



## 2.3 Community-based approaches to landscape management

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### Introduction

Despite significant progress in expanding protected areas (PAs), biodiversity is being lost across the world at an unparalleled pace. In fact, much if not most biodiversity remains outside PA systems. The fate of this biodiversity — and of the vital ecological processes that cannot be sustained within PAs alone — will depend on the sound management of socio-ecological landscapes. Practitioners, donors and governments are increasingly interested in supporting work at the landscape level to protect global environmental values related to climate, biodiversity, and land degradation, as well as development priorities, including food security, disaster risk reduction and poverty alleviation.

Although there is growing support for community-based activities, these often occur outside a strategic framework and lack integrated outcomes that produce ecological and social resilience to climate change and other pressures. Many community-based efforts ignore the fundamental principles of stakeholder participation in the identification, design and execution of initiatives, which weakens their sustainability. Too few approaches deliberately target local organizations as active partners, rather than more passive beneficiaries, and fail to build local capacities through a learning-by-doing approach; i.e., designing, undertaking, evaluating and revising their own initiatives through adaptive management. Fewer still are those initiatives and approaches supported by donors over the longer term that slowly but surely build the social capital to sustain the adaptive management process to achieve social, economic and ecological resilience.



THE ENORMOUS DIVERSITY OF LANDSCAPES REQUIRES LOCALLY ADAPTED SOLUTIONS TO MEET THE NEEDS OF STAKEHOLDERS AND THE ECOSYSTEM FUNCTIONS ON WHICH THEY DEPEND.

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## The COMDEKS project

Over the past several years, the United Nations Development Programme (UNDP) has been integrating and adapting a new community-based landscape management approach through the Community Development and Knowledge Management for the Satoyama Initiative (COMDEKS) project.<sup>1</sup> Its approach is based on lessons learned from more than two decades of experience with community-level projects and activities.<sup>2</sup> The COMDEKS Project was launched in 2011 as the flagship of the Satoyama Initiative, a global effort to promote the sustainable use and management of natural resources in socio-ecological production landscapes and seascapes (SEPLs). In Japanese, *satoyama* refers to landscapes incorporating villages and the surrounding mountains, grasslands and woodlands, and describes a concept of people in harmony with nature.

The COMDEKS project covers a wide variety of landscapes in 20 countries around the world, supporting innovations identified by communities for biodiversity conservation, promotion of ecosystem services, agro-ecosystem management and strengthening of governance systems at the landscape level. The project is implemented in inland water systems such as lakes (Kyrgyzstan, Malawi and Niger), watersheds (Cambodia, Ecuador and Costa Rica) and wetlands (Slovakia); in coastal seascapes (Fiji, El Salvador, Indonesia and Turkey); in mountain ecosystems/landscapes (Bhutan, Ghana, India and Nepal); in agro-pastoral systems (Ethiopia, Cameroon and Brazil), and in grasslands (Mongolia and Namibia).

The project works through the Small Grants Programme (SGP) of UNDP's Global Environment Facility, providing small grants directly to local community organizations. COMDEKS has been designed to support local community activities to maintain and, where necessary, rebuild SEPLs, while also collecting knowledge from on-the-ground actions for dissemination to other smallholder organizations and adaptation to other landscapes and regions of the world.<sup>3</sup>



Through a process of social learning, projects are organized and implemented as part of a landscape strategy. In each country, grants are provided through SGP Country Programmes and their National Steering Committees, which are decentralized, voluntary, multi-stakeholder decision-making bodies. This is a fast, flexible and proven mechanism to reach communities and civil society at the local level in a country-driven manner.

The landscape management approach piloted through COMDEKS focuses on strengthening or renewing SEPLs. These are mosaics of uses and intensities of use that permit the conservation of biodiversity, sustain the generation of ecosystem services and enhance livelihoods and incomes, especially for the most vulnerable people. The evolving approach relies on a participatory planning process that strengthens local organizational capacities and ownership. It also depends on the networks of organizations and relationships across sectors that are fundamental to

resilience and sustainable development. The aim of this approach is to empower communities by engaging them to enhance and sustain the ecological, economic and social resilience of the landscapes and communities where they live and work.

Community organizations — cooperatives, self-help groups, advocacy groups and others — will pursue sustainable management of the landscape and its processes and resources if the benefits of doing so enhance the social and economic well-being of the people who live there. To maintain interest, innovation and commitment, community organizations must own the process of landscape planning and management. This ownership is built by community organizations acting as primary decision-makers, and determining the socio-economic and ecological objectives of landscape management, the innovations to be pursued, the modes of execution, the indicators of success, and the lessons learned. Above all, by reflecting on the decisions they have made in carrying out their own initiatives, community organizations build their capacities to adapt their practices to ecological, economic and social challenges and opportunities. As owners of landscape planning and management, they are active partners, not passive beneficiaries. They take the lead in determining how to meet the demands of enhancing resilience by strengthening ecological sustainability, economic growth and social cohesion.

