Nature's Comeback: Achieving Biodiversity and Human Thriving Through Ecosystem Restoration

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OPEN ACCESS

Keywords

Ecosystem restoration; KM-GBF; UN Decade on Ecosystem Restoration; NBSAPs

How to cite this article:

Bora, D. and Suman, S. 2025. Nature's Comeback: Achieving Biodiversity and Human Thriving Through Ecosystem Restoration. *Vigyan Varta* 6(1): 66-69.

ABSTRACT

Ecosystem restoration is essential for reversing biodiversity loss and mitigating climate change. The UN Decade on Ecosystem Restoration and the Kunming-Montreal Global Biodiversity Framework (KM-GBF) offer a global roadmap for these efforts. By aligning national strategies with these frameworks and fostering international collaboration, we can create a sustainable future for both nature and humanity. This article highlights global strategies, lessons from past biodiversity targets, and key requirements for integrating restoration into National Biodiversity Strategies and Action Plans (NBSAPs).

INTRODUCTION

In a world increasingly marked by urban sprawl and industrial expansion, the delicate balance of our natural ecosystems has been significantly disrupted. The results of this imbalance are far-reaching, affecting not just the biodiversity, but also the well-being of human itself. As we face the dual crises of biodiversity loss and climate change, the concept of ecosystem restoration emerges as a beacon of hope—a pathway to reviving our natural landscapes and, in turn, enhancing the quality of human life. According to United Nation, ecosystem restoration is "the process of halting and reversing degradation, resulting

in improved ecosystem services and recovered biodiversity" (UNEP, 2021). Recognising its urgent need, the restoration targets have been set up, and included in 2030 SDGs and other key international frameworks addressing the dual crisis of biodiversity loss and climate change.

Global Efforts and Strategies:

The United Nation is the frontier of restoration support through UN Decade on ecosystem restoration initiative, which aims to build a robust, global movement to accelerate restoration and ensure a future with sustainability. Additionally, Convention on Biological Diversity (CBD) has adopted the Kunming-Montreal Global Biodiversity Framework (KM-GBF), which includes a significant global target for restoration.

- **KM-GBF:**

Adopted in December 2022, KM-GBF envisions living in harmony with nature by 2050. This says about a world where biodiversity is valued, conserved, restored, and wisely used. The framework includes four long term goals for 2050 and 23 urgent targets for 2030. Among which the Target 2 is related with restoration of the ecosystems.

The target 2 of KM-GBF aims to ensure that "by 2030, at least 30 percent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems are under effective restoration, to enhance biodiversity and ecosystem functions and services, ecological integrity, and connectivity" (GBF, n.d.). This target is crucial for achieving many other goals and targets of KM-GBF.

- **The UN Decade on Ecosystem Restoration 2021-2030:**

Declared by the UN in 2019, this decade aims to prevent, halt, and reverse the degradation of ecosystems worldwide, visualising a restored relationship between humans and nature. Led by the Food and Agriculture Organization (FAO) and the United Nations Environment Programme (UNEP), with the collaboration of CBD Secretariat, the initiative operates through five task forces: Best Practices, Finance, Monitoring, Science, and Youth. Most importantly it has defined the ecosystem restoration and takes different restoration activities. The initiative aims to build connections between various Multilateral Environmental Agreements and other global initiatives, focusing particularly on Target 2 of the KM-GBF.

Understanding Past and Future Biodiversity Targets:

Restoration efforts were indeed a part of the previous Aichi Biodiversity Targets (ABTs) and the Strategic Plan for Biodiversity 2011-2020. Specifically, ABTs included targets related to restoration—Target 14 focused on ensuring the provision of essential ecosystem services through restoration, and Target 15 aimed to restore 15% of degraded ecosystems to help with climate change mitigation, adaptation, and combating desertification. Unfortunately, these targets were not achieved by 2020. One key reason was that national strategies were often project-focused and missed the opportunity for large-scale, integrated initiatives.

Several gaps existed in the ABTs and the Strategic Plan for Biodiversity 2011-2020,

1. Targets 14 and 15 lacked a clear relationship between restoration and biodiversity.
2. There was no specific definition of ecosystem restoration.
3. Lack of clear quantitative metrics for assessing ecosystem degradation, setting national targets, and reporting restoration progress.

4. Hindrance in alignment in national targets due to the challenges such as defining degradation, agreeing on baseline conditions, lack of data, and insufficient capacity for monitoring and reporting.

Integrating Restoration Targets into National Biodiversity Strategies and Action Plans (NBSAPs):

The lessons learnt from the ABTs and the Strategic Plan for Biodiversity 2011-2020 highlight the importance of aligning national restoration efforts with KM-GBF Target 2 and updating National Biodiversity Strategies and Action Plans (NBSAPs) accordingly. Key Requirements for Incorporating Target 2 Components into NBSAPs:

1. Restoration Planning: Restoration targets should be an integral part of the NBSAP process.
2. Stakeholder Engagement: Engage stakeholders, rights holders, and knowledge holders in the planning process.
3. Collaboration: Work with teams addressing other KM-GBF targets to mainstream restoration across all sectors.
4. Financial Planning: Develop a finance plan, including a budget for both creating or revising the NBSAP and implementing priority actions.
5. Capacity Development: Create a capacity development plan to ensure the necessary organizational and technical skills are available, recognizing the role of regional organizations in building capacity and promoting scientific and technical cooperation.
6. Provision of Tools and Guidance: Ensure the availability of tools and guidance needed to effectively implement NBSAPs, whether developed at the national or global level.

Global Ecosystem Restoration Initiatives:

- Sustainable Development Goals (SDGs): Including Targets 6.6, 14.2, 15.1, and 15.3.
- Paris Agreement: Adopted under the United Nations Framework Convention on Climate Change (UNFCCC).
- Land Degradation Neutrality Targets: Supported by the United Nations Convention to Combat Desertification (UNCCD).
- Bonn Challenge: Based on ABT 15, and the New York Declaration aims to restore 350 million hectares of degraded landscape and forestlands by 2030.
- Sendai Framework for Disaster Risk Reduction 2015-2030.

There are also several other international conventions and initiatives related to Target 2, such as the World Heritage Convention, Ramsar Convention, REDD+, and the UN Decade of Ocean Science for Sustainable Development (2021-2030).

CONCLUSION:

The lessons from past biodiversity targets stress the need for integrated, large-scale restoration strategies aligned with global frameworks like the KM-GBF and the UN Decade on Ecosystem Restoration. Restoring ecosystems is vital for supporting all species, including humans. By embedding restoration targets into NBSAPs and fostering collaboration, financial planning, and capacity development, we can significantly advance restoration efforts. Aligning with initiatives like the SDGs, the Paris Agreement, and the Bonn Challenge ensures a cohesive approach. Ultimately, the success of these efforts depends on our collective commitment to valuing and protecting our natural world. As we embrace this journey of restoration, we

pave the way for a future where both biodiversity and human well-being flourish in harmony.

REFERENCES:

United Nations Environment Programme. (2021). Becoming# Generation Restoration: Ecosystem Restoration for People, Nature and Climate. Nairobi: United Nations Environment Programme. https://wedocs.unep.org/bitstream/handle/20.500.11822/36251/ERPNC.pdf.

Global Biodiversity Framework. (n.d.). Target 2. https://www.cbd.int/gbf/targets/2.