Authors & Contributors

Section 1 Why do we need a Nature-based Economy?
Lead author: Prof. Mary Lee Rhodes, Trinity College Dublin, Ireland (Connecting Nature, Horizon 2020 project)

Contributors:
Prof. Thomas Andersson, IKED (URBiNAT, Horizon 2020 project)
Prof. Edoardo Croci & Prof. Benedetta Lucchitta, Bocconi University, Italy (Urban Green Up, Horizon 2020 project)

Section 2 Nature-Based Solutions in the Nature-based Economy
Lead authors:
Dr. Daniela Rizzi & Alice Reil, ICLEI (Connecting Nature & Clever Cities, Horizon 2020 projects)
Joanne Schanté, LGI Sustainable Innovation (ARTISAN LIFE project; Clearing House, Horizon 2020 project)
Prof. Edoardo Croci & Prof. Benedetta Lucchitta, Bocconi University, Italy (Urban Green Up, Horizon 2020 project)

Contributors:
Mark Gough & Joseph Confino, Capitals Coalition
Guy Duke (We Value Nature, Horizon 2020 project)
Jordan Hairabedian, EcoAct (ARTISAN LIFE project)
Aurélie Tailleur, ADEME (ARTISAN LIFE project)

Section 3 The Market for Nature-Based Solutions
Lead authors:
Prof. Thomas Andersson, IKED (URBiNAT, Horizon 2020 project)
Siobhan McQuaid & Esme Kooijman, Trinity College Dublin, Ireland (Connecting Nature, Horizon 2020 project)
Marianne Feichtinger-Hofer & Alina Lueckl, Joanneum Research (REGREEN, Horizon 2020 project)
Matthieu Grosjean, Steinbeis 2i GmbH (Network Nature, Horizon 2020 project)

Contributors:
Dr. Wenting Chan, Norwegian Institute for Water Research (NIVA) (FutureMares & MERCES, Horizon 2020 projects)
Monica A. Altamirano, Deltares (NAIAD, Horizon 2020 project)

Section 4 Introducing a Global Perspective
Dr. Daniela Rizzi & Alice Reil, ICLEI (Connecting Nature & Clever Cities, Horizon 2020 projects)

Introduction, Recommendations, Conclusions
All authors and contributors

Reviewers
Dr. Helen Toxopeus, Utrecht University (Naturvation Horizon 2020 project)
Prof. Marcus Collier, Trinity College Dublin (Connecting Nature Horizon 2020 project)

Recommended citation
Executive Summary

Decades of research and more recently public policy recognise that current economic practices are not compatible with a healthy planet. The European Green Deal aims to decouple economic growth from resource usage, decarbonise industry and do this in a fair and just way for society. Nature-based solutions (NBS) to address societal challenges have been identified as an important policy instrument to achieve the aspirations of the European Green Deal and other key policy objectives such as those set out in the EU Biodiversity for 2030 Strategy and the ambitions of “building back better” from the impact of COVID-19 in the EU Recovery plan. The European Commission identifies nature-based solutions (NBS) as those solutions to societal challenges 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” (Faivre et al., 2017). Nature-based solutions provide multiple benefits for biodiversity. While much focus to date has been on the environmental or social benefits of NBS, less attention has been paid to their economic potential and their role in a just transition to the type of sustainable economy envisaged in the European Green Deal.

This White Paper addresses this imbalance by proposing a paradigm shift - a new approach to valuing natural capital and to enabling its incorporation in the economic system.

This document is a synthesis of a longer background report under preparation by the Nature-Based Economy Working Group of Task Force III of the European Commission. The recommendations of this document will be debated at a high level policy dialogue at the end of June 2021 following which they will be shared as part of an open consultation process running until mid September 2021. The outcome of this process will form the basis for an EC Expert Publication on the Nature-based Economy to be launched at the European Business Summit in November 2021.

The recommendations of this White Paper provide a basis for dialogue with policy makers, at all levels of government and across all fields of policy implementation, and with wider stakeholders in business, society and the innovation ecosystem on the changes needed to shift towards a Nature-based Economy. It particularly aims at stimulating valuable cross-sectoral policy discussions between policy makers responsible for climate change and biodiversity policy and those responsible for sustainable economic growth policies within the context of rapidly depleting stocks of natural capital.

