



Successful, sustainable NbS involve the protection and restoration of a wide range of naturally occurring ecosystems on land and in the sea

Key messages from NbS Digital Dialogues Panel 2

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[You can watch the recording of the session on YouTube.](#)

SUMMARY

1. NbS across all ecosystems have potential to provide local and global societal benefits.
2. To scale-up NbS across different ecosystems, a landscape approach to management is needed, including consideration of interactions between ecosystems.
3. Landscape management requires cooperation of stakeholders at all levels, and can be initiated from any level of governance from local to international.
4. Transparency and clarity in communication of positive outcomes and trade-offs is imperative for spread and improvement of NbS.
5. Systemic changes in societies and economies are needed to address the ultimate drivers of nature loss and degradation, including sustainable production, consumption and responsible supply chains.

INTRODUCTION

Currently, high-level multilateral pledges for nature focus on forests, due to their well-known potential to sequester and store carbon. However, other ecosystems are just as important carbon sinks and, like forests, they are also rich in biodiversity, help society adapt to climate change, and directly support the livelihoods of millions of people. In this session, the discussion explored the importance of a landscape approach to NbS planning and implementation, for producing resilient landscapes that deliver multiple societal benefits for decades and generations to come.

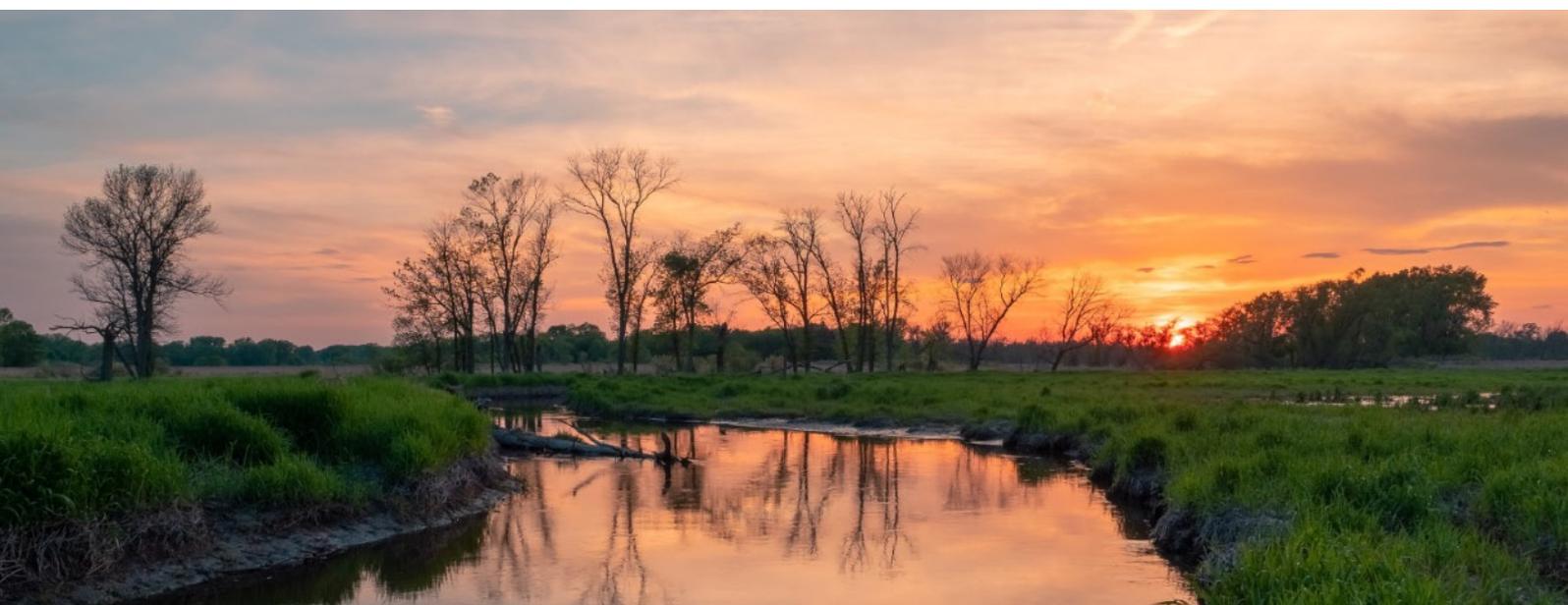
KEY MESSAGES

1. NbS across all ecosystems have potential to provide local and global societal benefits.

- The current focus on forests has drawn attention away from interventions in other habitat types which are vital for achieving not just climate change mitigation goals, but also for climate change adaptation and supporting other sustainable development goals.
- Ecosystems must not be protected, restored or managed purely based on their mitigation outcomes; habitats that do not contribute to climate change mitigation are still valuable for other contributions they make to society.
- Ocean ecosystems are often overlooked as opportunities for NbS, yet they have critical roles to play. For example, coral reefs shield coastal communities from storms, support fisheries that provide food and livelihoods for local people, and are sites for sustainable tourism. In many parts of the East African coast, small-scale fisheries provide 50-90% of household income. Protecting and sustainable use of East African coral reefs can help secure the livelihoods of these people.
