NBSI NEWSLETTER

March 2019, Issue 1

Welcome to the first newsletter of the NBSI where we highlight latest NBS developments in science and policy.

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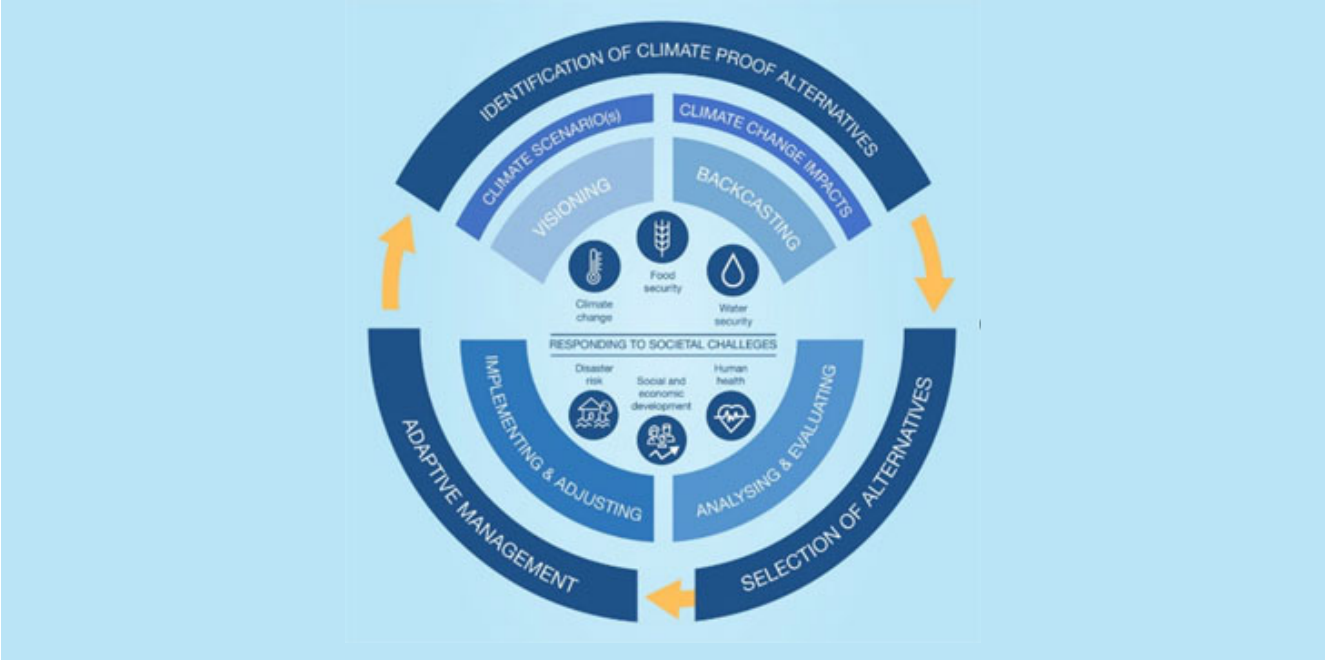
NBS SCIENCE

This month, we look at three papers that systematically review literature on nature-based solutions (NBS) in order to develop frameworks or criteria that assess the effectiveness of NBS approaches.

An assessment framework for climate-proof nature-based solutions

With nature-based solutions (NBS) growing popular in the effort to tackle climate change, scholars are focusing attention on ways to evaluate their effectiveness. This article sets out an ex ante assessment framework that specifically includes criteria for assessing future changes and unintended consequences, using visioning and backcasting methods as processes of assessment. It is pointed out that developing new approaches to address climate change is not enough, these initiatives also need to be critically evaluated and attention must be drawn to the costs of implementing nature-based solutions. Outlining the process by which an NBS can be 'climate-proofed' is ultimately invaluable, and should be incorporated into all future assessments of NBS. For the full article, please click here.



Graphic of the assessment framework

Social-ecological and technological factors moderate the value of urban nature

Focusing on urban systems, this article conducts a systematic literature review to identify factors that help determine whether nature-based solutions are effective in providing 10 different ecosystem services. The factors are grouped into three different contexts: social, ecological, and technological contexts, which is useful because the paper assesses a lot of practical considerations- from cultural norms and physical safety to tree canopy size and sewage infrastructure. It concludes that a systems approach that recognises how NBS produces both benefits and disservices is the best way to confidently assess the value of NBS in addressing urban sustainability challenges. For the full article, please click here.

