



# **Rangelands and Pastoral Development in the Hindu Kush-Himalayas**

**Proceedings of a  
Regional Experts' Meeting  
November 5-7, 1996  
Kathmandu  
Nepal**

A black and white photograph of a vast rangeland in the Hindu Kush-Himalayas. The upper two-thirds of the image show a steep, grassy hillside densely populated with a large flock of sheep grazing. In the lower third, a dark, rectangular tent is pitched on the ground. Several people are visible near the tent, and a few dark-colored cows are scattered in the foreground. The overall scene depicts a typical pastoral landscape in the region.

**Edited by  
Daniel J. Miller  
Sienna R. Craig**

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Editors

**Daniel J. Miller  
Sienna R. Craig**

**International Centre for Integrated Mountain Development  
Kathmandu, Nepal**

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Nomad Camp with Sheep and Yaks, Zoige, Sichuan, China

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# Foreword

Rangelands cover two million square kilometres of the Hindu Kush-Himalayan Region; they include large parts of Pakistan and the vast expanses of the Tibetan Plateau, which reaches out into India, Nepal and Bhutan. As such it is the single largest land-use system within ICIMOD's realm. Yet it is also an area with the lowest population density in the HKH. This may very well have been the reason why rangelands and the largely nomadic people that inhabit them have not received similar attention from governments and development agencies as the more densely populated human settlements and agricultural systems of lower altitudes.

The fact is that rangelands present a vast, rich resource because of their diversity in terms of plant species, wildlife, and unique cultural groups. They are also important as the headwaters' environment of the major river systems of Asia; systems that are essential for hydropower development, irrigation, and as the basis for human survival. The situation in upland watersheds has a critical impact on the terrain below, but development interventions in this region have often neglected, if not marginalised, the pastoral peoples; the long-term custodians of this natural wealth.

Rangelands of the HKH are in transition and subject to change. On the one hand, modern market mechanisms have improved access and services to previously remote pastoral areas. This has provided pastoralists with opportunities, as well as constraints. While improved access increases marketing opportunities, it has also meant the expansion of agriculture on to rangelands, transformation of traditional pastoral systems-not always for the better, and disruption in traditional trans-Himalayan trade routes. Delineation of productive lands for agriculture and increased mobility are exerting higher growing pressures on the remaining lands, threatening the quality of forage and herds. Changes have also taken place due to natural causes. For example, alterations in climate have modified vegetation composition, reduced plant productivity and carrying capacity, and led to a general desiccation in Alpine-type rangeland.

The International Centre for Integrated Mountain Development, realising that, despite their extent and importance, rangelands in the Hindu Kush-Himalayas are still poorly understood, made sure that knowledge on the rangelands was an important and integral part of its first Regional Collaborative Programme (1995-1998).

As part of this process of increasing our knowledge of rangelands in the HKH, experts from five of its Regional Member Countries gathered in Kathmandu in November 1996 and brought together a wealth of experience and information that could be shared among themselves and with ICIMOD professional staff engaged in rangeland and natural resources' management.

Through publishing the proceedings of this regional consultation, ICIMOD hopes to stimulate reflection on and greater consideration of issues relevant to rangeland management, biodiversity conservation, forage improvement, and pastoral development in the Hindu Kush-Himalayan-Tibetan Plateau Region.

I am grateful to all the participants in the consultation for their contributions and commitment to bringing the issue of rangeland management higher on the agenda of work for ICIMOD and through that process hopefully also on the work agenda of institutions and organizations in its member countries. Mr. Daniel Miller, former rangeland management specialist at ICIMOD, and Mrs. Greta Rana, Senior Editor, deserve special thanks for making this publication not only technically more interesting but also pleasing to the eye.

**Egbert Pelinck**  
Director General

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# Welcome Address

**Egbert Pelinck, Director General  
International Centre for Integrated Mountain Development  
(ICIMOD)**

Distinguished Participants and Colleagues:

On behalf of the International Centre for Integrated Mountain Development (ICIMOD), I welcome all of you to this Regional Experts' Meeting on Rangelands and Pastoral Development in the Hindu Kush-Himalayas. We are gathered here this week to deliberate on an important topic: the sustainable management of the rangeland resources of the Hindu Kush-Himalayas. I express sincere appreciation for the efforts you have made in coming to Kathmandu.

ICIMOD was established in December 1983 against the backdrop of a sharply growing concern about the alarming degradation of mountain environments and the increasing poverty of mountain people. This concern was for mountain areas of the world in general, but in particular for the Hindu Kush-Himalayas (HKH). This area is home to more than 120 million of the world's poorest people - trying to make a living in some of the world's harshest environments.

Poverty alleviation and environmental conservation in the HKH is ICIMOD's primary mandate. We pursue these objectives through documentation and information exchange, research and knowledge reviews, capacity building, and advisory services.

ICIMOD has worked on many different programmes over the years, but when I came to ICIMOD a little over two years ago, one area that I noted we had neglected to a great extent was the rangeland ecosystems of the HKH, despite the fact that rangelands cover about 40 per cent of the total land area of this region. Fortunately, ICIMOD has now begun to give greater consideration to rangelands and their inhabitants. The fact that ICIMOD has organized this regional expert meeting on rangelands and pastoral development is indicative of this trend.

Attention to rangelands is important for a number of reasons. First, they form the headwater environments of the HKH's major river systems. What takes place in these upper watersheds has important effects downstream for millions of people. Second, products obtained from rangelands — livestock and plants and their by-products — provide food and generate income for local people. Third, rangelands are home to millions of people who have, for the most part, been neglected by previous national development efforts which have historically focussed on the plains and lower hills; yet

there is a great potential to improve the livelihood of people living in rangeland areas. Fourth, rangelands are important storehouses of biological diversity, providing habitats for numerous wild animals. Similarly, many of the protected areas in the HKH are dominated by rangeland vegetation.