In this community-based approach, landscapes are initially selected based on a wide variety of criteria, the most important of which is the demonstrated interest and engagement of the communities themselves. A participatory baseline assessment is carried out to identify problems in the landscape and discover their causes. Using mapping exercises, problem tree analysis<sup>4</sup> and focus-group discussions, community members and stakeholders identify the characteristics, resources, challenges and opportunities of their landscapes.



As part of this process, a set of indicators for resilience in socio-ecological production landscape and seascapes (SEPL indicators; Bergamini et al. 2013) is applied.<sup>5</sup> The indicators are a set of 20 questions designed to capture the interrelated dimensions of key landscape-level systems: ecosystem resilience, social resilience and economic resilience. They are a tool to help communities reach a common understanding of threats and solutions, and define resilience-strengthening strategies (Box 1).

Through knowledge-sharing and relationship-building at the community level, the use of the indicators, combined with landscape mapping exercises (Box 2), creates an opportunity for landscape stakeholders to share valuable information on relevant issues in the area, highlighting assets, problems, threats and opportunities. Although the indicators guide the discussion, the maps created by the communities are reference material for future analysis and planning, providing important insight into the area's specific socio-ecological characteristics.

**Box 1. Piloting resilience indicators in the Datça-Bozburun peninsula, Turkey**

The target landscape for the COMDEKS project in Turkey is the Datça-Bozburun peninsula, located in Muğla province in the southwest of the country. The peninsula is a Key Biodiversity Area,<sup>7</sup> representing one of the world's most pristine Mediterranean lowland forest and coastal ecosystems. The target landscape spans 247,700 hectares (ha) and includes Datça and Bozburun peninsulas and the rich marine habitats of Gökova Bay. Stakeholder-driven participatory planning processes and the practical application of the SEPL indicators, integrating community-based perspectives, were effective in reaching a common understanding of threats and potential solutions and defining resilience-strengthening strategies.

During the use of the indicators, it was essential to tailor the training content to meet the needs of participants. Interactive mapping exercises and the use of photos of the landscape proved to be particularly successful in providing a spatial dimension to conservation priorities and encouraging relevant and practical solutions. One challenge was to adapt the terminology to community needs. The language used in the first version of the indicators was found to be too complex for most of the audience to easily comprehend. In response, facilitators simplified the language and provided examples relevant to local communities to ensure that all members understood the terms and concepts. Community mapping was effective in engaging participants in discussions, and the social and cultural indicators provided participants with various perspectives from which to assess their landscape.

**The Country Programme Landscape Strategy**

During community consultation and participatory planning exercises, participants select desirable resilience outcomes for landscape management in four areas:

- ecosystem services and biodiversity;
- sustainable production systems;
- income generation; and
- strengthening of formal and non-formal institutional and governance systems at the landscape level.

These outcomes form the framework for the COMDEKS Country Programme Landscape Strategy. This comprehensive document is developed in each participating country through a community consultation process that delineates the landscape issues and the strategic approaches for community-based actions to achieve the chosen outcomes. These approaches guide the community selection of specific initiatives for direct grant funding. A fundamental premise of the UNDP approach is that community organizations select the concrete problems to be addressed as well as the responses that will be tested for potential adoption.

The enormous diversity of landscapes requires locally adapted solutions to meet the needs of stakeholders and the ecosystem functions on which they depend. The knowledge of local stakeholders has been developed through years of observation and experience with the management of natural resources and ecological processes. When this knowledge is combined with more systematic and scientific approaches, community organizations can identify innovations, test them and obtain replicable results. Based on an analysis of pilot initiatives, these innovations may be adapted for further experimentation by community organizations. Reflection on progress toward landscape-level outcomes allows community members to adjust activities and approaches as needed and use this information to inform new planning and action. Techniques and technologies that enhance resilience are developed and/or adapted locally by the organizations themselves; learning reliable systems of innovation is key to the process of community empowerment. The lessons learned are disseminated to all other stakeholders in the organization and across the network of organizations in the landscape and to policy-makers. Innovation, adaptation and the dissemination of the lessons learned and other knowledge gained is the essence of social learning and the basis of social capital and resilience.

**Box 2. Village mapping in India for collaboration and community empowerment**

As part of the consultation process, the COMDEKS project in India engaged community members in an analysis of the landscape and a village mapping exercise. The target landscape for COMDEKS activities in India is an area of approximately 50,000 ha located in the Kumaon Region, located in Uttarakhand, a mountainous state in the north of the country. This is an area where the interdependence of humans and nature is particularly pronounced.

A baseline assessment of the landscape was carried out in November 2012 through a stakeholder consultation workshop; additional field visits ensured community participation. An important part of the community consultation was a mapping exercise in each of the participating villages to list and locate the critical local natural resources and identify who had access to them. Input from village consultations and workshops informed the design of the COMDEKS strategy for India and subsequent grant-making. The main areas of concern emerging from the baseline assessment included the loss of productive land due to forest fires, soil erosion and threats from wild animals; soil and water degradation from industrialization; and a shortage of labour due to migration. Poor market linkages and lack of awareness of best management practices have also contributed to a loss of biodiversity and the economic hardships that residents face. Although time consuming, the mapping exercise provided an opportunity to involve a large number of men and women from the community, including those who have traditionally been marginalized. This built trust and strengthened relationships between facilitators and community members, and established a structure for shared decision-making and responsibilities.

