

## How to preserve the multifunctionality of forested landscapes

The problems related to forests and their management are still tackled with rather conservative and sectoral approaches today – both in the global North and South. However, such isolated strategies cannot accommodate the competing interests of different stakeholders. The multiple functions and management practices of the different production systems and landscape elements are too intricately interlinked. Hence our authors call for a holistic approach and take various projects to show what counts in implementing such a landscape-based strategy.

By Zora Lea Urech, Kaspar Schmidt and Francisco Medina

Forested landscapes must satisfy different needs of different stakeholders in parallel, such as biodiversity conservation, timber production, water quality and quantity, protection from natural hazards, food security and economic development (e.g. tourism, mining, infrastructure). While in industrial countries, homogenous landscapes focusing on one function (e.g. on food production) dominate, in developing countries, smallholder farming systems often shape a small, scattered and still multifunctional landscape. The multifunctionality of such mosaic landscapes depends highly on the interlinkages between different resources and land uses that constitute the landscape, each with a different value to different stakeholders. The current efforts of development cooperation try to preserve and promote this multifunctionality of landscapes in developing countries in order to improve the resilience of local people's livelihoods, supporting ecosystems and inclusive socio-political systems.

The increase and decrease of forested areas are directly linked to other land uses in a landscape. Globally speaking, forests are under increasing pressure because other land uses – particularly agricultural and pastoral land uses – are expanding into forested areas. Direct monetary benefits from agriculturally managed areas are in most cases much higher than the benefits resulting from an intact forest – at least on the short term. But forests and the environmental services they provide are directly linked to other production systems and landscape elements and thus have to be considered as an integrated element of a multifunctional landscape. Research results from India, for instance, show that the richness and density of native trees in a landscape (they should be neither too abundant nor too scarce) influence the pollination of coffee plants by bees and, ultimately, coffee production.

The great challenge to conserve or even strengthen the multifunctionality of forested

landscapes is to integrate competing interests of different stakeholders within one landscape. In the end, local populations often suffer most from the conflicts resulting from these different competing interests: those communities who directly or indirectly depend on forest services and products, but also have to secure their food and income. It is therefore essential that the use and management of forests is integrated into an overarching strategy and vision at the level of a landscape or a jurisdiction – referring to the related jurisdictional approach that puts more emphasis on the organisation of governance in space – and that this strategy and vision is framed by applying essential good governance principles such as equity, transparency and participatory decision-making. The following examples illustrate how this can be done successfully.

### Participatory management of forested landscapes in the Bhutanese Himalayas

Pitched on the Eastern Himalayas, Bhutan has a high forest cover and is home to a great diversity of different forest types from lowland subtropical forests, through broadleaved and pine forests to mixed conifer and subalpine fir forests. The landscape of most of the country's valleys is dominated by forests intermixed with pastures, agricultural land and mostly scattered settlements. Given the steep terrain, forests assure essential ecosystem services such as soil conservation and provision of water both for adjacent as well as for downstream communities. They are also an important source of construction material, fuel and a broad range of non-timber forest products for local communities and the national economy. Moreover, they are key to the conservation of biodiversity as a global common good.

Bhutan takes pride in its efforts and success in nature protection. Over the past decades, sus-

A forested landscape in a high-altitude valley in Western Bhutan.

Photo: Sabine Nebel



tainable forest management including the use and marketing of forest products and services has become more important in the context of the modernisation and economic development which aims at contributing to Bhutan's development vision of gross national happiness. The country has pledged to remain carbon neutral and is developing its hydropower capacities. Forests are highly relevant for these policies as a carbon storage option with the potential for further carbon sequestration and for the provision of essential ecosystem services – such as water – for hydropower production.

Given these assets and various groups of beneficiaries of forest products and services with partly competing interests, Bhutan has applied diverse approaches to forest governance and management. Until the 1980s, the forestry sector was highly centralised. The central government was the dominant agent in the sector. However, the central forest agency faced significant challenges ensuring effective forest protection and management alone across the country. The centralised model also led to conflicts with local communities who had been deprived of their forest use rights with the nationalisation of forests in 1969. Since the 1990s, Bhutan has moved significantly towards a decentralised organisation of forestry and more people-oriented forest policies while keeping forests under state ownership.

