

Part - A

Proceedings

INTRODUCTION TO THE WORKSHOP

Protection of mountain areas is a growing concern. In the instruments adopted at the United Nations Conference on Environment and Development (UNCED 1992), Chapter 13 of Agenda 21, mountains are defined as: "*important sources of ...biological diversity*" and "*storehouses of biological diversity and endangered species.*" The great wealth of biological diversity is due to the wide variety of environments existing in the mountains, particularly in the Himalayas.

The Hindu Kush-Himalayan (HKH) region is host to the world's highest ecosystems. The region extends over 3,500km and consists of different types of environment. These mountain environments are extremely rich in biodiversity because of the varied altitude, climatic conditions, geological-biophysical conditions, and soil formations. Historically, human interactions with mountain environments have further enriched the biodiversity, in particular the distribution patterns of plants, animals, and genetic diversity. For example, a long list of medicinal materials can be found in the higher mountains, and these provide actual and potential benefits. This fact is illustrated by an annual fair held in Dali in Yunnan province, China, where as many as 550 species of medicinal herbs and hundreds of food plants are traded by the mountain people. The conservation of this biodiversity through sustainable use also improves the standards of living and the cultural diversity of the existing population. The *Bai*, *Yi*, *Naxi*, *Tibetan*, *Lisu*, and *Lahu* are among a few of the ethnic groups who visit this gathering.

The Global Convention on Biodiversity (1992) called on participating nations to cooperate and undertake measures to promote the conservation of biodiversity in order to ensure the sustainable use of its components and a fair and equitable distribution of the benefits accruing from the use of its resources. It should be noted that biodiversity conservation is accorded high priority in the HKH regional member countries (RMCs), namely, Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Many areas have been demarcated as protected areas, and innovative participatory approaches to development and conservation, which are the most progressive in the RMCs of the HKH region, are being implemented. However, the challenges are immense; conserving the natural and cultural heritage and, at the same time, livelihoods require continued commitment and increased efforts as well as regional collaboration.

As the first international centre for mountain environment and development, ICIMOD made an important contribution to the background document and the chapter on mountain ecosystems

for UNCED--Agenda 21. The world's attention was thus drawn to the 3,500km Hindu Kush-Himalayan region with its 120 million inhabitants, which is ICIMOD's special focus. In ICIMOD's Regional Collaborative Programme for the Sustainable Development of the Hindu Kush-Himalayas, an overall workplan has been formulated for its 1995-96 programme activities which accords high priority to the conservation of natural resources and biodiversity in the Hindu Kush-Himalayan region. More recently, as part of an effort to improve biodiversity conservation from a national perspective, several countries in the region introduced action plans on national biodiversity or similar programmes that respond to the commitments made by them to their mountain ecosystems. Biodiversity concepts consider an ecosystemic approach in a broader geographic context, which is also essential for further conservation, and Agenda 21 reinforces that concept by devoting a full chapter (13) to *Fragile Ecosystems: Sustainable Mountain Development*.

In response to the Global Convention on Biodiversity, ICIMOD is planning to play an active role in the field of biodiversity in the HKH region. Since May 1995, ICIMOD has been preparing a programme on '**Biodiversity Assessment, Monitoring and Management in the HKH Ecosystems**' for regional collaboration. The regional ICIMOD-coordinated programme was to be complementary to and in support of the national programmes and was to involve two main activities.

- State-of-the-Art Reviews of Biodiversity Conservation and Management
- Organisation of a Regional Consultation on Biodiversity for further development of the programme

The main purpose of the State-of-the-Art Reviews was to recommend a Regional Collaborative Programme on Biodiversity Assessment, Monitoring and Management by considering the priority issues for the mountain areas of the HKH region; a region that includes parts of Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Based on the reviews, the needs of each country will help to identify the existing knowledge base and, therefore, the areas to be given high priority in future. On the basis of available information and in consultation with other biodiversity experts, the state-of-the-art review papers were prepared towards the end of November 1995 by authors from the member countries of the HKH region. The review papers highlighted the main issues involved in biodiversity conservation and management in the countries of the HKH region and focussed on mountain ecosystems with updated information, data, and maps on biodiversity.

Against this background, the Regional Consultation on Biodiversity Assessment, Monitoring and Management in the HKH Region was organised from December 19 to 20, 1995, at ICIMOD in Kathmandu. The workshop was action-oriented and had three interrelated objectives.

- i. To exchange and share information on biodiversity conservation in the mountain ecosystems of the HKH and improve the existing knowledge and understanding to ensure better collaboration on the subject in the region
- ii. To assess and discuss the State-of-the-Art Review papers prepared by experts from the regional member countries
- iii. To provide a forum for the discussion and development of a medium-term work programme for regional collaboration on biodiversity in the HKH

The workshop brought together 22 participants from eight countries in the HKH, as well as from international agencies such as World Wildlife Fund (WWF), International Union for the Conservation of Nature (IUCN), World Conservation Monitoring Centre, based in London, UK (WCMC), ICIMOD, and the authors of the State-of-the-Art Review papers.