Many issues regarding the sustainable management and development of rangelands need to be considered. While the ecology of these areas is still poorly understood by scientists, a wealth of indigenous knowledge exists that has been left largely untapped. Pastoralists have adapted animal husbandry skills and grazing practices to the harsh environmental conditions of the HKH over centuries. The efficacy of these traditional systems, however, is still poorly understood and not sufficiently acknowledged by development planners. We must deliberate on the tremendous local knowledge that herders possess and the unique strategies they have developed to survive — even thrive — in these difficult environments.

Furthermore, mountain rangelands contain a wealth of wildlife; yet we still know little about these wild animals and their interactions with other aspects of rangeland ecology, and I include domestic livestock in this knowledge gap also. One of the major management issues facing national parks and protected areas located in the mountains is grazing related. Outside protected areas, wildlife is often thought to compete with domestic livestock for grassland resources. Management plans that consider the needs of both the wildlife and livestock that share rangelands both inside and outside reserves and protected areas should be developed.

Sustainable rangeland development requires appropriate policies. Development policies in the HKH have largely ignored mountain rangeland environments. Policies that do exist for pastoral areas have generally maintained that traditional pastoral systems need to be improved without any consideration for the practical or valuable implications of these existing systems. Agricultural and forestry policies have usually neglected the role of livestock in development and the potential positive contribution that domestic animals can make to economic growth.

ICIMOD is uniquely positioned to assist its member countries with developing policies and methodologies for sustainable development of rangeland ecosystems. By focussing greater attention on rangelands, ICIMOD expects to assist governments, NGOs, local people, and the international donor community in promoting the well-being of inhabitants and users of rangelands in the HKH; improving the conditions and management techniques for rangelands; and strengthening the capabilities of relevant institutions and organizations in ICIMOD's member countries.

This meeting has brought together rangeland specialists with various interests from five of our Regional Member Countries, as well as from ICARDA and Turkey. The participants' diverse knowledge and experiences give me hope that we can begin the process of addressing complex issues related to sustainable rangeland management in the HKH. ICIMOD expects that participants will be able to help us not only to clarify the major rangeland issues, but also to assist us in developing practical programmes for further

work at national and regional levels. These may include directives for research priorities, policy reviews and options, and management options.

While the programme of this three-day consultation is fairly comprehensive, I am personally very interested in the issue of forage and fodder development as it relates to overcoming the scarcity of fodder during the long, harsh winters at high altitude. Tragedies like the one that killed thousands of yak on the Tibetan Plateau in the winter of 1994-95 should be prevented in future. The advice of those gathered for this meeting could be a first step in that direction.

Another issue that might be neglected in this highly male-dominated consultation — and of concern to ICIMOD — is the role women occupy in range management, particularly their increased workloads due to the seasonal or permanent outmigration of men in search of alternative income sources.

The challenges facing rangelands in the Hindu Kush-Himalayas are considerable, but I am confident that together we can have an impact.

I thank all of you for coming to this important meeting, and I look forward to hearing more about the discussions and recommendations arising from it.

Thankyou

# Contents

Foreword	
Acknowledgements	
Abstract	
Welcome Address by Director General	

## SECTION ONE

Rangelands and Pastoral Development: An Introduction		
<i>Daniel J. Miller</i>		1
New Perspectives on Range Management and Pastoralism and their Implications for HKH-Tibetan Plateau Rangelands		
<i>Daniel J. Miller</i>		7
Status of Himalayan Rangelands in India and their Sustainable Management		
<i>Panjab Singh</i>		13
Rangeland Resources and Conditions in Western Sichuan		
<i>Wu Ning</i>		23
Status of Rangelands and Rangeland Development in Pakistan		
<i>Dr. Mirza Hakim Khan</i>		41
Conserving Biological Diversity in the HKH-Tibetan Plateau Rangelands		
<i>Daniel J. Miller</i>		47
Rangeland Management and Wildlife Conservation in HKH		
<i>Joseph L. Fox</i>		53
A Photo Essay of Himalayan and Tibetan Pastoralism		
<i>Daniel J. Miller</i>		58
Pastoral Issues of the Central and Eastern Indian Himalaya: Prospects and Constraints		
<i>Nehal A. Farooquee</i>		141
Pasture Management, Indigenous Veterinary Care and the Role of the Horse in Mustang, Nepal		
<i>Sienna Craig</i>		147
Upper Mustang's Shifting Animal Husbandry Practices		
<i>Denis Blamont</i>		171

Pastoralism and Its Development in Balochistan, Pakistan <i>Dr. Muhammad Saleem</i>	193
Small Ruminant Production and Pastoral Development in the Dry Mountains of Pakistan <i>Abdul W. Jasra</i>	201
Pastoral Development and Its Relevance to Large Ruminants' Production in Pakistan <i>Abdul W. Jasra and Amjad Saleem</i>	209
Forage and Fodder Development on Rangelands of the Indian Himalayas <i>Bhag Mal</i>	215
Forage and Pasture Development and Forage Seed Production in Nepal <i>Rameshwar Singh Pande and Dala Ram Pradhan</i>	227
Forage Resource Development on Degraded Land in Nepal: A New Approach <i>Dinesh Pariyar</i>	237
Fodder Development Initiatives and Hill Conservation in Nepal <i>Surya Bahadur Singh</i>	243
Conclusions and Recommendations from the Workshop <i>Daniel J. Miller</i>	251
 <b>ANNEXES</b>	
Annex 1 Workshop Schedule	261
Annex 2 List of Participants	265