POLICYBRIEF

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Landscape Approaches to Ecosystem Restoration

Lessons Learned from Managing Socio-Ecological Production Landscapes & Seascapes

Maiko Nishi and Suneetha M Subramanian

Highlights

Landscape approaches help to effectively facilitate ecosystem restoration for the benefit of people and nature, by leveraging Indigenous and local knowledge and enhancing context-specific cooperation between stakeholders. The process of applying landscape approaches to ecosystem restoration should be multi-lateral, iterative and inclusive. It needs to be navigated by communicating and interacting with stakeholders across different sectors and levels.

Recommendations:
- Start at the landscape or seascape scale to identify and mobilize local resources and capacities for long-term restoration efforts.
- Promote peer learning and knowledge sharing to develop integrated solutions for restoration and sustainable development, and upscale them for broader impact.
- Institutionalize local restoration efforts as part of coherent policies and frameworks to facilitate systemic change in human–nature interactions.

Global Commitment to Ecosystem Restoration

Despite conservation and restoration efforts in recent decades, ecosystems around the world have continued to decline. Natural forests have receded at a growing rate (NYDF Assessment Partners 2018) and wetlands have been degraded by 35 per cent since 1970 (Ramsar Convention on Wetlands 2018). Responding to the alarming rate of ecosystem degradation, in 2019 the UN General Assembly declared the Decade on Ecosystem Restoration (2021–2030) to bolster and scale up efforts to prevent, halt and reverse ecosystem decline (A/RES/73/284). This initiative is a global call to accelerate existing commitments and initiatives for restoration, including the Bonn Challenge — a global effort launched in 2011 by the Government of Germany and the International Union for Conservation of Nature (IUCN) — and support wider restoration efforts across terrestrial and marine biomes (Dudley et al. 2020).

Under the leadership of the UN Environment Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO), a collaborative partnership has been created to implement the decade, involving partner agencies across the globe. Its strategy for inclusive, coordinated action, as well as the action plan for its effective implementation,

have been aligned with the 2030 Agenda for Sustainable Development and multilateral environmental agreements. The 196 Parties to the Convention on Biological Diversity (CBD) have committed to restoring at least 30% of degraded areas by 2030 under the Kunming–Montreal Global Biodiversity Framework (CBD/COP/DEC/15/4).

Nevertheless, it is challenging to precisely understand what can be achieved through the decade and to what extent restoration initiatives could be successful, because ecosystem restoration has multiple dimensions, including ecological, socio-economic and cultural. In an attempt to learn from experience, the Task Force on Best Practices — an FAO-led collaborative initiative for the decade — has supported capacity development and knowledge dissemination. This task force has developed ten guiding principles (FAO, IUCN CEM & SER 2021) and standards of practice (FAO, SER & IUCN CEM 2023) to guide ecosystem restoration. While there remains scarce evidence to properly guide socially and ecologically sound restoration (Cooke et al. 2019), most of the key principles (e.g., broad engagement, benefits to nature and people, local and land/seascape contexts) accord with those of landscape approaches (e.g., multiple stakeholders, multifunctionality, participatory and user-friendly monitoring) (Sayer et al. 2013). Landscape approaches have typically been practised through the management of socio-ecological production landscapes and seascapes (SEPLS) where integrated initiatives for both production and conservation have been developed and promoted through stakeholder collaboration to achieve multiple objectives within a given area.

This policy brief highlights the potential of landscape approaches to accelerate ecosystem restoration, based on findings from case studies of SEPLS management. It provides recommendations for policymakers and other stakeholders to facilitate ecosystem restoration, giving due consideration to diverse local contexts across different regions, to benefit both humans and nature and move towards more sustainable futures.

Landscape Approaches to Ecosystem Restoration

Optimally, ecosystem restoration is best supported by a multi-pronged and transdisciplinary approach that addresses underlying natural and anthropogenic drivers of degradation. In this context landscape approaches have the potential to play a pivotal role. This would require fostering a common understanding across stakeholders regarding historical land and sea uses, as well as the competing landscape needs of the users, and aligning them with relevant policy goals. It also

entails appropriate integration of different knowledge systems (traditional and mainstream knowledge, across disciplines) to develop ideal solutions, and approaches to cooperation between diverse actors that ensure management decisions promote restoration and sustainable use. This can be facilitated through multi-stakeholder platforms and by harmonizing the objectives of different actors. It recognizes the various rights of the communities enabling capacity development and raising awareness among stakeholders of interconnections between environmental health and human well-being.

Ecosystem restoration, however, requires changing current forms of interaction between people and nature to revive healthy ecosystems and (re-)establish more harmonious human–nature relationships. Three main challenges frequently arise throughout the planning cycle for restoration activities. First, appropriate capacities and resources are prerequisites for any restoration initiative (e.g., financial, human and social capital), but they are not always sufficient to ensure that all actors can fully grapple with the initiative. The necessary resources — such as time to participate in restoration initiatives and technical tools (e.g., nursery stock, monitoring tools) — are often least available to those who are most vulnerable to land or sea degradation. Second, coordination between different stakeholders is needed to reach an agreement on the goals and means of restoration. This is challenging not only due to the divergent interests, priorities and responsibilities of stakeholders but also the trade-offs ensuing from restoration effects, which can impact diverse stakeholders across levels and scales. Third, financial sustainability is crucial to sustain long-term restoration efforts, but external funding, which is often needed to initiate restoration activities, can give rise to financial dependency or unexpected negative consequences (e.g., ecotourism development leading to adverse environmental outcomes). Furthermore, financial sustainability should be sufficiently robust to ensure that restoration initiatives are resilient against shocks and disturbances, and that they strengthen the adaptive capacities of local communities.