- Creation of novel ecosystems is also not limited to forests (afforestation). For example, creation of an artificial foreshore around a degraded lake in the Netherlands aided accumulation of sediment, establishment of vegetation and habitat for birds, creating a new freshwater ecosystem supporting fish stocks.

2. To scale-up NbS across different ecosystems, a landscape approach to management is needed, including full consideration of interactions between ecosystems.

- For NbS to realise their full potential, they need to be implemented at scale across landscapes which are often heterogeneous, including multiple types of ecosystems, which are varied within themselves, and are inhabited by and used by people, such as for agriculture.
- Ecosystems interact with one another, and the functioning and resilience of ecosystems are affected by and dependent on one another. Hence, planning for any given NbS intervention requires consideration of the health and functioning of neighbouring ecosystems, or those otherwise connected, for example, by waterways.
- Terrestrial and aquatic ecosystems are intimately connected. For example, destructive land practices leading to erosion can increase delivery of sediment to coral reefs, undermining their resilience. On the flip side, benefits from land restoration practices can extend to marine systems. For example, the recovery of seabird populations promoted by removal of invasive rats which prey on seabird chicks, can lead to increased guano loads which fertilise reefs, increasing growth, health and resilience. Therefore, in order to protect or restore a reef, the state of the neighbouring terrestrial ecosystems also needs to be taken into account.
- Creating novel ecosystems in order to restore ecosystem functioning and services requires an in-depth understanding of the social and ecological system of which the new ecosystem will form a part. Finding a similar system elsewhere to use as a reference can help inform the creation of the new ecosystem; for example, the novel freshwater ecosystem at Markermeer was compared to a reference system in Estonia with similar characteristics.



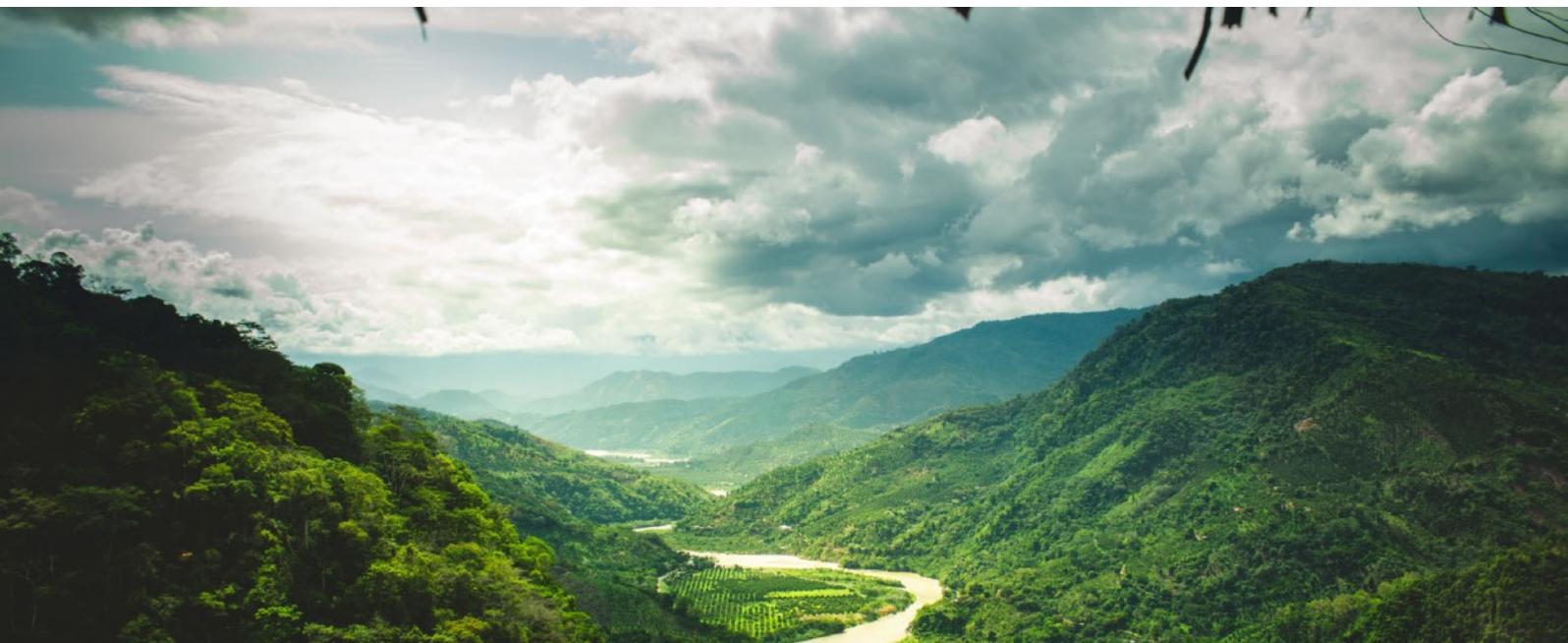
3. Landscape management requires cooperation of stakeholders at all levels, and can be initiated from any level of governance from local to international.

