8. ENHANCING ECOLOGICAL AND PEOPLE'S RESILIENCE: IMPLEMENTING THE CBD'S ECOSYSTEM APPROACH IN THE HINDU KUSH-HIMALAYAN REGION

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INTRODUCTION

The Hindu Kush-Himalayan Region (HKH), extends across the eight countries of Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal and Pakistan, and is a globally acknowledged biodiversity-rich area, represented in eight of the nine global conservation priority templates (Brooks et al. 2006). The services coming from the diverse ecosystem types cater to more than 200 million people in the region, and some 1.3 billion people in the downstream river basins. In the HKH, the ability of biodiversity to provide a diversity of goods and services has been influenced by synergistic impacts from a range of anthropogenic disturbances such as habitat degradation, habitat fragmentation, over-extraction of resources for economic benefits, and several other drivers of change such as land use cover change, climate change, globalisation, poverty, and demographic changes. Thus the task of biodiversity management with regard to enhancing the resilience of ecosystems and the wellbeing of people is becoming complex; and the conventional means of protecting biodiversity within the confines of protected areas (PAs) is constantly being challenged by rapidly degrading habitats outside PAs and even within some PAs.

IMPLEMENTING THE ECOSYSTEM APPROACH IN THE HKH

Biodiversity conservation is a national priority for all the eight countries sharing the HKH, and all are signatories to the Convention on Biological Diversity (CBD). As an immediate measure for protection of biodiversity in the HKH, the eight countries have together allocated more than 39% of their most biologically rich terrestrial lands into 488 PAs (Chettri et al. 2008). Over the years, biodiversity management in the HKH has advanced its focus towards integrated conservation approaches that safeguard ecosystem functions and services and respect people's dependence on the biodiversity for their livelihoods. The ecosystem approach endorsed by the sixth meeting of the Conference of Parties to the CBD is the type of management strategy that aims to synergise biodiversity conservation with sustainable utilisation for the benefit of people (CBD 2000). In the HKH, the CBD's ecosystem approach has been adopted to influence landscape-level regional (transboundary) biodiversity management (Sharma and Chettri 2005), which has led to the identification of east-west transboundary landscapes, and four north-south trans-Himalayan transects across the region as shown in Figure 1 (Chettri et al. 2009). These developments require managing ecosystems 'beyond borders', improvising upon a variety of existing biodiversity management interventions to enhance the ability of a larger landscape matrix and increase the resilience of ecological and human socioeconomic systems (Chettri et al. 2010). The ecosystem approach has also been the basis for development of corridors and connectivity, especially for restoring habitat contiguity between the mosaic of protected area habitats and allowing spatial flexibility for species distribution shifts along elevation gradients and horizontally (Chettri and Shakya 2010).