Landscape approaches offer an integrated means to collectively overcome these challenges and identify opportunities for concerted efforts on restoration and sustainable development. Bringing together multiple stakeholders on a common platform allows them to negotiate different needs and interests, learn from each other and mobilize resources for collaborative action. These stakeholders range from Indigenous Peoples and local communities (IPLCs), youth, women and the private sector to government, scientists and other experts, each of whom plays a key role in planning and implementing restoration efforts.

Policy Recommendations

To initiate and effectively implement a restoration initiative for long-term adaptive co-management of natural resources, it is crucial that stakeholders feel motivated and agree on their roles and responsibilities in the collaborative effort. This process should be iterative and inclusive. It should entail the following three steps, which are not mutually exclusive and could be repeated and adjusted throughout the planning cycle.

1. Start at the landscape or seascape scale to identify and mobilize local resources and capacities for long-term restoration efforts

Taking the perspective of a landscape or seascape should be a starting point from which policymakers and practitioners can identify context-specific issues, relevant stakeholders and their relationships and appropriate methods and approaches that suit a certain place for restoration. In particular, communications with local stakeholders allow them to better understand locals' everyday practices, associated value perspectives and potential opportunities and threats to sustainable practices — helping to identify critical elements and evaluate the feasibility of an intervention. The local community should be engaged through local associations or administrative bodies, but ensuring representation of all stakeholders' needs and interests can be challenging, for instance due to existing power dynamics. They can partner with intermediaries (e.g., local NGOs, research or educational bodies) that facilitate iterative participatory processes for community consultation. This helps all stakeholders to identify and recognize their own roles and responsibilities for the initiative, while revealing conservation and restoration needs and bringing to the fore innovative ideas and benefits for culture and livelihoods.

Such consultation processes should be carefully designed and implemented to enhance the adaptive capacity of the community and ensure the financial sustainability of the initiative. Participatory approaches enable locals to recognize negative impacts or threats to biodiversity and ecosystems that consequently affect their livelihoods and well-being, and thus motivate them to take action and engage in restoration. For instance, youth, fishers, farmers, and other key local actors should be involved in monitoring and evaluation, and encouraged to collect and analyze data in the long run — thereby strengthening their adaptive capacity and building resilience in the landscape or seascape. In addition to taking advantage of available external funds at the outset, initiatives should leverage existing local resources and, if appropriate, build public–private partnerships to support and reinforce community-based restoration efforts.

2. Promote peer learning and knowledge sharing to develop integrated solutions for restoration and sustainable development, and upscale them for broader impact

Creating or fostering a common platform for peer learning and knowledge sharing is another key step. This is crucial because the consequences of ecosystem degradation can go beyond a certain spatial and/or temporal scale, while good practices can be replicated or adapted to address common challenges. Examples of such a platform (based on either online or in-person interaction) include workshops, regular meetings and continued networking at the regional, national or international levels that policymakers and practitioners can use to engage existing contacts or invite new stakeholders. Platforms should ensure accessibility to a broad range of stakeholders, with careful consideration of relevance, language, literacy (including digital literacy), technological availability, financial resources, time availability and other constraints.

A common platform, if easily accessible, allows for comparative analyses, learning from both successes and failures, awareness raising among diverse stakeholders, and resource mobilization and capacity development for concerted restoration initiatives. Importantly, this makes different types of knowledge accessible and available to diverse users. Measures must be taken to ensure the intellectual property rights of knowledge holders, carefully considering their availability (e.g., time constraints faced by locals); free, prior and informed consent (FPIC); equity; equal opportunities; and gender equity.

3. Institutionalize local restoration efforts as part of coherent policies and frameworks to facilitate systemic change in human–nature interactions

It is also essential to institutionalize local restoration efforts so they can be incorporated into plans and strategies at the regional, national and international levels. Policymakers and practitioners can take advantage of customary or traditional local governance systems to steer restoration initiatives at the local level, and then coordinate them with government institutions based on clear recognition of upstream and downstream connections (e.g., financial flows, knowledge transfer) along with specific roles and responsibilities for stakeholders to allow for coherent policymaking and implementation. To develop such a coherent and comprehensive governance structure, they can also draw on global policy frameworks such as other effective area-based conservation measures (OECMs) to make local contributions more visible and recognizable at multiple levels for achieving global sustainability goals. Furthermore, building on integrative concepts for sustainability (e.g., SEPLS), multi-stakeholder networks — particularly those engaging policymakers — can be developed and fostered at

the international level to motivate local stakeholders, build wider interest and recognition of local actions, and advocate for broader support. This would also help to strengthen local capacities for long-term commitment to global agendas for restoration and sustainable development.

NOTE

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