How vegetation can aid in coping with river management challenges: A brief review

The third review focuses on river management and the role of vegetation in enhancing ecosystem resilience and biodiversity. It is argued that undertaking intensive restoration projects to maintain healthy river systems is too expensive and impractical, and that less intensive solutions, which incorporate vegetation as a tool for NBS, may be sufficient. The review found that clever use and maintenance of vegetation can potentially provide large-scale positive environmental impacts in rivers and streams. The authors suggest a two-stage (compound) design focused on vegetation to improve resilience to flooding, control the transport of substances, and enhance the ecological status. For the full article, please click here.

NBS IN POLICY

If the 2015 Paris Agreement initiated the entry of nature-based solutions (NbS) into international policy, then the latter half of 2018 signalled that NbS have grown to be a leading approach in addressing the climate crisis. At the Convention of Biodiversity Conference of the Parties (COP14), held in November 2018, NbS featured prominently as an approach for mainstreaming biodiversity concerns into the (particularly urban) climate change agenda. Following closely on the heels of the COP14 was the United Nations Framework Convention for Climate Change (UNFCCC) COP24, where NbS were the focus of numerous side events, tying into discussions on nature restoration, water management, and sustainable agriculture.

Looking forward, NbS are included as one of the main action portfolios being developed by the UN before the Climate Summit this September 2019. The NbS portfolio encompasses the three aspects of climate change response- sequestration, mitigation, and adaptation, and is broadly applied to forestry, agriculture, oceans, biodiversity, and supply chains.
For more information about the 2018 development, and a quick review of potential issues that will arise as NBS become more visible and mainstream, please see here.

NBS IN PRACTICE

From 2015-2018, in partnership with the International Union for the Conservation of Nature (IUCN) and the UN Environment World Conservation Monitoring Centre (UNEP-WCMC), the International Institute for Environment and Development (IIED) collected evidence about the use of ecosystem-based approaches from 12 projects conducted in Asia, Central and South America, and Africa. The project 'Ecosystem-based approaches to climate change adaptation: strengthening the evidence and informing policy' aims to inform policy makers about the use of ecosystem-based approaches to meet climate adaptation goals.

In Costa Rica, a range of EBA activities were conducted that related to crop diversity, water system and biodiversity restoration, soil conservation, and tree nurseries. Results tentatively showed that farming diversification does improve food security. The findings were used to develop the Costa Rican government's National Adaptation policy, where EBA is included in one of the strategic guidelines.

In El Salvador, the EBA focus was on improving mangrove management and restore water flows through reforestation and clearing river channels. The results suggest that there have been improvements in resilience and adaptive capacity as a result of the EBA measures. The preliminary findings have been presented to the El Salvadorian Ministry of Environment and Natural Resources, with hope that EBA is included in the development of climate change and water management policy.

NBS EVENTS

Paris Forum on NbS
April 4-5

Addressing major societal challenges: climate change adaptation-mitigation, risk management and resilience

Read more about this event

The Nature of Cities
June 4-7

How do we create green cities that are better for both people and nature?

The Nature of Cities, Paris, France
Read more about this event

Valuing our Life Support Systems
May 21-22

An opportunity to discuss and debate innovative natural capital solutions that enhance the environment and strengthen society.

Natural Capital Initiative's 10th Anniversary Summit, London, UK
Read more about this event

European Climate Change Adaptation conference
May 28-31

EU funded projects on behalf of the European Commission, Lisbon, Portugal Theme 6.4 is ecosystem services and nature-based solutions to improve resilience.

Read more about this event

NBS IN THE NEWS

Soil becomes fertile ground for climate action

25 February 2019

The Earth's soil systems are invaluable to us as carbon stores and ecosystem service providers, and finally the climate spotlight is focused on increasing sustainable agricultural practices to improve soil health. Greenbiz describes the latest in the movement towards regenerative agricultural practices, which are increasingly being tried out by companies- large and small alike- that rely on agricultural products and want to meet their sustainability goals. Take a look at the article here.

NBS IN THE NEWS

NBSI is an interdisciplinary programme of research, policy advice, and education aimed at increasing the sustainable implementation of NbS through the application of science. Our current work focuses on collating scientific information on NbS for climate change adaptation and making this more accessible to decision makers through our platform (LINK). We also assess the role of NBS in climate change policy, with a focus on the adaptation plans of all signatories of the Paris Agreement. The goal is to facilitate the process by which climate pledges are revised and to scale up the role of NbS. We were present at the COP24 where support for NbS grew as a response to climate change, and we will be present at September's United Nations Climate Summit in Paris. In our latest article Grounding nature-based climate solutions in sound biodiversity science, published in the journal Nature Climate Change in February, we highlight the fundamental importance of biodiversity for meeting climate change policy goals.

This month NBSI Director Nathalie Seddon will be giving the fifth Annual Plymouth Linnean Lecture on the value of nature in a warming world. Next month we will be presenting on the theme of "nature-based resilience" at the Paris Forum for NbS .