



Co-Management of Rangelands in the Hindu Kush-Himalayas

Using collective wisdom and collaborative action to cope with challenges

INFORMATION SHEET #7/09

Rangelands are the single largest ecosystem in the Hindu Kush-Himalayan (HKH) region, covering over 60 per cent of the land area. Rangeland resources are used in multiple ways and provide significant ecosystem products and services to multiple users, but there is increasing concern about their vulnerability and present day impacts. Collective wisdom and coordinated efforts are required to effectively manage these resources and ensure the continued supply of ecosystem products and services. ICIMOD, together with its partners, promotes the co-management of rangelands in the HKH region through community mobilisation, institutional set up, and policy inputs.

The rangelands in the Hindu Kush-Himalayan region have been supporting pastoral livestock production for thousands of years. Livestock provide a large part of the livelihoods of the people of the region, especially the poor, including high protein food, and materials for clothing and shelter. It is increasingly recognised that rangeland ecosystems also provide significant services and benefits that go far beyond livestock production. Rangelands provide people in the region and downstream with a wide range of non-grazing rangeland products and services (NGRPS) for recreational, educational, and socioeconomic uses, such as open areas, fresh air, beautiful scenery, and diverse genetic resources. Moreover, especially in the HKH region, rangelands play a very important role in the storage, regulation, and provision of water; sequestration of carbon both above – and below – the ground; and stabilisation of soil, nutrients, and the climate. These rangelands also foster a great diversity of cultures.

The rangelands in the greater Himalayan region have been shaped and maintained by physical forces and human use over millennia, but they are threatened by the current changes. About 90 per cent of China's rangelands are degraded, and it is likely that similar figures apply across the region. The future functioning of the rangelands and provision of ecosystem services will depend on how people today perceive and manage the rangelands within a changing environment and process of globalisation.

What are rangelands?

Rangelands in the Hindu Kush-Himalayan region means the type of land which is suitable for grazing by wild or domesticated animals, and is maintained as a quasi natural ecosystem with the predominant vegetation either grass alone or grass together with shrubs and scattered trees.



Multiple Stakeholders

The main users of the Himalayan rangelands are pastoralists (from purely nomadic to semi-transhumant), who depend entirely or partially on livestock production for their livelihoods; but there are many other people and organisations who have rights and interests in the use and management of rangeland areas. State governments, who are usually the actual owners of the land, assign different ministries or departments to take care of sectoral management. For example, a livestock department in a ministry of agriculture may have a mandate to maximise livestock production from the rangelands, whereas a ministry of environment (and forest) is likely to be responsible for conserving the rangeland ecosystems and biological diversity. Other stakeholders include representatives of industry and entrepreneurs, development workers, travel agencies, tourists, collectors of non-grazing rangeland products, and conservationists involved in rangeland management. The multiple stakeholders include others who are concerned about, have an impact on, or benefit from the rangelands.

Not only do the rangelands have multiple users, they are also highly variable in terms of the products and ecosystem services that they provide as a result of the variation in water and heat resources in different areas. Another challenge is the fact that land tenure over grassland ecosystems, especially in developing countries, is often characterised by competition or even conflict between customary and statutory systems, which compounds the problems resulting from the pressure exerted by increasing populations and a changing environment.

Co-Management of Rangelands

The complexity of rangelands, multiple uses of rangeland resources, and co-existence of multi-stakeholders suggests the need for an effective mechanism that enables collective action in their management as well as for adaptable management mechanisms that can respond to ecosystem variability and maximise the desired outputs for all concerned. A cooperative management system is required that facilitates efficient, equitable, and sustainable use of rangeland resources. There are

Co-management is

“...a situation in which two or more social actors negotiate, define and guarantee among themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or set of natural resources.”

(Borrini-Feyerabend et al. 2000)

a number of key terms emerging in different parts of the world to define this new management system such as ‘adaptive management’, ‘joint management’, ‘grassland-based cooperatives’, ‘livestock-oriented cooperatives’, ‘collaborative or co-management’, ‘community-based natural resource management’, and so on. Of these, the last two are the most widely accepted and practised worldwide.

