



Editorial

UN Decade on Ecosystem Restoration 2021-2030: Are We Ready for the Grand Challenge?

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UN Decade on Ecosystem Restoration 2021-2030 is a rallying call for the protection and revival of ecosystems all around the world for the benefit of people and nature declared by the United Nations Environment Programme and Food & Agriculture Organization of the United Nations (UNEP and FAO, 2021). The grand ambitions of the decade are aimed at halting the degradation of ecosystems and restoring them to achieve the Global Goals also known as the Sustainable Development Goals (SDGs). This makes the year 2030, which is also the timeline for achieving SDGs, an important milestone for humanity that is widely accepted as the last chance to prevent catastrophic climate change. This ambitious plan includes the restoration of 350 million hectares of degraded terrestrial and aquatic ecosystems, which could generate US\$9 trillion in ecosystem services while removing 13 to 26 gigatons of greenhouse gases from the atmosphere.

Ecosystem restoration entails assisting the recovery of ecosystems that have been degraded or

destroyed while conserving the remaining ecosystems. Ecosystem services are a subset of ecosystem processes and functions that contribute to human well-being. The ecosystem services provide us with the essential ecosystem services that underpin economies, from fertile soils and multifunctional forests to productive land and seas, from good quality fresh water and clean air to pollination and climate regulation and protection against natural disasters (Schröter et al., 2019).

Sri Lanka's Commitment to the Decade

Sri Lanka's commitment to contribute to the 15th SDG, i.e., to protect, restore and promote sustainable use of terrestrial ecosystems, manage forests sustainably, combat desertification, and halt & reverse land degradation and biodiversity loss are now manifested in the updated Nationally Determined Contributions (NDCs) to United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement on Climate Change (MOE, 2021). The NDCs state that Sri Lanka is

committed to achieving carbon neutrality by 2050. The forest cover is to be increased from 29.15% as per the estimates released in 2005 to 30% by 2030. This is primarily by restoring over 18,000 ha of non-forest lands. Further, the quality of growing stocks of degraded forests (200,000 ha), forest plantations (78,000 ha), and forest lands under regional plantation companies (RPCs) are to be improved by 2030. The climate change-sensitive areas are to be mapped, of which 25% are to be restored by prioritizing areas as such according to biodiversity & ecosystem values and climate change vulnerability.

Challenges for Ecosystem Restoration

In the economic crisis in the post-pandemic recovery era, Sri Lanka has plunged into a steep recession driving many communities to well below the yet-to-be-redefined poverty line. A vast majority of them will be food insecure. Whereas in Sri Lanka's arable lands excluding those designated for conservation, are almost fully utilized, widespread cultivation drives may accelerate further degradation and deforestation of the forest cover. In an enabling policy atmosphere, it is best to foresee a sharp rise in land encroachment for agricultural expansion including the protected areas and the lands designated for ecosystem restoration. For instance, proposals for ordering RPCs to cultivate food crops in uncultivated lands cast doubts on whether natural and secondary forests with high ecosystem service values within RPCs would be deforested. Further worries are accumulated following the decentralization of the authority of protection of other state forests from the Department Forest Conservation to the Divisional Secretariats.

A recent analysis of multidecadal forest cover loss in the dry zone of the country shows that 130,349.5 ha of forests have been lost from 2010 – 2019s at 24,899.6 ha per year (Ranagalage et al., 2020). To date such an analysis for the rest of the country is absent. Therefore, the NDC of increasing the forest cover to 30%, primarily by restoring over 18,000 ha of forests above the base values reported in 2005 (29.15%) appears to be a grand challenge to realize. Further, the National Red List (2020) of the Flora of Sri Lanka calls for serious attention to the fact that, out of 3,087 species evaluated, 1,496 are threatened (48.4%; critically endangered, endangered or vulnerable) and habitat loss directly contributes to endangering the species. While Sri Lanka is in its infancy in adopting the integration of ecosystem service concepts, the rest of the world has moved far ahead by mainstreaming ecosystem service approaches from development and conservation decision-making to national accounting such as in Europe (Schröter et al., 2019), and in neighbouring India (Chopra et al., 2020).

A Roadmap for Reaching UN Decade on Ecosystem Restoration 2021-2030

Given Sri Lanka's bold and ambitious commitments, roadmaps for the protection and revival of ecosystems should be revisited particularly focusing on the inclusion of several key actions. A paradigm shift is needed more than ever before on the perception of the significance of forest resources, particularly through (1) valuation of ecosystem services, and mainstreaming ecosystem service values for conservation- and development-related decision-making. Rather than cursing the darkness, a candle could be lighted by (2) establishing public-private-and-community

partnerships (PPCPs) for community-led landscape-level conservation and restoration projects. These PPCPs should bring about monetary benefits of enhanced ecosystem service values, which should be channeled to the rural communities; not to expand agricultural lands further, but to diversify home gardens as analog forests or agroforests increasing their ecosystem values, and to support adopting novel technologies of crop cultivation, value addition, and marketing. However, most ecosystem restoration projects are not sustained beyond the proposed project periods, therefore, (3) establishing a Forest-Department-led monitoring and evaluation mechanism for ecosystem restoration and conservation projects is essential to assure the sustainability of ecosystem restoration projects. Field manuals and guidelines for the restoration of ecosystems are scanty for many ecosystems of the country, therefore, (4) collating, reviewing, and establishing appropriate knowledge products for implementing science-based ecosystem restoration projects is necessary. Finally, (5) establishing an ecosystem restoration funding scheme under the monitoring and evaluation mechanism proposed (#3) above is essential for financing PPCPs for community-led landscape-level conservation and restoration projects. It is, however, noteworthy that such roadmaps would be realistic only if the SDG 16, i.e., to promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels, is satisfactorily met in Sri Lanka.

References

- Chopra, B., Khuman, Y.S.C., and Dhyani, S. (2022) 'Advances in Ecosystem Services Valuation Studies in India: Learnings from a Systematic Review.' *Anthropocene Science*. vol1, pp 342–357
- MOE (2021) *Amendment to the Nationally Determined Contributions of Sri Lanka to United Nations Framework Convention on Climate Change*. Ministry of Environment, Colombo, Sri Lanka. pp 1-69.
- National Red List (2020) *Conservation Status of the Flora of Sri Lanka*. Biodiversity Secretariat, Ministry of Environment and the National Herbarium, Department of National Botanic Gardens. pp 1-254.
- Ranagalage M., Gunarathna M.H.J.P., Surasinghe T.D., Dissanayake D., Simwanda M., Murayama Y., Morimoto T., Phiri D., Nyirenda V.R., Premakantha K.T., and Sathurusinghe A. (2020) 'Multi-Decadal Forest-Cover Dynamics in the Tropical Realm: Past Trends and Policy Insights for Forest Conservation in Dry Zone of Sri Lanka'. *Forests*. vol. 11, no. 8, pp 836.
- Schröter M., Bonn A., Klotz S., Seppelt S., and Baessler C. (2019) *Atlas of Ecosystem Services: Drivers, Risks, and Societal Responses*. Springer International Publishing AG, part of Springer Nature, Switzerland. pp 1-406.
- UNEP, and FAO. (2022) 'UN-Decade on Ecosystem Restoration.' UN Decade on Restoration. The United Nations Environment Programme. Accessed December 14, 2022. <https://www.decadeonrestoration.org>.