Since the mid-1990s, with the support of the Swiss Agency for Development and Cooperation (SDC), other donors and Helvetas, Bhutan has developed its own approach to community forestry. Today, hundreds of local communities are involved in forest management across the country. The decentralisation of agriculture and forestry, the build-up of an inter-disciplinary extension service for agriculture, livestock and forestry and the process of democratisation that gave local communities more say in decision-making processes on natural resources have greatly facilitated this change towards more people-oriented ways of managing forests. Applying key good governance principles such as subsidiarity, participation of key actors including local people and governments in decision-making and working across sectors helped to develop and establish new policies and systems like the National Community Forestry Strategy (2009) or the National Forest Policy of 2011 and corresponding enabling national laws and regulations. These allow the integration of local, national as well as global interests in the conservation and sustainable management of the valuable forest resources of Bhutan and provide important entry points for broader resource management at the landscape level.

### The significance of forests: a question of perception

What comes to your mind first if thinking of forests? In Swiss society, timber production, protection from natural hazards, biodiversity and recreation are amongst the most frequently mentioned benefits of forests. At the global level however, the most important forest services might be carbon storage and sequestration and biodiversity conservation. But forests provide a much wider diversity of products and services from which societies indirectly or directly benefit. This diversity and society's perception about the significance of forest products and services vary from country to country. Also within a country, perceptions differ significantly between different interest groups, even among different communities living within a forest, near to or far from a forest.

A study in Eastern Madagascar, for instance, analysed how the perception about forests and forest resources changes according to the distance from the village to the next forest. Village communities living close to a forest give significantly more weight to the function of the forest as a land reserve for agriculture than to direct products and services even though they use a wide range of forest products to cover their daily needs (e.g. as food, medicine, for construction). Many households of these villages are not aware of the finiteness of the forest, as it has always been there close to their village.

### Sustainable management of forests and landscapes in the Andes

Similar to forests in the Himalayas, mountain forests in the Andes provide a wide range of services and benefits to local communities and many other stakeholders. The Andean Forests Programme is a regional initiative to support Andean communities in adapting to climate change and to ensure the continuity of social, economic and environmental benefits provided by Andean forests in the long run. Established in 2014, the programme works closely with government agencies at different levels, communities, research, the private sector and other stakeholders in Colombia, Ecuador, Peru, Bolivia and Chile. It is funded by the Global Programme Climate Change and Environment of SDC and facilitated by a consortium comprising Helvetas and Condesan (the Consortium for Sustainable Development of the Andean Ecoregion).



Rice fields in a multifunctional cultural landscape in Eastern Madagascar. Photo: Silvia König

Their focus is much more on the establishment of their fields for crop cultivation to assure food security, and households can still easily access forest services and products. However, households in villages situated a few hours walking distance from some of the same forests which have been cleared during the last decades are already aware of the consequences of forest decline. Families in the latter communities mentioned that they had already experienced decreasing quality of water required for daily needs and above all the decreasing availability of forest products for house constructions, medicine or food during lean seasons. They are therefore aware of the importance of forests and trees as elements in their agriculture-dominated landscape. But forests have gone and land for reforestation has become too scarce.

The programme promotes collective learning amongst stakeholders in managing forested landscapes by applying new approaches and demonstrating their impact on so called "learning sites" across the Andes. One of these is located in the Department of Apurímac in Southern Peru. Since 2015, the stakeholders from Apurímac have identified the main problems and challenges in the Andean forest landscape in a participatory diagnosis, compiled relevant experience and developed best practices and recommendations for measures to improve landscape management together with the community of Kiuñalla. The measures promoted were the use of solar panels and improved stoves to reduce firewood consumption, the recovery of natural pastures, and the sustainable management and restoration of communal forests. In addition, the programme supported the elaboration of forest fire risk management plans, the protection and recovery of water sources for rural and adjacent ur-



Local people working on a "cocha", a local water reservoir, in Apurímac, Southern Peru.

Photo: Andean Forest Programme

ban areas and the drawing up of the Department of Apurímac Forest Development Plan.

At the national level, the programme has fostered government agency awareness of local initiatives in order to design more inclusive and pertinent forest management policies. In these ways, the Andean Forests Programme has been supporting the elaboration and implementation of new forest management approaches and public policies concerning Andean forests. The vision of a sustainable landscape management with its intersectoral articulation (environment, agriculture, water) at multiple levels (communal, sub-national and national) has been a key element to illustrate the implementation of national public policies at the local level and to show concrete examples of

effective improvements at the landscape level that are recommended for replication in other areas in the Andes.