## Lessons learned

Some initial lessons learned and recommendations have emerged from implementing the COMDEKS approach.

*Participatory landscape planning is a prerequisite for collective action and the development of social capital.* In COMDEKS landscapes, the community consultation process enables the development of participatory strategies that are negotiated by representatives from local communities. This process builds ownership and community capacity to work together for common goals, and guarantees a high degree of sustainability due to the knowledge and social capital generated. The use of the resilience indicators has proven particularly effective in providing a structure to discussions, allowing communities to better understand what resilience means in a specific landscape, and how it should be assessed. In



India, for example, the village mapping exercise, combined with the use of the indicators, contributed to community collaboration and empowerment, creating knowledge sharing and trust building.

*Landscape strategies address inter-related challenges at the landscape level and propose integrated economic, ecological and social solutions.*

When looking for ways to address global challenges — including poverty eradication, food security, climate change and environmental sustainability — concerted, holistic actions at

the local level are critical. Sectoral approaches are not sufficient. In each target landscape supported by COMDEKS, communities agree on long-term outcomes for multifunctional landscape management, including maintenance and enhancement of ecosystem services and biodiversity, more sustainable production systems and greater food security, sustainable livelihoods and increased household income, and stronger landscape governance. COMDEKS landscape strategies detail the changes and improvements communities wish to see. They also set out the plans that communities have for achieving their goals through local initiatives that they design, implement and evaluate, adapting as necessary to new conditions.

*Effective governance of production landscapes calls for formal or informal institutions that can represent multiple stakeholders with an integrated landscape plan.* In Ghana, for example, one important governance innovation has been the establishment of the Weto Platform, a consortium of civil society groups and traditional authorities who have agreed to work together to achieve integrated landscape governance. Successful governance of integrated landscapes does not necessarily require the establishment of formal state institutions at the landscape level; mechanisms that create connections and communities of interest across the landscape may be more effective.

*Knowledge sharing and dissemination of lessons learned is critical to scale up successful interventions at the landscape level and beyond.* Knowledge generation and dissemination are essential for building the adaptive management capacities of community organizations and for strengthening social learning through community organizations and landscape-level and sub-regional networks. Generating knowledge requires an accessible methodological approach to innovation, analysis of the experience and dissemination of lessons learned and good practices. This knowledge is based on locally specific evidence that can be transmitted from person to person and group to group across the landscape, and used to propose credible policy and programme reforms.



*Working at the landscape level requires long-term engagement and adaptive management.* Working at the landscape level and using a process of adaptive management entails long-term strategic engagement with communities, and a programme-based rather than a project-based approach. It must focus on participatory community-based learning by doing, and create an opportunity for multiple donors to collaborate in funding innovative and more strategic activities over a reasonably long period of time.

## Endnotes

1. With a contribution of US\$10 million from the Japan Biodiversity Fund, established within the CBD Secretariat, the COMDEKS Project is implemented by UNDP in partnership with the Ministry of the Environment of Japan (MOEJ), the Secretariat of the Convention on Biological Diversity (SCBD), and the United Nations University-Institute of Advanced Studies of Sustainability (UNU-IAS). See [www.comdeksproject.com](http://www.comdeksproject.com).
2. These include the GEF Small Grants Programme (SGP), the Community-Based Adaptation Programme and the Community Management of Protected Areas for Conservation (COMPACT) initiative.
3. Through support to community-based biodiversity management — ecosystems, species, plant genetic resources — and sustainable livelihood activities, the COMDEKS project contributes to achieving the objectives of the Convention on Biological Diversity and the implementation of the Aichi Biodiversity Targets adopted by the tenth meeting of the UN Convention on Biological Diversity Conference of the Parties (October 2010).
4. A problem tree analysis is a participatory method of determining all the known causes and effects of a specific problem.
6. See Bergamini et al. 2013. Since 2013, UNDP (through COMDEKS) has worked with Biodiversity International, the Institute of Global Environmental Studies (IGES), and UNU-IAS on a collaborative effort, under the International Partnership for the Satoyama Initiative (IPSI), to revise the indicators and develop a toolkit for the application of the Indicators of Resilience. The indicators toolkit is expected to be launched during the Fifth IPSI Global Conference (IPSI-5) and CBD COP 12 in October 2014.

7. Key biodiversity areas are identified nationally using simple, standard criteria, based on their importance in maintaining species populations.

### Reference

Bergamini, N., R. Blasiak, P. Eyzaguirre, K. Ichikawa, D. Mijatovic, F. Nakao and S.M Subramanian. 2013. *Indicators for Resilience in Socio-ecological Production Landscapes (SEPLs)*. Yokohama: UNU-IAS. [https://satoyama-initiative.org/wp/wp-content/uploads/2013/08/Indicator\\_SEPLs\\_EN.pdf](https://satoyama-initiative.org/wp/wp-content/uploads/2013/08/Indicator_SEPLs_EN.pdf).