INAUGURAL SESSION

Opening of the Workshop

The inaugural session of the workshop was chaired by **Mr Egbert Pelinck**, the Director General of ICIMOD. In his opening address, Mr Pelinck emphasised the importance of an action plan for sustainable mountain development which gives priority to biodiversity conservation and management. The pressing needs to preserve diverse species, ecosystems, and genetic resources and to take the opportunity for sustainable use of varied biodiversity resources were crucial for improving the livelihood of mountain communities in the HKH region. Mr Pelinck briefly reviewed the travelling seminars conducted by ICIMOD since May 1995 in some of the regional member countries. From these activities, ICIMOD had become convinced that sharing information and knowledge in the area of biodiversity was important, and that a regional consultation on biodiversity should be organised through ICIMOD's regional collaborative programmes. Finally, Mr Pelinck highlighted the current activities of ICIMOD's programme on biodiversity in the regional context and perspective involving a: i) review and assessment of the state of biodiversity in the region; ii) development of a framework for assessing and monitoring changes in the biodiversity of the HKH mountain ecosystems; iii) field/community-based case studies

on biodiversity resources' management and indigenous knowledge; and iv) the organisation of regional exchange sites and meetings to discuss the findings and identify long-term programme priorities for the preservation of biodiversity, genetic resources, and indigenous knowledge in the mountain areas.

Following the welcome speech, **Professor Pei Shengji**, Workshop Coordinator and Coordinator for ICIMOD's Biodiversity Programme, gave an introduction to the ICIMOD Programme on Biodiversity Assessment, Monitoring and Management in the HKH Region. He also described the preparatory activities carried out so far and the objectives and agenda of the workshop.

SESSION ONE

Review of Biodiversity Conservation and Management in the Hindu Kush-Himalayan Region

The first Technical Session included a 'Review of Biodiversity Conservation and Management in the Hindu Kush-Himalayan Region' and consisted of country reports from the regional member countries, namely, Afghanistan, Bangladesh, China, India, Myanmar, Nepal, and Pakistan.

The seven country presentations on the state-of-the-art of biodiversity and management were made by authors from the regional member countries. The country reports gave an overall review of the current state of biodiversity in each country. They contained updated information and data on biodiversity conservation, both *in situ* and *ex situ*; inventories; national action plans; biodiversity legislation; institutions dealing with biodiversity programmes; and ongoing activities involved in biodiversity conservation and management. The reviews also pinpointed the gaps in research and information databases on biodiversity in the respective countries. Recommendations were made. Comments on the country review papers made during the discussions were positive and informative. It is important to note that these systematic country reviews on biodiversity are the first to have been undertaken with a mountain focus in the nations of the HKH region. Suggestions on additional development and the need to include relevant maps/charts/tables on vegetation, distribution, and inventories on biodiversity in the country review papers were also made.

Technical Session One was chaired by **Professor Pei Shengji** during the first half. The second half was chaired by **Professor T.N. Khoshoo**. The titles of the papers and the names of their authors are given in the Workshop Agenda in Annex 1. The papers are given in their entirety in Part B of this report.

SESSION TWO

Issues of Biodiversity Conservation, Monitoring and Management in the Hindu Kush-Himalayan Region

This session was chaired by **Dr Tirtha M. Maskey**. Five presentations were made during this session by participants from international organisations and national institutions involved in biodiversity and nature conservation.

Mr Donald Gordon of the WCMC presented a paper entitled 'Towards a Framework for a Biodiversity Information Management System for the HKH Region: Integration and the Role of an Information Cooperative'. Mr Gordon highlighted the activities carried out by WCMC in biodiversity information development and its role in sharing information with decision-makers. He pointed out that capacity-building was an essential component of information networking and presented a broad overview of the process of information networking, the management and use of environmental information and data, and the steps involved in sharing information. He pointed out that the WCMC was involved in supporting programmes at the national level, that all the information was available on Internet, and that it focussed on national capacity-building. His presentation also provided details on Biodiversity Information Management Systems and how these could be useful for a regional collaborative programme in the HKH region.