- An integrated landscape approach is project specific, with no single formula for implementation. There are two contrasting extremes of the spectrum by which an integrated landscape approach could emerge:
 - Cooperation between small-scale habitat-specific interventions: multiple community-driven interventions might come together such that as a whole they cover a large spatial area, incorporating all of the interacting ecosystems and groups of people in the region. For example, Locally Managed Marine Areas (LMMAs) in East Africa grew from one to 24 LMMAs in less than a decade to now cover a total of 11,000km².
 - Large scale vision broken down into smaller interventions: multiple national governments might form an international vision for NbS across a landscape. For example, the Great Green Wall initiative in Africa was conceptualised to restore 100 million hectares of degraded land across the Sahel and Sahara, and has since worked at the community level across these landscapes, carrying out a suite of activities to meet the objectives of the broad vision; 53,000 hectares are currently under restoration.
- Involvement from stakeholders and decision makers at all levels are needed simultaneously throughout the whole process of project design and implementation.
 - Bottom-up and top-down processes must meet in the middle.
 - Local people: must be fully involved and consulted to ensure that their needs are met; NbS should support local livelihoods and wellbeing, and people should be able to take leadership and ownership over projects in their local area.
 - Regional and national governments: must support community level projects through finance, legislation, and technical support.
 - International processes: international bodies can provide financial support as well as platforms for knowledge sharing; national governments need to consider how the projects they support contribute to international commitments and targets (including UNFCCC, CBD, and SDG targets). E.g. The Pan-African Action Agenda on Ecosystem Restoration for Increased Resilience, and the UN Decade of Restoration have helped move the Great Green Wall from concept to action on the ground.

- A diversity of knowledges are needed to inform NbS design and implementation:
 - Science, local and traditional knowledge can provide complementary information, enabling the best possible solutions to be designed and refined.

4. Transparency and clarity in communication of positive outcomes and trade-offs is imperative for spread and improvement of NbS.

- Project managers must be transparent at all stages of project planning and implementation, including clearly declaring unavoidable trade-offs.
 - Transparency enables trust to be built towards stakeholders of a project.
 - Successes and lessons learnt from NbS projects should also be clearly communicated and made freely available, to help inform NbS projects elsewhere. Showing communities the outcomes of an NbS project elsewhere and allowing them to talk to the owners and beneficiaries of such a project can aid uptake of NbS, as seen in Kenya.
 - The IUCN Global Standard provides a framework for achieving this.



5. Systemic change in societies and economies is needed to address the ultimate drivers of nature loss and degradation, including sustainable production, consumption and responsible supply chains.

- Landscapes sit within a global system which continues to support the fundamental causes of nature loss.
- Therefore, effective implementation of NbS at the landscape scale is insufficient for securing essential flows of ecosystem services and enabling biodiversity recovery, without additional changes that address the fundamental drivers of habitat loss and degradation.
- Without addressing the fundamental drivers of biodiversity loss and climate change, simply increasing the number of local NbS projects will not add up to bend the curve of biodiversity loss, and the benefits of these projects may in fact be undermined by the impacts of climate change. However, these projects are still fundamentally important, and can help protect people and nature to replace during the time it will take for systemic change to take place.
- For example, the UK invests in reforestation efforts in Brazil, but benefits from such an action are undermined by the UK simultaneously importing Brazilian soy, creating demand for agricultural land and driving deforestation.
- Destructive production, consumption, and trade therefore require transformation. We need to shift agricultural production away from deforestation fronts, avoid destructive infrastructure, ensure sustainable supply chains, and create policy frameworks and governance structures that enable this, including creating a level playing field for producers that act sustainably.
- Attention is urgently needed to outlining how this will be achieved, requiring strong commitments, planning and actions from governments.

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