

# International Center for Himalayan Biodiversity (ICHB): Conserving Himalayan Biodiversity—A Global Responsibility

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Biodiversity is a global endowment of nature. Conservation of biodiversity includes all species of plants, animals and other organisms, the range of genetic stocks within each species, and ecosystem diversity. Food, many types of medicine and industrial products are provided by the biological resources that are the basis of life on Earth. The value of the Earth's biological resources can be broadly classified as direct and indirect. Consumptive and productive uses are direct values, whereas non-consumptive uses and options for the future constitute indirect values. One of the most fundamental direct benefits of biological resources is in providing the world's food. Wild species have also provided many of our medicines.

Ensuring conservation of biodiversity is one of humankind's important global responsibilities. Consequently, biodiversity has become a growing concern of central significance to all sectors of society. In Chapter 13 of Agenda 21, adopted at the United Nations Conference on Environment and Development (UNCED 1992), mountains are defined as "storehouses of biological diversity and endangered species." This great wealth of biological diversity is attributed to the wide variety of environments in the mountains, particularly the Himalayas.

Hence, UNCED gave biodiversity an important place on the agenda. Over 150 states have now signed the Convention on Biological Diversity (CBD), which entered into force at the end of 1993. By 1994, several countries from Asia and Pacific had ratified the Convention. Nepal was the 34th nation in the world and the 14th nation in the then Asia-Pacific region to ratify the Convention, on 23 November 1993. The Convention is a framework agreement that allows individual countries to determine how most of its provisions are to be implemented.

The Himalayan region is the largest, highest, and most populous mountain chain in the world, and it is one of the world's richest ecosystems in terms of biological diversity. Extreme variations in altitude, aspect, geology, and soils over short distances have resulted in a wealth of natural ecosystems. The Himalayas are home to hundreds of endemic plant species and some of the world's rarest

wildlife species. These rich biological resources have traditionally served as the foundation for the economic and cultural life of mountain people.

The Hindu Kush-Himalayan (HKH) region is host to the world's highest ecosystems. Extending over 3,500 km the region of different types of environments, 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 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 such biodiversity through sustainable use also improves the standards of living and the cultural diversity of the existing population. The botanical wealth of the Indian Himalayas and Nepal consists of more than 8,000 species belonging to 200 families; about 30 percent of the Himalayan flora is endemic. Nine thousand plant species have been reported in the virgin forests of Eastern Himalayas of which 3,500 or 39 percent are endemic to the region. The total number of species of plants in the Hindu Kush-Himalayan Region is estimated to be as many as 25,000 or 10 percent of the world's flora.

Human beings use the environment heavily. Projected population growth and economic activity will mean loss of biodiversity at a greater rate. Although biological resources are renewable, their overuse is usually associated with loss of biodiversity. Among the major threats are overexploitation of forest and vegetation resources for fuel, fodder, manure, grazing, fishing, and hunting, expansion of agricultural land for an ever-increasing population, and the practice of slash-and-burn agriculture in mountain regions.

Biological resources are deteriorating rapidly throughout the world, primarily because of unsustainable

approaches used in human activities, leading to the following changes and potential impacts:

- A decline in biological diversity, as evidenced by accelerating extinction of species and the destruction, modification, and fragmentation of habitats and ecosystems at all scales.
- A decline in the health and functioning of ecosystems, as evidenced by biodiversity loss, degradation of air and water quality, and loss of soil.
- A decline in the quality of human life, as evidenced by increasing world poverty, disparities of wealth, and particularly conflicts over natural resources.

## Need for Research and Action on Himalayan Biodiversity

Against this background, the Himalayan Resources Institute (HIRI) with its partners organized an “International Conference on Himalayan Biodiversity (ICHB-2003)” from 26 February 2003 to 28 February 2003 in Kathmandu, Nepal, on the occasion of the International Year of Mountains (IYM, 2002). The conference was attended by more than 200 research scientists, technical specialists, and resource managers involved in various issues related to Himalayan Biodiversity, representing more than 50 national and international organizations. Over 150 technical papers covering various fields of Himalayan biodiversity were presented by more than 50 national and international organizations and institutions from abroad.