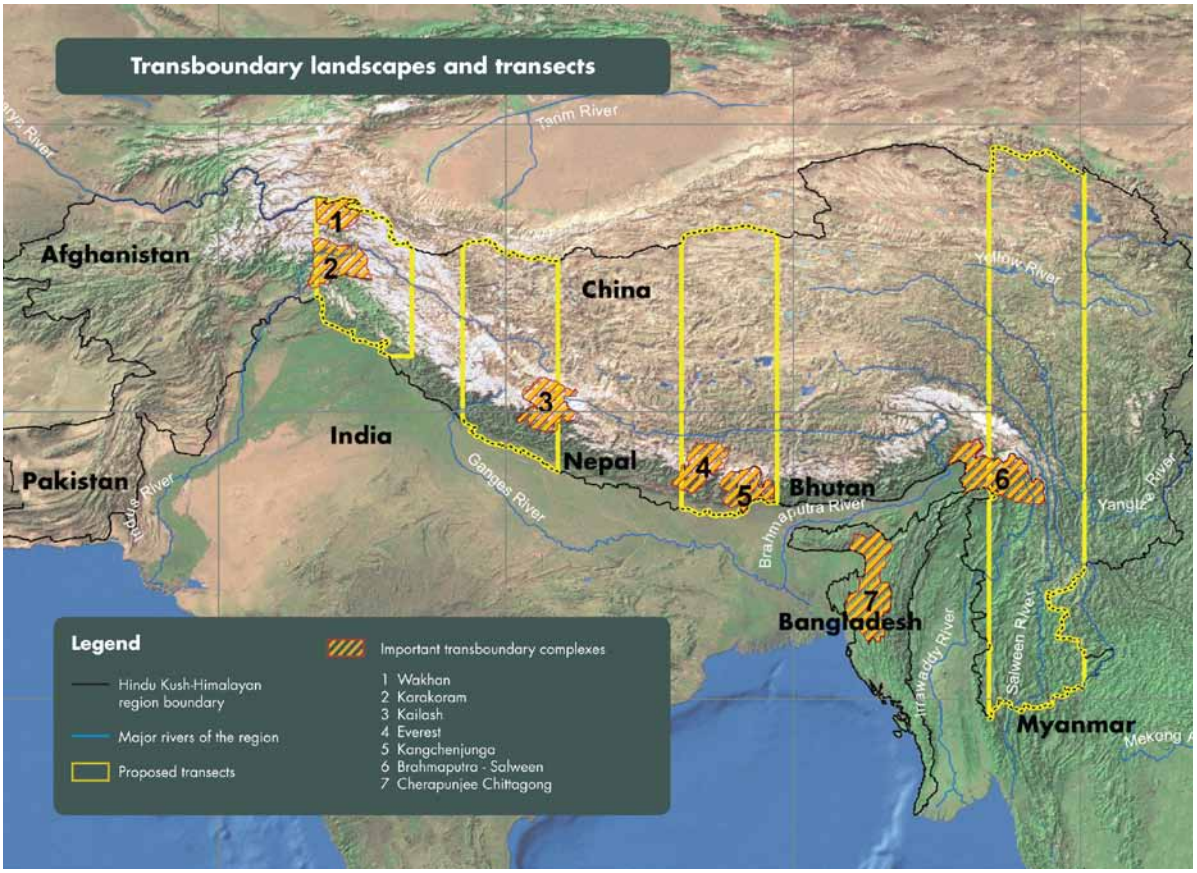

FIGURE 1: Six transboundary landscapes and four trans-Himalayan transects to facilitate the ecosystem approach in the HKH region.

RESTORING HABITATS TO ENHANCE ECOSYSTEM-BASED ADAPTATION

The ecosystem-based adaptation being promoted in the HKH through adoption of the ecosystem approach embodies the landscape-based solutions to reduce biodiversity vulnerabilities to climate change and other drivers by monitoring changes at larger scales, by managing a comprehensive representative reserve system, by developing connectivity between ecosystems, by restoring natural vegetation, and by benefiting people and building their socioeconomic resilience. It tends to consider both ecological and societal aspects of adaptation in a holistic way advancing both biodiversity and natural resource management and the socioeconomic adaptation for people. The ecosystem-based adaptation framework in the HKH emphasises adaptation as an interdisciplinary issue, and considers coordinated policy, management and capacity and knowledge development interventions at the landscape level as indicated in Figure 2. Ecosystem-based adaptation also provides a useful policy solution at the regional level bringing out synergies among climate change adaptation, biodiversity conservation and management, and sustainable development across the landscape (Sharma et al. 2010).

One of the prominent features of the ecosystem approach is the restoration of habitats outside the PAs so that both natural and managed ecosystems are brought within the biodiversity management framework, including agroforestry land, agricultural land, plantation forests, areas with wildlife corridors, and areas of cultural diversity, which maintain a significant genetic diversity. This integrated conservation approach has successfully advocated the establishment of habitat linkages or corridors among the scattered protected

areas in the HKH region, not just to manage the contiguous ecosystem in its entirety, but also to support livelihoods of communities by involving people in the maintenance and use of the biodiversity resources in the corridor areas (Chettri and Shakya 2010). The multiple use habitats restored outside PAs in the form of conservation corridors provide an opportunity to establish well-functioning ecosystems across the landscape by interlinking PAs, by restoring degraded habitat outside PAs, by keeping the natural vegetation intact, by facilitating the movement and dispersal of many species of plants and animals, and by considering people's rights over the use of resources for their livelihoods. They also provide an opportunity to involve a multitude of institutions and people across the cultural and national fabric to promote biodiversity management across the larger landscape.

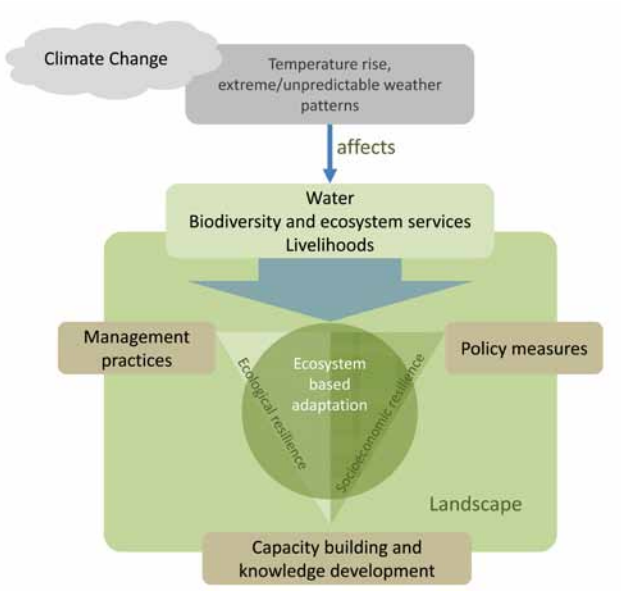

FIGURE 2: Schematic diagram to facilitate ecosystem based adaptation through implementation of the CBD's ecosystem approach at the landscape level

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