Global Landscapes Forum

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Background Brief

Implementation of integrated landscape approaches

This background brief has been jointly produced by
Bastiaan Louman (CATIE); **Terry Sunderland** (CIFOR); **James Reed** (CIFOR)

Growing demand for raw materials, food and energy along with processes of migration and urbanization are putting increased pressure on our land and natural resources. Landscape approaches have developed from this need to identify integrated solutions to competing demands on land uses and multiple pressures on social and environmental systems. As such, landscape approaches seek to simultaneously contribute to climate change mitigation and adaptation, food security, livelihood opportunities, biodiversity conservation and cultural and recreational needs.

Integrated landscape approaches are particularly important given the existence of multiple interactions between the different functions within a landscape. Landscapes are defined broadly – not only accounting for geographical and natural characteristics, but also for political and cultural practices that shape the way land is utilised.

Within any landscape, there are usually a variety of land uses. These can include forestry, agriculture, agroforestry and livestock uses as well as protected areas, community forests, logging concerns, and water concessions for drinking water, energy or agricultural uses. Even though the land uses are interconnected socially and biophysically, they have been primarily managed in isolation. A holistic approach can help in understanding the inter-connections between each of the different land uses, capturing the complexity of those land uses, and making sure their management is integrated, and trade-offs between competing land uses are fully negotiated.

On the ground, actually implementing the landscapes approach can pose a challenge to policy makers. Getting stakeholders – who have different views about what should happen in the landscape – to agree on a shared vision is particularly challenging. Achieving consensus among all stakeholders in a landscape is a key principle of the landscape approach.

The main tenet of integrated landscapes management is recognizing and negotiating for trade-offs that are needed to work towards the common vision, so that all stakeholders come to an understanding that there are likely to be winners and losers – but the overall goal is that one "wins more" and "loses less."

The implementation of integrated landscape approaches benefits from a wide range of tools and processes: technology is crucial in monitoring the changes that occur in a given landscape; local climate data underpins mitigation and adaptation at the landscape scale; and multi-stakeholder approaches to governance help negotiate competing demands.

Common questions

- How should landscape approaches be implemented in practice?
- What conditions have allowed for successful implementation of landscape approaches?
- What are the drivers that contribute to the implementation of collective community engagement?
- Can the landscapes approach work in all scenarios, or are landscape approaches context-dependent?
- Are there cases where the landscape approach may not be the most appropriate framework to use?
- How can gender dynamics be better integrated in the landscapes approach? How can landscape approaches ensure that the rights of minorities and vulnerable groups are strengthened?
- What strategies have been/can be employed to ensure the long-term success of landscape approaches (particularly after institutional support is withdrawn)?
- What technologies can we use to better understand land-use change and improve policy and practice in forest and landscape management?
- What is needed to make landscape research more useful and practical?

Key points of debate

Though the landscape approach is firmly established in scientific literature, putting theory into practice is a more contested field. During this forum we will analyze practical experiences in implementing landscape approaches, addressing in particular the following issues:

- Closing the research-practitioner gap. Land management strategies at landscape scales have been documented within the literature since at least 1965. A number of frameworks have been produced in subsequent years, each seemingly having the potential to meet these global challenges. And yet while this has led to a wealth of theoretical knowledge, we remain struggling for evidence of successful landscape interventions on the ground. Due to the complex nature of landscapes themselves, barriers to implementation persist. The identification of such barriers together with the development of appropriate solutions can help to realign landscape approach rhetoric with practice.
- 'Frontier' landscapes: Challenges and opportunities for integrated landscape management. Landscapes across many developing countries are experiencing rapid changes due to increasing demand for food and other natural resources, exacerbated by climate change drivers. Over time, these frontier landscapes often give rise to "novel societies" with a diversity of actors that have different productive strategies, cultural and migration histories, and access to capital, technology and markets. How can landscape approaches guide these dynamic processes towards more sustainable and integrated landscape management, and what technical, social and institutional challenges need to be met in order for integrated landscape management to function?
- Achieving a gender-based approach to comprehensive land use planning. In acknowledging the dynamic nature of landscapes and the diversity of actors within it, the landscapes approach places huge importance on multi-stakeholder participation to land use planning. It assumes that a process of facilitation and negotiation will lead to a shared vision of a sustainable landscape, but in reality, entrenched views and conflicts of interest hamper true consensus. How can the recognition of gender help the construction of a joint vision and the negotiation of trade-offs?
- Landscape planning inclusive of climate change considerations. Recognizing the overall importance of the potential effects of climate variability and change on land use and ecosystems services, landscape approaches need to consider these in their planning and implementation. Can landscape approaches improve responses to climate risks and related policies, in spite of both the limited information available on local climate change and the uncertain nature of the projections at a landscape scale? What technologies and innovations are being used and are particularly useful to integrate climate-smart strategies into landscape planning?

Recommendations

As the literature on integrated landscape management has grown, principles for successful implementation of landscape approaches have been published, notably the 10 principles proposed by Sayer et al (2013). Outlined below, these principles should be seen as a menu of approaches from which practitioners may draw, to solve problems on the ground.

- **Establish clear understanding of landscape research with management objectives:**
  The diverse range of interpretations of a 'landscape approach' can be a cause of confusion for non-specialists and practitioners. Researchers can reduce the complexity of the research scope by linking the type of landscape research directly to the policy issues that it aims to influence.

- **Adaptability and participatory monitoring are important when managing landscapes:**
  Landscape processes are complex and dynamic. External shocks and unforeseen interactions could change things on a daily, weekly or monthly basis. But practitioners must adapt to these changes, and these changes must inform decision-making. Each surprise is an opportunity for learning and to revise management strategies in a process that requires continual adjustment. In this regard, stakeholders cannot be constrained by the project document, but rather, take a flexible approach that appreciates the process as much as, or even more so than the project deliverables. All stakeholders should be able to generate, gather and integrate information to interpret activities and assess progress and threats.