The participants at the conference recognized that:

- The Himalayan range is a unique chain of mountains with fragile ecosystems and high endemic, rare, and endangered species of wild flora and fauna that fulfill basic daily needs for millions of people living in mountains and plains.
- These mountain ecosystems are largely neglected and are greatly threatened by human pressure.
- Exploration of flora and fauna and their habitats and mechanisms for maintenance of biological diversity are inadequate at present.
- Degradation and loss of biological diversity are at high levels.
- Appropriate approaches needed to address these issues are lacking, but recent developments (for example, large-scale conservation) appear positive.
- Traditional practices (forestry, agriculture) and indigenous technology are disappearing.

- There is a lack of coordination and communication among scientists and a lack of partnership among scientists, planners, and managers.
- A comprehensive Red Data Book is lacking.

There is a need for habitat mapping using geographic information systems and global positioning system techniques.

There is a lack of appropriate teaching curricula and infrastructure and research capabilities in the area of biotechnology to assign and use biodiversity for the betterment of society.

As a result, the Conference passed a series of resolutions in the ICHB-2003 Declaration.

## Kathmandu Declaration of the International Conference on Himalayan Biodiversity

- Realizing the lack of effective implementation of earlier conventions and treaties (such as CBD, Kyoto, Johannesburg), this conference strongly demands that nation states in the region incorporate/translate the provisions of treaties and conventions into national legislation.
- This conference strongly recommends the creation of a Himalayan Biodiversity Database for the long-term research and monitoring of natural resources for sustainable development, including human dimensions.
- Realizing the rapid depletion of biological resources and the indigenous knowledge system (IKS), this conference strongly recommends the meaningful participatory biodiversity conservation approach based on indigenous knowledge.
- Realizing that mountain ecosystems are fragile and unique repositories of immense biological and cultural diversity, this conference recommends that the international community pay special attention to the conservation and sustainable development of these mountain ecosystems and cultural landscapes.
- Recognizing the lack of coordination and communication among the scientific community and institutions involved in Himalayan biodiversity conservation, this conference strongly recommends the establishment of institutionalized networking among policymakers, scientists/researchers, and institutions.
- This conference strongly recommends that the World Trade Organization respect the CBD, particularly by

protecting the rights of the communities and farmers who are the true custodians of biological diversity.

- This conference opposes the extension of an intellectual property rights (IPR) regime specifically patenting life forms and genetic processes, which are the creation of millions of years of natural evolutionary processes.

## Need of “International Center for Himalayan Biodiversity” for Research and Development

In considering the mandate of the Kathmandu Declaration of ICHB-2003, the ways in which Governments and local, national, regional / global level organizations could help achieve a better understanding of biological diversity and its related issues and greater cooperation in ensuring the sustainable development and poverty alleviation of Himalayan regions, “International Center for Himalayan Biodiversity (ICHB)” has been set up in close coordination, collaboration and cooperation with institutions and individuals working in education, research, and development in the field of conservation and sustainable use of biological diversity supporting Himalayan people in their search for sustainable development. The center is running as an autonomous and self governed institution and is supported by the Himalayan Resources Institute (HIRI). The CENTER brings out to the public about various national/international events, information, and links. Specifically the social, economical including scientific aspects of the sector and management, appropriate alternative technologies, indigenous knowledge and community management will be the further coverage of the program. The CENTER is committed to the dissemination of information about current conservation issues to the researchers and development professionals. To this end, the Network maintains active affiliations with a variety of local organizations and provides educational opportunities through community speakers, speaker series, Conservation Forum, Himalayan Biodiversity Day.