1 High level policy dialogue on Nature-based Economy organised on 29th of June 2021 as part of the Connecting Nature Enterprise Summit. Content available following the event on connectingnature.eu
Section 1: Why do we need a Nature-based Economy?

We propose the following definition of the Nature-based Economy as the starting point of an open consultation process: “The Nature-based Economy encompasses all production, exchange and consumption processes related to activities concerned with the protection, conservation, restoration and sustainable use of natural resources by consumers, industry and society at large”. With this definition, we position our analysis and recommendations within the ‘Economy’ domain (represented in Exhibit 1 and discussed further in Section 2) and take up the specific challenge outlined in the Dasgupta review of the ‘Economics of Biodiversity’ to focus on “increasing the efficiency with which the biosphere’s supply of goods and services are converted into global output and returned to the biosphere as waste” (Dasgupta, 2021, p.31).

We then set out the rationale for defining a nature-based economy based on the identification of four major limitations in current economic approaches. These are (1) current inadequacies in approaches to the pricing and valuation of nature; (2) a failure to take into account the diversity and interaction of actors in production and consumption; (3) a sustained lack of emphasis on resource inefficiencies; (4) the exclusion of decision-making processes in the formation of rules governing production and consumption. A paradigm shift towards a Nature-based Economy perspective is proposed which explicitly recognises nature as both providing a critical input to production and generating valued output in the economy. Attention is shifted from the role of individual actors, such as the public or private sector, to the integrated activities of all stakeholders in the ‘consumption’ and ‘production’ of nature. Inefficient use of natural resources, a finite source of capital, will be addressed by applying shadow pricing of ecosystem services in production and consumption activities coupled with tangible interventions to both reduce ‘consumption’ and increase ‘production’ of natural resources. Finally, the essential role of a range of actors in decision-making about the rules for production and consumption is incorporated as an important stand-alone process in the Nature-based Economy.

Section 2: What is the role of NBS in the Nature-based Economy?

Section 2 begins by positioning NBS within a broader context to enable sustainable economic growth within the contexts of the climate change and biodiversity crises. At a European level some of the most relevant policy contexts include the European Green Deal, the EU Biodiversity for 2030 Strategy and the EU Recovery plan. At a global level, 70 governments,
private sector, civil society and international organizations signed up to the NBS for Climate Manifesto at the UN Climate Action Summit in 2019, and NBS have been identified as part of the pathway to a global movement towards achieving the goals of the UN Decade of Ecosystem Restoration. The IUCN Global Standard for NBS and the EC Handbook on Evaluating the impact of NBS will greatly contribute to a more consistent understanding, implementation and measurement of the impact of this concept globally.

In this section, we consider different approaches to the valuation of nature within the context of a Nature-based Economy and identify the complexity of stakeholder value chains in the delivery of different types of NBS. We conclude that NBS have the potential to play a significant role in the Nature-based Economy - ‘super-charging’ the transition to sustainable development decoupled from resource utilisation and carbon emission growth. To deliver on this potential we need to consider how to secure active and ongoing participation across all stakeholders and sectors of the economy in an approach where all parties have a full understanding of the value of nature as both an input and output in economic processes.

Section 3: The Market for NBS

In Section 3, we present an overview of the market for NBS including key challenges and enablers to market development and undertake an analysis of the market forces of supply and demand. We examine clear patterns of growth in established NBS market sectors, such as green buildings, and identify the emergence of promising new sectors such as smart-tech for NBS and NBS for health and well-being. We review macro-environmental factors influencing overall market growth which include policy supports, economic valuation of NBS, technological drivers, inclusive governance and increased awareness of social justice aspects of NBS development.