Forests can no longer be seen as an isolated element in a landscape simply because they are not isolated, and the many services forests provide unfold through interactions with multiple management interventions in the broader landscape. To develop a strategy at a landscape level, however, complex processes are necessary. For the smooth facilitation of such processes, an in-depth analysis of often complicated situations and wicked problems is required in order to understand the different perspectives among different actors with differing interests, claims and influence and power. The identification of compromises and

solutions calls for their being addressed in a concerted way, thus based on participatory and multi-actor discussions that take into account the interests of local communities, the private sector, the public sector, civil society and governments. This requires time, resources, and high moderation skills – much to invest, but much to benefit, too.

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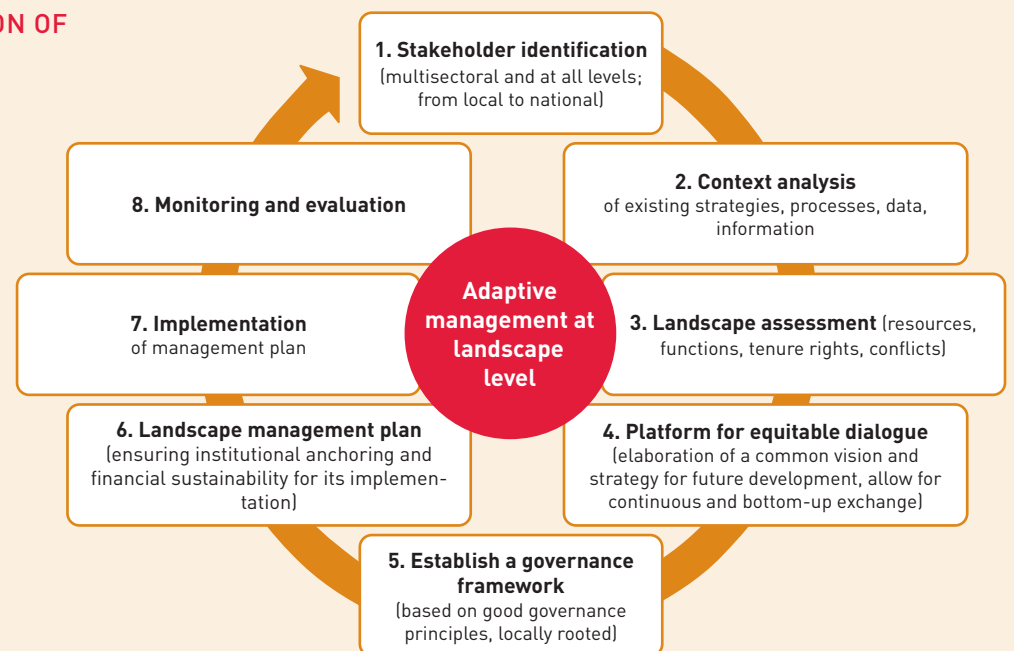
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## EIGHT STEPS FOR THE IMPLEMENTATION OF A LANDSCAPE APPROACH: THE CASES OF MACEDONIA AND MADAGASCAR

The process of implementing a landscape approach in multifunctional forested landscapes always needs to be adapted according to the individual context, and the concrete objective, as the examples of two Helvetas projects show:

In **Macedonia**, the concrete aim is to establish a large-scale protected area (International Union for Conservation of Nature/IUCN category V: protected landscape) managed by the state forest services, which shall consider the interests of the logging industry, hydropower companies, mining companies, hunters, three different municipalities, conservation NGOs, tourist development, and civil society. In **Madagascar**, the entry point is sustainably sourced cacao, where the cocoa-sourcing companies have a particularly important role.

Based on long-term experiences in different countries, Helvetas generally follows the eight steps illustrated in the Figure, also in the concrete cases of Madagascar and Mace-



donia. In both cases it is essential to have a strong data base, context knowledge and understanding of different perspectives in order to develop different scenarios that are convincing to a diverse range of actors. In Macedonia – with its centralised governance mechanism – it is significant to find a com-

promise with authorities from the forestry and mining sector in order to avoid economic disadvantages. In comparison to this, in Madagascar it has remained an essential challenge for decades to find incentives for local farmers to reduce deforestation and establish locally rooted governance mechanisms.