

International Mountain Biodiversity Conference

November 2008

Conference Report

IMBC: Biodiversity Conservation and
Management for Enhanced Ecosystem Services:
Responding to the Challenges of Global Change

Workshop Reports

Mountain Transboundary Protected Area and
Connectivity Conservation 2008

Linking Geodata with Biodiversity
Information in the Himalayas

Research Strategy on Global Change in
Mountain Biosphere Reserves

**A Compilation of the Rapporteurs' and Workshop
Convenors' Reports**

Summary

The HKH region is one of the largest and also most understudied mountain regions in the world and one where the effects of global change are becoming apparent at an ever increasing rate. While there is a growing body of anecdotal evidence which strongly suggests that the mountain ecosystems and biodiversity which form the basis for local livelihoods are threatened by changing conditions, the hard data needed to substantiate what seems to be probable and plausible are sorely lacking. The mountainous regions of the eight countries that share the Hindu Kush-Himalayan (HKH) region share similar terrain, biological diversity, and climatic conditions, and face the same challenges of global change. They also share the fact that none has fully benefited from the experiences gained by global institutions and programmes. There is an added incentive to address these issues now as there is a growing awareness that the influence that mountain ecosystems exert on their neighbouring environments extends far beyond their geographical limits to encompass the surrounding lowlands dependent on them for goods and services. While highlands and lowlands have always been linked, globalisation has brought both new challenges and a greater awareness of the need to address them.

In recognition of the need for reliable data that will allow the region to benefit from climate change science, ICIMOD convened the International Conference on Mountain Biodiversity, which took place from 16-18 November 2008 at the ICIMOD Headquarters in Kathmandu. The objective of this meeting was to bring together global institutions involved in biodiversity conservation with regional groups familiar with the specific issues of the region. The aim was to share, network, and develop future strategies and alliances for mountain biodiversity conservation especially to meet the emerging challenges from climate change. It was the expressed intention of the organisers to bring together researchers from the region, who have an in-depth understanding of the region and its people, with representatives of global programmes, who have access to the latest methodologies for data collection and interpretation. Some 75 biodiversity, climate change, and conservation experts, representatives of global programmes, and representatives of the eight countries that share the Himalayan region, from more than 20 countries in all, met to discuss ways of systematically gathering and sharing the information needed, developing a reliable picture of the present situation, and formulating approaches to respond.

The Conference was accompanied by two pre-conference workshops on Mountain Transboundary Protected Areas (10-14 November 2008), and Linking Geodata with Biodiversity Information (15-16 November 2008), and a post-conference workshop on a Research Strategy on Global Change in Mountain Biosphere Reserves (19 November 2008) which provided further opportunities to discuss special aspects of this important topic.

One of the major discussion points was on how to fill the gap in availability of consistent data for the HKH region. The transect (latitudinal – north south) approach at various longitudes in the HKH, which includes both transboundary biodiversity rich landscapes and their connectivity corridors, was the highlight of the conference. The transect approach was accepted as the way forward, with the understanding that the concept still needs some further development and fine-tuning. Another area of concern was long-term continuity of research efforts for the generation of meaningful data through a coordinated effort. ICIMOD should take the lead in developing the transect approach and in implementing it with its regional and global partners.

The three main themes of the Conference centred on climate change and its implications for mountain biodiversity; biodiversity management for economic goods and ecosystem services from the mountains; and institutionalising long-term continuity in mountain research programmes. The papers presented on these themes provided the basis for animated discussions. These discussions helped to advance our understanding of the effect of climate change on the biodiversity and the lives and livelihoods of the people of the Himalayan region, and were recorded by the Chairs and the session rapporteurs. The conference report presented here is the sum of these reports for each of the sessions. The pre and post conference workshops were reported in a similar way by the conveners and these reports are also enclosed here for completeness.

The full conference proceedings, which will contain all of the invited papers, will be publishing by ICIMOD in electronic form, in mid 2009.

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Acronyms and Abbreviations

AAS	Afghanistan Academy of Sciences
ABS	access and benefit sharing
APN	Asian Productivity Network
ArcGIS	Arc Geographical Information Systems
ArcIMS	Arch Internet Map Server
ASCCI	Altai-Sayan Connectivity Conservation Initiative
ASP.NET	Microsoft's web application framework
BFRI	Bangladesh Forest Research Institute
BR	Biosphere Reserve
CAS	Chinese Academy of Sciences
CBD	Convention on Biological Diversity
CC	climate change
CCAs	connectivity conservation areas
CCD	Convention to Combat Desertification
CCM	connectivity conservation management
CDM	clean development mechanisms
CEPF	Critical Ecosystem Partnership Fund
CESVI	Cooperation and Development (Cooperazione E Sviluppo)
CHM	clearing-house mechanism
CHT	Chittagong Hill Tracts
CITES	Convention on International Trade in Endangered Species
CKNP	Central Karakoram National Park
CMES	Centre for Mountain Ecosystem Studies
CODATA	Committee on Data for Science and Technology (CODATA)
CONDESAN	Consortium for Sustainable Development of the Andean Ecoregion
CoP	Conference of Parties
CRIS	Current Research Information System
DAR	Department of Agricultural Research
DG	Director General
DGCS	Directorate General's Guidelines for Developing a Cooperative System
DIGIR	Digital Imaging Information Resource
DIS	Data Information Service
DIVERSITAS	International Programme of Biodiversity Science
DNPWC	Department of National Parks and Wildlife Conservation
DSS	decision support systems
DSTs	decision support tools
ECES	Environmental Change and Ecosystem Services (ICIMOD)
EEA	European Environment Agency
EH	Eastern Himalayas
ES	ecosystem services
ESSP	Earth System Science Partnership
EU	European Union
EV-K2-CNR	Everest- K2- Italian National Research Council (CNR)
EWHALE	Laboratory of the Institute of Arctic Biology, University of Alaska
FAO	Food and Agriculture Organization
FTP	File transfer protocol
GBIF	Global Diversity Information Facility
GBPIHED	GB Pant Institute of Himalayan Environment and Development
GCOS	Global Climate Observing System
GCRN	Global Change Research Network
GDP	gross national product
GEF	Global Environment Fund
GEOSS	Global Earth Observation System of Systems
GHG	greenhouse gas

