part one
conservation of hkh mountain ecosystems and sustainable development

Introduction to Part 1

Conservation of Hindu Kush-Himalayan Mountain Ecosystems and Sustainable Development

The Hindu Kush-Himalayan (HKH) Ecoregion is highly diverse biologically, in terms of ecosystems, species, and genetic resources, due to extreme altitude differences and associated changes in climate and soil conditions, which create a vertical zonation in natural vegetation. There are many rare and endemic species to be found there. The eastern Himalayan region, influenced by a tropical monsoon climate, has the richest biodiversity of all the Himalayas and has been recognised as one of the 10 most biologically diverse areas in the world. This biodiversity is a substantial resource for the human population in this region, providing the basis for their survival through agriculture, animal husbandry, forestry, and industry; hence long-term, sustainable use of these biological resources is vital.

This part of the book examines several important aspects of biodiversity conservation in the region and provides a useful general background for the more specific parts of the book that follow. The first part gives a detailed overview of the HKH Ecoregion and its biodiversity; it addresses the reasons for conserving this biodiversity as well as the factors causing its decline. It also describes the important role of the International Centre for Integrated Mountain Development (ICIMOD) in this conservation. The second part focuses on the HKH member countries and local people as the main stakeholders of and important contributors to biodiversity conservation in the region, using examples to illustrate this. Pidaung Wildlife Sanctuary is introduced as a case study to illustrate how management can be improved to protect and conserve biodiversity and the importance of local people's participation in the successful management of the sanctuary. The third part discusses the unique biodiversity of the Grand Canyon of the Yarlung Zangbo River, located in the Qinghai-Tibetan Plateau in the eastern Himalayas. The diversified climates of the plateau and the moisture passage created by the grand canyon of the Yarlung Zangbo River splitting the south-eastern Qinghai-Tibetan Plateau (through which warm, wet air flows from the Indian Ocean and reaches the inner part of the plateau) give rise to a rich ecosystem and species' diversity, which are detailed in this part. The final part focuses on advances in bidioversity research and networking in the HKH Ecoregion. The concept of the Qinghai-Tibetan Plateau as a

'new animal geographical area' is discussed and the evolution of flora and fauna to adapt to the harsh environmental conditions of the region is considered, with examples. Also addressed is the future of research into biodiversity in the region, which is hampered currently by a lack of funds, facilities, and personnel. Using the example of China, the benefits of research networks, which integrate national parks and reserves with research stations, is examined.