021. https://doi.org/10.3390/su13095021	Employs a content analysis of current environmental European policies, strategies and agreements, to provide an overview of the state of the art of the environmental European policy framework and the recognized role of NbS and sustainable urban planning in reaching defined objectives. Offers insights regarding where NbS and sustainable urban planning could play a larger role within this framework.
Doswald, N., Janzen, S., Nehren, U., et al. (2020)	<i>Words Into Action: Nature-based Solutions to Disaster Risk Reduction. Draft: For Public Review</i>	This technical guidance note, to be launched in June 2021, provides technical guidance for Member States in incorporating NbS in national DRR strategies toward implementation of the Sendai Framework for Disaster Risk Reduction.
Dumitru, A., Wendling, L. (2021)	<i>Evaluating the impact of nature-based solutions: A handbook for practitioners</i>	A guide to the development and implementation of scientifically-valid monitoring and evaluation plans for the evaluation of NbS impacts. Provides a comprehensive NbS impact assessment framework, and a robust set of indicators to assess impacts of NbS across 12 key societal challenge areas.
Dumitru, A., Wendling, L. (2021)	<i>Evaluating the impact of nature-based solutions: Appendix of methods</i>	Accompanies the Handbook for Practitioners. Provides standardised guidance and methods to aid the selection and implementation of indicators to assess impacts of NbS, and, over time, establish a robust European evidence base on NbS performance and impact.
Eggermont et al. (2015)	<i>Nature-based Solutions: New Influence for Environmental Management and Research in Europe</i>	This paper proposes a typology of NBS, and reflects on the added value of this term with respect to existing concepts, its possible drawbacks in case of misuse, and perceived future challenges for research and management. The typology proposed has since then been integrated in the IUCN Global Standard for NbS.

European Commission	<i>Science for Environment Policy Future Brief – the solutions is in nature</i> (multimedia)	Video, infographics and report
European Environment Agency (Castellari, S., et al., 2021)	<i>Nature-based solutions in Europe: Policy, knowledge and practice for climate change adaptation and disaster risk reduction</i>	Nature-based solutions for CCA and DRR is increasingly embedded in global and EU policy frameworks for sustainable development; however, better coherence across policy domains, prioritisation at EU level and more project design is needed. EU-wide mapping of existing and potential new or restorative NbS can help identify priority areas based on desired services, increasing the consideration of trade-offs between climate change and biodiversity aims. Summarises the state of the art in NbS for CCA and DRR, identifying opportunities for mainstreaming NbS into diverse sectors across Europe.
Gerritsen, E., Kopsieker, L., Naumann, S., Röschel, L., Davis, M. (2021)	<i>Using nature-based solutions to foster synergies between biodiversity and climate: Missed chances and new opportunities for a sustainable future</i>	IEEP and Ecologic Institute present their paper on how EU policies and investments have spurred the uptake of nature-based solutions to support biodiversity and ecosystem health. This paper outlines remaining gaps and opportunities on how to best scale up efforts to meet the current EU policy framework's 2030 objectives. It provides ideas for how the new EU Restoration Plan could be operationalised through concrete tools, measures and strategies to allow Member States to scale up their efforts, while complementing existing policies and contributing to the broader European Green Deal agenda.
Herzog, C.P., Antuña Rozado, C. (2019)	<i>The EU Brazil Sector Dialogue on Nature-based solutions</i>	In this report, European and Brazilian experts analyse the occurrence and potential of NBS in Brazil, highlight good practices in the EU for possible adaptation to the Brazilian context, and contribute to the elaboration of a NBS strategy in Brazil.
IPBES Reports	Regional & sub-Regional assessments of biodiversity and ecosystem services – multiple (https://ipbes.net/assessing-knowledge)	IPBES performs regular and timely assessments of knowledge on biodiversity and ecosystem services and their interlinkages, which include comprehensive thematic, global and regional assessments. To date, 8 IPBES assessments have been completed.

IPBES (2018)	Land Degradation Assessment	Covers the global status of and trends in land degradation, by region and land cover type; the effect of degradation on biodiversity values, ecosystem services and human well-being; and the state of knowledge, by region and land cover type, of ecosystem restoration extent and options. Aims to enhance the knowledge base for policies for addressing land degradation, desertification and the restoration of degraded land.
IPBES (2019)	Global Assessment Report on Biodiversity and Ecosystem Services	Assesses the status and trends with regard to biodiversity and ecosystem services, the impact of biodiversity and ecosystem services on human well-being and the effectiveness of responses, including the Strategic Plan and its Aichi Biodiversity Targets.
Kettunen, M., Kopsieker, L., Whiteoak, K., Wicander, S., Kapos, V., Davis, M. (2020)	Up-scaling of nature-based solutions for climate change	In light of the global political recognition of nature-based solutions and the need to accelerate their uptake and use by actors across society, an international expert workshop on how to scale up nature-based solutions was organised in Brussels by the European Commission in February 2020. The workshop report provides further links to key knowledge items, policy initiatives and projects
Kopsieker L., Gerritsen E., Stainforth T., Lucic A., Costa Domingo G., Naumann S., Röschel L. and Davis M. (2021)	Nature-based solutions and their socio-economic benefits for Europe's recovery	Provides an overview of the wide range of socio-economic benefits that nature-based solutions can achieve alongside addressing the intertwined climate change and biodiversity loss crises
IPCC (var.)	Multiple reports	The IPCC prepares comprehensive Assessment Reports about knowledge on climate change, its causes, potential impacts and response options. The IPCC also produces Special Reports, which are an assessment on a specific issue and Methodology Reports, which provide practical guidelines for the preparation of greenhouse gas inventories.
IUCN (2020)	Global Standard for Nature-based Solutions : first edition	Nature-based Solutions (NbS) are a powerful ally to address societal challenges, such as climate change, biodiversity loss and food security. As the world strives to emerge from the current