From a policy perspective, stimulating demand and supply is not a simple proposition and requires consideration of the complexity of this market sector. A multiplicity of actors are involved in both demand and supply of nature-based solutions with varying roles across value chains in different market sectors. Participatory processes leading to effective user participation and an openness to innovative approaches are an essential starting point for consideration in any policies to stimulate market demand. Demand-led policies must take into account the nature of NBS as private goods and services (e.g. green buildings primarily paid for by the private sector but which may create public benefits such as urban cooling), public goods or services which can be enjoyed by many (e.g. urban parks primarily owned and paid for by the public sector but which may involve some private businesses such as coffee shops) and so-called common pool resources i.e. public goods where over-use of such resources would lead to negative effects (e.g. urban forests or nature reserves, again often owned and managed by the public sector, but with increasing evidence of effective management by
This section identifies that the market for NBS is at an early stage of development with much potential for growth. Section 3 considers challenges to supply and demand in the public sector highlighting the many knowledge gaps remaining, residual challenges measuring effectiveness, challenges related to hybrid governance and financing and a myriad of challenges related to public procurement which has led to difficulties finding skilled private sector suppliers of NBS.

This section concludes with results of recent research looking at suppliers of NBS from the private sector or ‘nature-based enterprises’. The characteristics of nature-based enterprises are profiled in terms of size, stage of development, challenges and enablers. This section concludes that specific policies need to be put in place to support the start-up and growth of nature-based enterprises as a key enabler on the supply side to meet increasing market demand for NBS.

Section 4: Introducing a global perspective
In this section a range of initiatives to stimulate global market demand for NBS are summarised. Local governments are identified as a key enabler in this process with regional partnerships playing an important role in knowledge sharing. This section also highlights increased recognition of the role of the private sector and nature-based enterprises in the supply of NBS. The increased availability of international financing for NBS is seen as an enabler to market demand and growth.

Recommendations for discussion
Policy measures are proposed at global, EU, national and local government levels. Within each level, systemic measures needed for long-term transformative change, and immediate short-term actions needed to boost the market for nature-based solutions are put forward.

I. Global level

Systemic Change measures proposed at Global level:

1. Implement concrete measures to incorporate the valuation of nature in both public and private practices. For example, encourage a shift or expansion of the focus from global reporting of GDP from 'single' capital (financial) to multiple capitals (financial, social, natural).
2. Accelerate the activities of international networks, working groups and task-forces towards increasing and incentivising positive financial flows towards investment in nature.
3. Launch an open consultation on the positioning of “Nature-based Economy” concepts and related terminology such as “nature-based enterprises” in relation to other terms such as “circular bioeconomy”, “bioeconomy”, “nature-positive production”, etc.
4. Develop a comprehensive international framework for labelling, tracking, reporting and verifying the state of the Nature-based Economy.
5. Create an international multi-stakeholder database to increase data availability and improve decision-making related to the Nature-based Economy at a global level.

Immediate Actions to boost the NBS market at Global level:

1. Sustain measures to keep mainstreaming of NBS to the forefront of international and national governance, climate action and climate policy-related instruments.
2. Include more specific recommendations in global policies to facilitate investments in nature-based solutions in real terms. In the immediate short term, the public sector should be encouraged and supported to sustain and increase investment in NBS while in parallel, the international community puts in place systemic changes to incentivise increased private sector investment.
3. Agree a formalised strategic plan at the global level to introduce a cross-cutting modality of investment for nature-based solutions effectively creating an asset class for NBS.
4. Include specific and extensive financing for NBS in post-COVID economic recovery packages in all major economies.
5. Accompany increased investment in NBS with capacity building measures to stimulate the private sector supply of NBS leading to more innovation, job and enterprise creation.

II. EU level

Systemic Change measures proposed at EU level:

1. Improve policy alignment relating to NBS in Circular Economy and Bioeconomy strategies; increase policy collaboration with Regional policy and Enterprise policy.
2. Invest in EU wide research/market studies on the positioning and potential synergies between Nature-based Economy principles and other strategies and action plans identified to achieve the aspirations of the Green Deal including the EU Sustainable Finance Taxonomy.
3. Stimulate the development of NBS market sectors through measures taking into account NBS market characteristics (varying levels of market maturity) and challenges faced at market level (need for networking due to market fragmentation and early stage of development).
4. Embed multiple actors in decision-making processes on NBS at EU level.
5. Increase actions aimed at much higher levels of take-up of corporate and SME valuation of nature.

Immediate Actions to boost the NBS market at EU level:

1. Triple EU investment in NBS by 2030 and quadruple by 2050 as per the recommendations of the UN Report on the State of Finance for Nature (2021). Engage InvestEU, the EIB and the EIF in providing this financing. Align investment with tackling remaining roadblocks to NBS such as the need for transformative change at local government level.