GIS	geographical information systems
GLOCHAMORE	Global Change in Mountain Regions
GLOF	glacial lake outburst flood
GLORIA	Global Observation Research Initiative in Alpine Environments
GMBA	Global Mountain Biodiversity Assessment
GTOS	Global Terrestrial Observing System
HAWS	high-altitude wetlands
HKH	Hindu Kush-Himalayas
HKKH	Hindu Kush-Karakoram-Himalayas
IBA	Important Bird Areas
ICIMOD	International Centre for Integrated Mountain Development
ICRAF	World Agroforestry Centre
ICSU	International Council for Science (ICSU)
ICT	information and communication technologies
IGBP	International Geosphere Biosphere Programme
IHDP	International Human Dimensions Programme
INGO	international non-government organisation
INSA	Indian National Science Academy
IP	intellectual property
IPCC	Intergovernmental Panel on Climate Change
IPR	intellectual property rights
IPROMO	International Programme on Research and Training on Sustainable Management of Mountain Areas
IPY	International Polar Year
IRBM	international river basin management
ISI	International Sciences Institute
ISO	International Organisation for Standardisation
ITIS	Integrated Taxonomic Information System
IUCN	International Union for the Conservation of Nature
IWHM	Integrated Water and Hazards Management (ICIMOD)
IWMI	International Water Management Institute
IWRM	international water resource management
IYM	International Year of Mountains
LIBIRD	Local Initiatives for Biodiversity Research and Development
LTER	Long-term Ecological Research Network
LULCC	land-use and land-cover changes
LULUCF	Land-use, land-use change, and forestry
Ma	Mega-annum
MAIRS	Monsoon Asia Integrated Regional Study
MaNIS	Mammal Networked Information System
MAPS	medicinal and aromatic plants
MBRs	mountain biosphere reserves
MDGs	Millennium Development Goals
MEA	Millennium Ecosystem Assessment
MENRIS	Mountain Environment and Natural Resources Information System
MIREN	Mountain Invasion Research Network
MoAIA	Ministry of Agriculture, Irrigation and Animals
MoEST	Ministry of Environment, Science, and Technology
MoF	Ministry of Forestry
MP	Mountain Partnership
MRI	Mountain Research Initiative
MS	Microsoft
NASA	National Aeronautics and Space Administration
NBC	National Biodiversity Centre
NBII	National Biological Information Infrastructure
NCBI	National Centre for Biotechnology Information

NDBR	Nanda Devi Biosphere Reserve
NEON	National Ecological Observatory Network
NEPA	National Environmental Protection Agency (Afghanistan)
NGOs	non-government organisations
NTFP	non-timber forest product
OBIS	Ocean Bio-Geographic Information System
OECD	Organisation for Economic Cooperation and Development
PA	protected area
PAD	Provincial Agricultural Department
PADM	Provincial Area Development Ministry
PC	personal computer
PED	Provincial Environment Department
PES	payment for ecosystem services
PoW	programme of work
PoWPA	Programme of Work on Protected Areas
PR	public relations
QNP	Qomolungma National Park
REDD	Reducing Emissions from Deforestation and Degradation
RMCs	regional member countries (of ICIMOD)
RS	remote sensing
SARD-M	Sustainable Agriculture and Rural Development in Mountain Regions
SBSTTA	Subsidiary Body on Scientific, Technical, and Technological Advice
SHARE	stations at high altitude for research on the environment
SLRP	Sustainable Livelihoods and Poverty Reduction (ICIMOD)
SNP	Sagarmatha National Park
TAAS	Tibetan Academy of Agricultural Sciences
TAR	Tibet Autonomous Region
TCP	technical cooperation programmes
TEK	traditional ecological knowledge
TNC	The Nature Conservancy
TRs	transboundary reserves
UHI	University of Highlands and Islands
UMN's	University of Minnesota's Map Server
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO MAB	United Nations Educational, Scientific, and Cultural Organisation's Man and Biosphere programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNU	United Nations University
US NSF	United States' National Science Foundation
WCPA	World Commission on Protected Areas
WFS	web feature service
WI	Wetlands International
WISA	Wetlands South Asia
WMO	World Meteorological Organisation
WMS	web map service
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation
WWF	WWF-World Wide Fund for Nature (formerly World Wildlife Fund)