

## **Book Reviews: High Mountain Pastoralism in Northern Pakistan**

Author: Flury, Manuel

Source: Mountain Research and Development, 21(3) : 304-306

Published By: International Mountain Society

URL: [https://doi.org/10.1659/0276-4741\(2001\)021\[0304:HMPINP\]2.0.CO;2](https://doi.org/10.1659/0276-4741(2001)021[0304:HMPINP]2.0.CO;2)

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](https://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

## Web Sites on Decentralization

Many web sites concerned with decentralization appear to focus on its legal and socioeconomic aspects, with little or no particular reference to mountain regions. The sites presented below were selected to give a brief idea of the range of approaches to decentralization, with some reference to mountain regions.

### Decentralization

#### Net of World Bank

[www.worldbank.org/publicsector/decentralization/](http://www.worldbank.org/publicsector/decentralization/)

This web site provides a broad overview of the many different types of decentralization in various countries and within individual countries and sectors. Distinguishing among different types of decentralization facilitates discussion of design and impact. For example, the type of decentralization selected within a country will depend on its design—which in turn depends on the political structure and administrative issues of that country.

### Participatory District

#### Development Program (PDDP)

[www.pddp.org.np/](http://www.pddp.org.np/)

PDDP seeks to empower people to take increasingly greater control over their own development and to enhance their capacities to mobilize and channel the resources required for poverty alleviation. PDDP works simultaneously at the local and central levels to achieve its twin objectives.

### Local governance

#### program (LGP) by UNDP, Nepal

[www.lgp.org.np/about/index.html](http://www.lgp.org.np/about/index.html)

LGP was conceived in late 1996 after the successful efforts of the ongoing Participatory District Development Program (PDDP) in 20 districts of Nepal. LGP has been implemented since December 1996, with technical and financial assistance from UNDP. The Ministry of

Local Development (MLD) is the implementing agency and the National Planning Commission (NPC) is a cooperating agency. It was initiated to support government efforts to achieve better local governance, better management of local development, and have a greater impact on poverty alleviation.

### UNDP Decentralization Program in Kyrgyzstan

[dppiu.elcat.kg/First\\_page\\_eng.htm](http://dppiu.elcat.kg/First_page_eng.htm)

A number of steps have been taken in the Kyrgyz Republic, through the constitution, presidential decrees and government regulations, to further decentralization and local self-governance. This is particularly evident through the approval of policies and initial laws to facilitate such actions. In 1996, a new institution of local governance was established: the *aiyl okmotu*. This is the executive-administrative body of the *aiyl* (village), accountable to the *aiyl keneshes* (village level elected authority). This step was intended to increase the roles and responsibilities of local self-government.

### Popular Participation in Bolivia: Does the law "Participación Popular" secure participation of the rural Bolivian population?

CDR Working Paper 99.6, October 1999, by Vibeke Andersson  
[www.cdr.dk/working\\_papers/wp-99-6.htm](http://www.cdr.dk/working_papers/wp-99-6.htm)

This working paper explores the issues concerned with popular knowledge about the law and efforts to implement it.

Compiled by Susanne Wymann von Dach,  
Assistant Editor, MRD and Fani Kakridi Enz, CDE.

## Books

### Searching for Women's Voices in the Hindu Kush-Himalayas

Edited by Jeannette D. Gurung,  
International Center for Integrated Mountain Development, Kathmandu, 1999. 408 pp. US\$20.00 (developed countries); US\$15.00 (developing countries); US\$10.00 (ICIMOD member countries). ISBN 92-9115-855-0.

Coming on the eve of the International Year of the Mountain 2002, *Searching for Women's Voices in the Hindu Kush-Himalayas* (HKH) is an important reminder to the global development community that gender dynamics in mountain areas worldwide remain inadequately addressed and understood. This collection of 11 case studies, covering 7 countries of the HKH region (Afghanistan, Bangladesh, Bhutan, China [including the Tibetan Autonomous Region], India, Myanmar, and Nepal), makes visible the "hidden perspectives" of women's lives, especially in terms of the opportunities and constraints they face. Drawing on empirically grounded research and policy and programmatic analysis, these articles bring into sharp focus regional variations in women's mobility, legal status, control of resources, and decision making. They underscore existing gaps between policy goals, rural realities, and women's perceived needs.

In laying out the interaction between mountain women's centrality and marginality, this anthology is essential reading for policy makers, development workers, researchers, and activists involved in issues of mountain development. Those concerned with working to develop action-oriented agendas sensitive to gender issues in mountain areas will find it particularly useful.