The vision of the CENTER is to improve human welfare through the sustainable use of Himalayan biodiversity. The CENTER provides education, research, training and development opportunities, and a unique intellectual environment for the development of solutions to ecological questions and problems facing Himalayan Biodiversity. The Center is committed to attracting students from Himalayan countries that will play leadership roles in future conservation efforts,

as well as graduate students from Nepal and abroad seeking expertise in Himalayan Biodiversity, systematics, and conservation biology. Students associated with the center study both the Himalayan and Tropical ecosystems with particular strengths in Himalayan plant-herbivore dynamics, population biology and conservation of birds in the Himalayas, ecology of forest fragments, systematics of flowering plants, evolution of genes and genomes, population genetics of Himalayan and tropical flora and fauna. The Network associates have active research programmes in the economics and politics of biodiversity conservation and sustainable development. The Network in future will not only maintain state of the art equipment, laboratories and Himalayan and Tropical green houses to conduct biochemical, molecular, eco-physiological and ecological research but also develops research and international training programs and activities through out the Hindu Kush-Himalayan (HKH) and other mountain countries in the world.

In this way, the center will maximize the impact on this sector by bringing together all stakeholders in a common forum to exchange expertise.

### **Goal**

Bringing in all the diverse stakeholders of various field of Himalayan biodiversity in a common forum to strengthen the partnership in collaboration with government, international and national non-governmental organizations, consultants, academic institutions, agriculture, forestry and environmental management professionals and others with the objective of exchanging information and technical expertise.

### **Objectives of the ICHB**

The objectives and activities of the CENTER include:

- To establish local, regional and global networking on Himalayan biodiversity conservation to exchange experiences, information and technologies at local, national, regional/global levels to provide a local, regional/global forum for Himalayan biodiversity professionals to share knowledge, experiences, and ideas on recent biodiversity conservation and management approach.
- To support for CBD including sub-regional and inter-regional agreements on protection, sustainable and equitable development of Himalayan regions.
- To explore regional/global cooperation for effective implementation of biodiversity action plans and biodiversity strategies to support the government policies

and programs of the Hindu Kush- Himalayan (HKH) and other mountain countries in the world.

- To plan future strategies in Himalayan biodiversity conservation, management and development through biodiversity education, research, training.
- To organize meetings, workshops, seminars, conferences and congresses on Himalayan Biodiversity to exchange information and technologies in Himalayan biodiversity among development professionals, academic communities and concerned authorities in Nepal and the world.

### ***Activities of the Center***

Major activities of the CENTER include:

- The Center will actively establish an information management system with the support of the various national and international organizations to meet the needs of non-government, rural, and indigenous organizations and individuals working on biodiversity conservation in both the developed and developing countries.
- Store and plot information about geographical areas and record or attach area attributes such as species' distribution, habitats, management plans, surveys, and reports.
- Store web site addresses and information characterizing the sites and their developers, and record mailing lists, use net discussion groups, and site management information.
- Catalogue and annotate treaties, conventions, protocols, legislation, customary laws, regulations, and other legal instruments.
- File contact information and profiles of client groups, NGOs, government agencies, businesses, and services.
- Keep track of information on indigenous peoples, cultures, and ethnic groups.
- Track projects, together with complete project profiles - including key contacts, locations, funding, project descriptions, reports, and evaluations.
- Catalogue scientific and traditional knowledge of plants and animals - species' distribution, references to source materials, bibliographies, surveys, taxonomy, research, management, protective status, and experts.
- Publication and dissemination of a Newsletter of Himalayan Biodiversity.
- Publication of Yearly an "International Journal of Himalayan Heritage" a publication of the "International Center for Himalayan Biodiversity" for scientific community.
- Collection of books, newsletters and e-publications from various institutions and individuals from HKH and abroad.
- Organize regular international training course, workshops, seminars, conference, and congress on Himalayan Biodiversity on series wise events.
- Organize periodic talk programs on Himalayan Biodiversity and its related topics.
- Compilation of new ideas evolved and disseminating it to the partners through mail and e-mail.
- Compilation, record keeping and documentation of the indigenous knowledge on successful strategies, lesson learn and case studies.
- Preparing and publication of the directories and the relevant information of all the stakeholders and experts in the field of the Himalayan Biodiversity.
- Preparing, maintaining, and dissemination of relevant publications, books and other documents.
- Develop and maintain regional and international network for future cooperation, collaboration, and coordination on Himalayan Biodiversity.
- Develop and maintain the biodiversity website.