Co-management is an open-ended process through which multiple stakeholders negotiate, monitor, and revise their respective actions through 'learning-by-doing'. The co-management of rangelands comprises both the participation of the concerned parties, and active requests to key actors to achieve a consensus on a blueprint for the future and to agree upon their actions and the sharing of benefits, as well as information flows and monitoring mechanisms.

The co-management approach ensures the fair allocation of tasks by involving the key parties concerned throughout the process. It provides for the exchange of technologies and available resources when needed, facilitates the linking of different types and levels of organisations for collective wisdom and collaborative action, enables a reduction in transaction costs and the disentangling of information flows, shares the risks between stakeholders in the context of a highly variable and changing environment, and provides a platform for conflict resolution and power sharing (Carlsson and Berkes 2005).

ICIMOD's Rangeland Co-Management Initiatives

The need for co-management of in the Hindu Kush-Himalayan region HKH rangelands is becoming ever more evident as a result of the increasing complexity resulting from the demand for higher economic returns, growing concern about the significance of rangeland ecosystem services, and the changing environment and increased climatic variability. ICIMOD has been working in rangeland management since the mid-1990s.

The need for co-management of HKH rangelands is becoming ever more evident

Researchers have used a participatory action research approach to help communities gather information, carry out situation analyses, discuss strategies, and monitor action processes, together with other stakeholders. At the same time, ICIMOD has been working at the policy level, advocating to relevant ministries and departments at national and local levels that they incorporate co-management into policies and provide pastoral communities with more responsibilities in managing rangelands.



Successful co-management activities

Examples of successful co-management activities include Upper Mustang in Nepal, where an acute shortage of forage led to a breakdown in traditional winter-spring and summer-autumn pasture systems. The disordered use of seasonal rangelands exacerbated the shortage, especially during winter and spring, and increased conflicts between households and village development committees (VDCs). ICIMOD and local partners supported the formation and functioning of pasture management sub-committees (PMSCs) at the VDC level. These committees built three-dimensional participatory models and brought the villagers together to use the models to jointly define boundaries between VDC areas and seasonal pastures. The villagers nominated the PMSCs to monitor and enforce these commonly agreed regulations. They also started to grow fodder and forage species for supplementary feeding for livestock in winter.

Similarly, in the sparsely populated Chiang Tang Plateau in the northern Tibet Autonomous Region (TAR) of China, ICIMOD and its partners documented and provided support to local initiatives for the collective management of livestock and rangelands in Nima county and adjacent areas, after the livestock and rangelands had been allocated to individual households. Through collaborative arrangements, local herders helped each other to graze livestock on the vast but low productive rangelands; they managed to sell their livestock products at markets hundreds of kilometres away and bring back household and other goods at reasonable prices; they organised a surplus labour force to work in local infrastructure construction and factories; and they gathered regularly to share information and discuss new issues. People in these collectively organised communities were able to live well above the poverty line. Locally organised communities are also in a better position to talk to, and obtain support from, local conservation authorities in fencing their winter pastures so as to minimise the otherwise acute livestock-wildlife conflicts.



Influencing policy

Based on community-level experiences, ICIMOD supports the development of rangeland policy and set up of institutions for the co-management of rangelands in the region. ICIMOD has been officially involved in national rangeland policy formulation in Nepal and Pakistan. In addition, ICIMOD and its partners supported the establishment of the Rangeland Co-management Committee in Sichuan, China, consisting of representatives from research institutes, local government, local industry, and communities. Co-management as an approach has also been articulated in the Ladakh 2025 Vision Document, through the efforts of ICIMOD and its partners.

Further reading

Borrini-Feyerabend, G; Farvar, MT; Nguniguiru, JC; Ndangang, VA (2000) *Co-management of natural resources: Organising, negotiating and learning-by-doing*. Heidelberg: Kasperek Verlag (GTZ and IUCN)

Carlsson, L; Berkes, F (2005) 'Co-management: Concepts and methodological implications'. *Journal of Environmental Management* 75(1):65-76

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