2. Increase funding for knowledge exchange and collaboration between regions of Europe and the rest of the world, in particular the Global South.

3. Stimulate private sector supply of NBS through support for capacity building of nature-based enterprises (NBEs) and investment in NBS and NBEs in line with the EU Sustainable Finance Taxonomy.

4. Lead on the development of more comprehensive standards for different types of NBS to support market development. Standards will provide reassurances for buyers and verification of quality levels to help support and differentiate the offerings of suppliers.

5. Support EU and national platforms, networks and face-to-face NBS market events to connect nature-based enterprises with other actors across the supply chain. Support the organisation of match-making events between businesses and financiers focusing specifically on pro-biodiversity businesses or NBEs.

III. At national and local level

Systemic Change measures proposed at national/local government level:

1. Put in place measures to increase public sector adoption of approaches to capture, account and track the monetary and non-monetary value of nature and nature-based solutions.

2. Put in place measures to increase the understanding and valuation of nature in the private and third sector and to incentivise private sector investment in nature.

3. Implement capacity building measures to ensure that increased public investment in NBS leads to an increase in innovation and job creation in NBEs.

4. Embed participatory decision making processes in policy making in particular focused on increased engagement between local government and local business in the Nature-based Economy.

5. Deliver support and capacity building measures for local community and third party organisations to take on an increased role in co-governance of NBS.
Measures to stimulate demand:

1. Build a portfolio of NBS projects rated in terms of attractiveness for public and private sector investment.
2. Triple local government-led investment in NBS by 2030 and quadruple investment by 2050. Investment from the public sector should be prioritised in NBS where private sector investment is not attractive as the primary source of funding.
3. Increase public sector investment for pilots of novel approaches to NBS.
4. Stimulate private sector interest in investing in NBS through specific policy/regulation instruments e.g. ‘nature-credit’ scheme broadly based on carbon credit scheme.
5. Actions to increase investor understanding of NBS cost structure and business models.
6. Increase awareness and engagement of local businesses with communities and other actors in decision making processes around NBS.
7. Increase local business awareness of the direct benefits of NBS such as green building infrastructure leading to increased investment.
8. Introduce measures to increase the level of consumer awareness of the benefits of NBS.
9. Put in place measures to facilitate community financing of NBS.
10. Stimulate private demand through partnerships / platforms / infrastructure.

Measures to stimulate private sector supply of NBS:

1. Address barriers in specific NBS market sectors e.g. regulations hindering delivery.
2. Put in place financial incentives for nature-based enterprises to be started and scaled.
3. Contribute to the development of standards for NBS implementation at local/national level. Ensure NBEs are adequately represented in the development of standards.
4. Support platforms, networks and face-to-face industry events connecting nature-based enterprises with other actors across the supply chain.
5. Collaborate with relevant organisations to develop training and continuous professional development measures to increase the quality of NBS implementation.

Measures to address public procurement challenges:

1. Build the capacity of the public sector to take advantage of NBS opportunities through infrastructure, agencies and educational institutions.
2. Review and deliver the systemic changes needed to current procurement processes to better align with NBS non-monetary values and cost structures.
3. Change procurement processes to better accommodate smaller enterprises.
4. Increase awareness and recognition of the role of nature-based enterprises (NBE) in the NBS supply chain. Tailor procurement strategies to enable the development of new types of suppliers.
5. Incorporate Natural Capital assessment considerations into public procurement policies.
Finally, the potential of digital communications and the platform economy to accelerate NBS market development was recognised and measures are proposed to leverage this potential.

**Conclusion**

The ‘Nature-based Economy’ is a new concept which is at a very early stage of development. Robust feedback is needed from policy makers, practitioners and academics in the economics, public management and NBS fields on this concept, and the recommendations proposed in this paper in support of this concept.

We invite you to contribute to the consultation process on the concept and recommendations. Please visit us on [networknature.eu/Nature-Based-Economy-White-Paper-Consultation](http://networknature.eu/Nature-Based-Economy-White-Paper-Consultation) to complete a short feedback survey on priority recommendations and/or to submit a longer feedback document as part of this consultation process. Consultation will close on 10th September 2021. The final publication will be presented at the European Business Summit in November 2021.