- **Recognition of all stakeholders and awareness of multi-functionality and multiple scales:**
  Landscapes provide a diverse range of goods and services, each of which is valued in different ways by different stakeholders. In a landscape approach, trade-offs among these uses and purposes must be reconciled, and the concerns and aspirations of every stakeholder must be acknowledged and recognized. The failure to engage stakeholders fairly in decision-making processes will lead to ineffective, ineffective and inequitable outcomes. Part of this is the need to recognize the interaction of higher and lower level processes of governance, and the impact this has on local interventions. These principles highlight the importance of exercises such as political analyses, social network analyses, a gender approach and community mapping.

- **Transparency and identifying short term goals and actions can begin to build trust:**
  Given the difficulty of reaching consensus among multiple stakeholders, practitioners have found that focusing on easy-to-reach intermediate targets may provide a basis for stakeholders to begin to work together. This opens opportunities for shared learning and builds the confidence and trust needed to address further issues.

- **Clarification of rights and responsibilities:**
  Effective, efficient and equitable land management requires clear rules on resource access and land use. Stakeholders must have access to a fair justice system for conflict resolution and recourse.

- **Implementation of sustainable multifunctional landscapes requires trans-disciplinary partnerships and strengthened stakeholder capacity:**
  To negotiate, co-develop and work towards an agreed vision for a sustainable landscape, there needs to be true engagement among scientists, practitioners and professionals. The places where a landscapes approach works on the ground, where things are more effective, and outcomes better achieved, are where people are talking to each other and applying an ecosystem services approach, integrating all land uses. Conservation organizations cannot work in a protected area alone without being cognizant of what's happening around them, particularly in the forest margins. The same for the private sector – everyone needs to be talking to each other, because everything interacts at the landscape scale. Only through partnerships can the landscape approach work. Learning organizations that bring together multiple stakeholders that share, develop and adapt knowledge, resources and ideas can further ensure that research is socially relevant and user-informed to bridge the gap between research and implementation.

Remaining knowledge gaps

Landscape-scale research still faces scaling-up issues as most case studies focus on local data and recommendations. This may indicate lack of attempts to link local and landscape-scale research to policy issues at higher-order scales. Nevertheless, more work is needed to develop a systematic framework to establish baselines, to monitor, compare and evaluate studies at various scales.

Other issues still to be addressed include:

- Need for sufficient time and trust to develop necessary local enabling conditions (difficulty of securing long-term funding)
- Need for more case studies that focus as much on development and economic issues as well as conservation issues
- Need to develop systems and institutions (including knowledge management systems or mechanisms) to facilitate constructive, well-informed debate among interest groups toward a common understanding and resolution of complex objectives
- Need for greater link between research and information gathering and the end-users of the resulting information; in particular there is still a big gap between climate information and agricultural decision-making
- Need to consider how to effectively monitor landscape approaches in practice
- Need to consider capacity limitations of stakeholders and the sectoral nature of institutions involved in landscape management in tropical areas
  - » Integrated assessments are constrained by inadequate competencies and practitioners lack existing multi-sectoral platforms and procedures
  - » Need to consider whether there is evidence of integrated approaches from the outset, whether these are necessary or even desirable

Literature

Brussaard L, et al. 2010. Reconciling biodiversity conservation and food security: scientific challenges for a new agriculture. *Current Opinion in Environmental Sustainability* 2:34-42. doi: 10.1016/j.cosust.2010.03.007

Estrada-Carmona N, et al. 2014. Integrated landscape management for agriculture, rural livelihoods, and ecosystem conservation: An assessment of experience from Latin America and the Caribbean. *Landscape and Urban Planning*. 129:1-11. doi: 10.1016/j.landurbplan.2014.05.001

Harvey A, et al. 2013. Climate-Smart Landscapes: Opportunities and Challenges for Integrating Adaptation and Mitigation in Tropical Agriculture. *Conservation Letters* 00:1-14. doi: doi: 10.1111/conl.12066

Milder J, et al. 2014. Integrated Landscape Initiatives for African Agriculture, Development, and Conservation: A Region-Wide Assessment. *World Development* 54:68-80. http://dx.doi.org/10.1016/j.worlddev.2013.07.006

O'Farrell P and Anderson P. 2010. Sustainable multifunctional landscapes: a review to implementation. *Current Opinion in Environmental Sustainability* 2:1-7. doi: 10.1016/j.cosust.2010.02.005

Pfund J. 2010. Landscape-scale research for conservation and development in the tropics: fighting persisting challenges. *Current Opinion in Environmental Sustainability* 2:117-126. doi: 10.1016/j.cosust.2010.03.002

Sandker M, et al. 2010. The Role of Participatory Modeling in Landscape Approaches to Reconcile Conservation and Development. *Ecology and Society*. 15(2): 13. http://www.ecologyandsociety.org/vol15/iss2/art13/

Sayer J, et al. 2014. Landscape approaches; what are the pre-conditions for success? *Sustainability Science*. doi: 10.1007/s11625-014-0281-5

Sayer J, et al. 2012. Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses. *Proceedings of the National Academy of Sciences of the United States of America* 110(21):8349-8356. doi: 10.1073/pnas.1210595110

Scherr S, et al. 2012. From climate-smart agriculture to climate-smart landscapes. *Agriculture & Food Security* 1(12). http://www.agricultureandfoodsecurity.com/content/1/1/12

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