A presentation was also made by **Mr Mingma N. Sherpa**, WWF Country Representative for Bhutan and Nepal, on 'Biodiversity Conservation in Bhutan'. **Mr Saeed-uz Zaman**, Deputy Project Manager of the Global Environmental Facility (GEF) Project, IUCN, Pakistan, spoke about the approaches of the IUCN Biodiversity Conservation Programme in Pakistan. **Mr N.G. Nair**, Director of WWF India, presented an overview of 'Biodiversity Conservation in India—WWF Approaches', and **Dr T.B. Shrestha**, Coordinator of the Biodiversity Conservation Programme for IUCN Nepal, highlighted the involvement of IUCN in Nepal since 1983. The presentations highlighted the current programmes on biodiversity and approaches in Bhutan, Pakistan, India, and Nepal, covering the wealth of biodiversity and institutional development for conservation in Bhutan; the operation of a GEF-funded project in northern Pakistan, which is spread over a 75,000sq.km. area in the mountains and involves people's participation; biodiversity as the central theme of the WWF India and the 'hot spots' under study in the Western Himalayas through people's participation; and database establishment for heritage sites as well as for inventory purposes and ecotourism development in Nepal. The Chairperson for the session, **Dr T.M. Maskey**, said that the roles

played by WWF and IUCN in conserving biodiversity through the development and management of information were vital, and that the experiences gained from these activities would definitely be useful for future collaboration on biodiversity conservation and management from a regional perspective.

The papers presented in Technical Session Two are given in Part C of this report.

SESSION THREE

The third session of the workshop was organised into two different groups. The groups discussed common issues of biodiversity conservation and management in the HKH region. The first half of the session was chaired by **Professor Pei Shengji** and then two working groups were formed.

Working Group I discussed 'Biophysical Aspects of Biodiversity Conservation and Management for Collaboration in the HKH' and Working Group II discussed 'Socioeconomic Aspects of Biodiversity Conservation and Management for Collaboration in the HKH'.

The second half of this session consisted of the discussions and the outcomes of these discussion by two working groups. This was chaired by **Mr Egbert Pelinck**. Information about the working groups and their outputs has been given in Chapter Two of this document.

CONCLUDING SESSION

The workshop's concluding session was held on December 20th, 1995. **Mr Egbert Pelinck** chaired the session and **Dr T.N. Khoshoo** of TERI, India, **Professor Hong De-yuan** of CAS, China, and **Professor Pei Shengji** of ICIMOD gave concluding remarks. The workshop provided a forum to discuss the common issues and priorities of biodiversity conservation, monitoring, and management in the Hindu Kush-Himalayan region and to identify components of a mid-term work programme for regional collaboration on biodiversity.

WORKING GROUPS' REPORTS ON THE ISSUES AND NEEDS OF BIODIVERSITY AND MANAGEMENT IN THE HINDU KUSH-HIMALAYAN REGION

Group I: Biophysical Aspects for Regional Collaboration on Biodiversity Conservation and Management

The following broad issues were identified through group discussions.

1. Information and Management
 - 1.1 The need to create inventories on the state of biodiversity
 - 1.2 The threats to and monitoring of biodiversity dynamics and changes
 - 1.3 The need for Environmental Impact Assessment (EIA)
 - 1.4 The need to identify custodians for biodiversity management information systems
 - 1.5 The need to establish standards for land classification systems
2. Ecosystems' Management
 - 2.1 Cross-sectoral issues and linkages were stressed for management of ecosystems
3. 'Wise Use' Biodiversity Resources
 - 3.1 Collection and documentation of traditional biodiversity use by local communities
 - 3.2 The 'judicious use' of biodiversity, while recognising the needs of and giving importance to the local people
 - 3.3 The scope and prospects of captive breeding and trophy hunting as practised by various communities
4. Transboundary Reserves

The actions required to address the broad issues given above were identified through working group discussions.

1. Information and Management
 - 1.1 The primary objective should be to improve the information system and to close gaps at both national and regional levels (ICIMOD).
 - 1.2 It was agreed that there is a pressing need to move access to information and the exchange of information at regional level through the regional collaborative programme of ICIMOD.
 - 1.3 Emphasis was placed on setting standards for regional/national land-use classification and use of up-to-date hardware and software.
 - 1.4 Collection of information on rare, endangered, endemic, threatened, and genetically vulnerable species/varieties and the development of a methodology for data collection were stressed.

- 1.5 The group also identified the need to document data on policy prescriptions for EIA and information on habitat destruction and land-use patterns.
- 1.6 There should be fixed criteria on which the requirements of the community are assessed and ensured. It was suggested that a few protected areas be identified as models for monitoring biodiversity and developing an integrated management system.
- 1.7 The need to produce a state-of-the-art report on the biodiversity of the Hindu Kush-Himalayan region based on available and updated information, through a programme on regional collaboration, was recognised.

2. Ecosystems' Management

- 2.1 The group recommended the need to generate baseline information and preparation of management action plans.
- 2.2 It also identified the need to provide free access to protected areas and to create regional boards.
- 2.3 It emphasised the need for proper management and for identifying the problems with current management. The need to organise various fora, at government and non-government level, in order to increase support for protected area management, was also stressed.