		<p>pandemic and move towards the UN Sustainable Development Goals, it is imperative that future investments in nature reach their potential by contributing to the health and well-being of people and the planet.</p> <p>To this end -- and with growing interest from governments, business and civil society -- IUCN has developed the first-ever Global Standard for Nature-based Solutions to help users design, implement and verify NbS actions.</p>
Mačiulytė, E., Durieux, E. (2020)	<i>Public procurement of nature-based solutions. Addressing barriers to the procurement of NBS: case studies and recommendations</i>	An introductory guide to the public procurement of NbS. Aims to address challenges experienced in the delivery of NbS through case studies and examples of good practices, and provides a series of recommendations to facilitate NbS procurement.
Naumann, S., Davis, M. (2020)	<i>Biodiversity and nature-based solutions</i>	Addresses the linkages between NBS and biodiversity protection and/or enhancement, governance-related enablers to deliver biodiversity benefits through NBS implementation, and business models and financing approaches that support NBS targeting biodiversity enhancement. Reviews the evidence base on NBS for biodiversity through discussion of the biodiversity outcomes of several EU-funded NBS projects.
NATURVATION EC H2020 project	<i>Urban Nature Atlas</i> (online resource)	A comprehensive database of NbS for cities produced as the result of a systematic survey of NbS interventions in 100 European cities. Provides the basis for the analysis of socio-economic and innovation patterns associated with urban NbS in Europe and beyond.
PEDRR & FEBA (2020)	<i>Promoting NbS in the Post-2020 Global Biodiversity Framework</i>	Developed as input to the evolving deliberations on the post-2020 Global Biodiversity Framework under the Convention on Biological Diversity. Sets out general principles by which NbS can contribute to addressing biodiversity loss and ensuring people benefit from nature.
Renaud, F, Sudmeier-Rieux, K, Estrella, M. (2013)	https://pedrr.org/knowledge-product/the-role-of-ecosystems-in-disaster-risk-reduction-united-nations-university-press-new-york/	The Role of Ecosystems in Disaster Risk Reduction is one of the first books to compile latest knowledge and evidence on the links between healthy ecosystems and resilience to disasters. Contributions by 58 professionals from science and practice

		communities around the world are structured around 17 chapters describing state-of-the-art knowledge and perspectives in the fields of ecosystem management, disaster risk reduction and climate change adaptation.
Science for Environment Policy (2021)	<i>Science for Environment Policy Future Brief – the solutions is in nature</i>	Future Briefs are a series of horizon-scanning policy briefs, which provide an accessible overview of emerging areas of science and technology. The research collated in this brief confirms that NbS deliver simultaneously multiple benefits and shows the wide-ranging beneficial impacts of scaling up their implementation across Europe.
UN Convention on Biological Diversity (2020)	<i>5th Global Biodiversity Outlook</i>	Periodic report that summarizes the latest data on the status and trends of biodiversity and draws conclusions relevant to the further implementation of the Convention on Biological Diversity. Provides global summary of progress towards the Aichi Biodiversity Targets and is based on a range of indicators, research studies and assessments, as well as the national reports provided by countries on their implementation of the Convention.
UNEP (2021)	<i>Adaptation Gap Report 2020</i>	Reviews and summarises progress in planning for, financing and implementing adaptation with a focus on NbS. Identifies remaining gaps in finance for developing countries and bringing adaptation projects to the stage where they bring real protection against climate impacts such as droughts, floods and sea-level rise.
UNEP (2021)	Synthesis report <i>Making Peace with Nature</i>	A synthesis of how climate change, biodiversity loss and pollution can be tackled jointly within the framework of the Sustainable Development Goals. Translates the current state of scientific knowledge into crisp, clear and digestible fact-based messages that are easy to relate to and follow up on.
Vojinovic, Z. (2020)	<i>Nature-based solutions for flood mitigation and coastal resilience</i>	Reviews and summarises results from EU-funded NBS projects related to disaster risk reduction, water security and resilience to climate change. Identifies and discusses knowledge gaps related to NBS scale and their performance and impact, and

		opportunities for more explicit inclusion of NBS in European and Member States' policy instruments.
Wild, T. (2020)	<i>Nature-based solutions improving water quality & waterbody conditions</i>	Summarises outcomes of NBS projects related to water quality and waterbody conditions, framing the outcomes of these projects within European water policy instruments.
Wild, T., Freitas, T., Vandewoestijne, S. (2020)	<i>Nature-based Solutions: State of the Art in EU-funded projects</i>	Summary of outcomes and evidence from 'Valorisation of NBS Projects' initiative, which scanned EU R&I projects for results pertaining to NBS in key areas of policy implementation and development. Evidence from case studies is framed within knowledge from literature to illustrate the current state of the art and how NBS can address societal challenges.
World Economic Forum (2021)	<i>Global Risks Report 2021: 16th Edition</i>	The 16th edition of the World Economic Forum's <i>Global Risks Report</i> focuses on comprehensive analysis of the risks and consequences of widening inequalities and societal fragmentation.