3. 'Wise Use' of Biodiversity Resources

- 3.1 Status surveys on useful species, with special attention to CITES and indicator species of natural ecosystems, were recommended.
- 3.2 Monitoring and documentation of wild species harvested for medicinal uses, trophy-hunting, and captive-breeding, through selected case studies of natural habitats, were also recommended.
- 3.3 The need to organise workshops/seminars/expert meetings to share experiences and to review various uses and applications of wild species through regional collaboration was identified.
- 3.4 The establishment of a 'model project' for the 'wise' use of biological resources and species in the mountain areas was recommended.
- 3.5 The need for bilateral learning between the local people and institutions involved in resources' management was stressed.

4. Transboundary Reserves

It was recommended that this issue should be discussed at both national and regional levels, highlighting the need to strengthen protected areas falling within the purview of more than one country.

5. The group again stressed the need to identify the gaps in knowledge, research, and information systems on natural ecosystems and traditional farming systems in mountain areas in the context of biodiversity and its conservation.

Group II: Socioeconomic Aspects for Regional Collaboration on Biodiversity Conservation and Management

The issues related to the socioeconomic aspects of biodiversity were identified and are given below.

1. Awareness, including education and training
2. Institutional capacity-building: local institutions, linkage of institutions, information management
3. Policy, legislation, and strategy
 - 3.1 Endangered and rare species' protection
 - 3.2 Quota system and concessions for local communities for wild species' collection
 - 3.3 Control on poaching
 - 3.4 Need to adhere to international conventions
4. Transboundary considerations
 - 4.1 Transboundary trade: legal and illegal trade in wildlife
 - 4.2 Treaties and conventions
 - 4.3 Sharing information
5. Areas of people's participation
 - 5.1 Protected area management
 - 5.2 Sharing of benefits
 - 5.3 Capacity-building in the local community
 - 5.4 Documentation of indigenous knowledge
 - 5.5 Decision-making at community level
6. Monitoring and evaluation: internal and external
7. Conflicts
 - 7.1 Between government and locals
 - 7.2 Inter-community
8. Patronage: identification of individuals and agencies

Action required and approaches identified through the group discussions are presented below.

1. The views of the group were comprehensive and formal and informal education was suggested as well as training of user groups in biodiversity conservation.
2. The need to encourage grass root level participation and coordination within and between local institutions for local

- capacity-building and the need to facilitate capacity-building for information management at institutional, national, and regional levels were stressed.
3. The group discussed legislation and policy issues and identified the actions required. They are as follow.
 - 3.1 Promotion of conservation, both *ex situ* and *in situ*, for endangered and rare species' conservation
 - 3.2 Identification of the needs of local communities, establishment of baseline surveys of wild species, and closer cooperation between line agencies and local communities for control on poaching
 4. The group emphasised transboundary issues and suggested the actions to be adopted which are as follow.
 - 4.1 Governments, in collaboration with NGOs and local communities, should adhere to international treaties and conventions.
 - 4.2 This also requires information-sharing between countries with the effective participation of local communities.
 5. The group identified several approaches for people's participation. They are as follow.
 - 5.1 Community participation in protected area management
 - 5.2 Development of eco-tourism and trading of economic species as well as other income-generating activities
 - 5.3 Involvement in rural training activities and preserving the cultural traditions of local communities
 - 5.4 Establishment of a village biodiversity profile
 - 5.5 Formulation of a biodiversity conservation forum of users' groups
 6. The group stated that it should be mandatory to establish a monitoring and evaluation system, and that this should be undertaken by the communities themselves as well as externally
 7. Regarding the conflicts, the group identified the need to reduce government and community and inter- and intra-community conflicts and felt that nothing could be effectively achieved unless a consensus was reached through dialogue.
 8. The group finally undertook the task of identifying agencies and individuals through a transparent process to deal with or undertake patronage on biodiversity issues with various strata of society. It was their thinking that patrons should be capable of building confidence among local inhabitants.

In response to the recommendations of the two working groups, Mr Egbert Pelinck suggested that many of the issues were complementary. He further suggested that the socioeconomic aspects should also include gender issues. Others suggested that poverty alleviation and the issue of population should also be included.

In conclusion, the Chairman of the Session, Mr Egbert Pelinck, said that the discussions had a multidisciplinary approach. However, it was felt that all future efforts on biodiversity conservation should be complementary to what had been carried out so far. He also pointed out the need to identify the key issues of biodiversity conservation in mountain areas. Finally, Mr Pelinck stated that all issues should be directed towards the welfare of the mountain people and that the approaches should focus on mountain-specific problems so that innovative action plans could be formulated for the region.

*Country
Review Papers*