In a well-crafted introductory essay, Jeannette Gurung (an Ameri-

can professional who has lived and worked in Nepal for over 15 years) discusses the methodological orientation informing the work and the theoretical issues key to examining mountain women's status. She discusses the genesis of this volume: a fact finding mission on gender and development attempting to ascertain the depth of the data gap on mountain women. This was conducted under the aegis of ICIMOD in 1996 in the countries of the HKH region. The researchers, women from mountain areas with extensive familiarity with their regions, followed a multifaceted approach that drew upon both quantitative and qualitative methodologies:

- Collecting available data on mountain women.
- Locating governmental and non-governmental organizations working on gender.
- Identifying national/district-level development policies directed at women.
- Spending a period of at least 3 weeks collecting community and household data on economic livelihoods, infrastructure, demographic and political institutions, etc.
- Analyzing the data to understand how gender differentiates access to resources.

The results provide information on how women think development initiatives address their needs, assess the gaps between stated policies and programmatic goals, and consider their ability to offer assistance to rural women. This information was disseminated to institutions involved with gender and mountain development issues in the HKH region.

There is a wide geographical sweep in this work and a major differential in terms of political, legal, and regional issues of gender. Fortunately, a pull-out chart included in the introduction enables the reader to make rough comparisons

on key issues. At an overarching level, each article indicts over a quarter of a century's efforts toward developing greater gender equity. Together, they demonstrate that, although women's lives in the HKH are shaped by wide variation in terms of their mobility, decision making, and valuation as workers, women's workloads are heavier than men's and, in many instances, are becoming more difficult. Moreover, women have less access to education, health facilities, and new technologies.

Agricultural development interventions based on cash cropping and involvement in the market economy typically target men; women are thus relegated to the undervalued subsistence sector. Income-generating projects directed at women tend to favor low-earning and slow-growing activities, which thereby broaden the gender gap in the market. Women's ability to raise collateral for loans to expand farm activities and to earn cash incomes is stifled by their lack of formal ownership and tenure rights to critical land-based resources. Moreover, their involvement in political activities is limited, and in all instances, their involvement is less than men's.

Policy and development personnel would do well to heed 3 messages that emerge here. First, there is a disparity between national- and district-level policies in terms of their ability to address practical and strategic needs of women. Even the best intentioned of programs fails to consider the pressing realities of women's lives that prevent them from taking advantage of services—or even knowing about them. Second is the emergence of a systematic erosion of women's value within households and communities. In all but 2 of the areas (in Bangladesh and Bhutan), women have internalized ideological presuppositions legitimizing their inferiority. They experience low self-esteem, lack confidence in their organizational

and decision-making abilities, and suffer from an overall sense of insignificance. This development is profoundly disturbing because internalized powerlessness is transmitted transgenerationally, and it prevents women from finding the voices necessary to speak their truths to men, development planners, and government officials.

Of key salience in understanding this trend is Gurung's argument that local belief systems and the sociopolitical structures that govern people's lives are products of long historical engagement with the ideologies, values, and institutions of dominant nation-states. Likewise, religious and development paradigms disseminate explicit and implicit assumptions about women's "proper" place in society. These often contradict positive local gender ideologies that grant women high status, as reflected in certain Buddhist-influenced communities.

As is indicated in the preface, this anthology reflects "the professional disparities of the researchers, [and their] institutional difference[s] and political constraints." For example, use of statistics varies, indicating regional differences in political cultures and the variety of official attitudes toward accessibility. The Afghan case study was affected by the political unrest leading to the Taliban takeover, while the lack of official permission to travel in Tibet was reflected in the focus of that study.

These larger backdrops against which field research is conducted inform my concern as a social anthropologist that any discussion of mountain women without a parallel look at global forces inspires a "missing the forest for the trees" critique. By the "forest" I mean the larger geopolitical, economic, and social landscapes that are rapidly redefining how mountain communities engage with the external world. The microscopic gaze, while providing richly textured data and demonstrating ways by which

women's marginalization is, ironically, built into the very processes of development that seek to integrate them and their societies into wider national identities, overlooks vital dimensions. It does a disservice to current complexities of local-global articulations. Areas of particular importance to be tackled in the future should include the implications of national, ethnic, and inter-regional armed conflict on communities and women's health. The intersection of poverty and women's low status links with health issues in particularly dramatic ways, such as domestic violence, alcoholism, sex trafficking, and the spread of HIV/AIDS.

Overall, however, this is a commendable study. In raising more questions than it answers, it is likely to inspire further in-depth regional- and national-level comparative work on gender. Comprehensive and collaborative research methodologies feed into action agendas, and next year's global focus on mountain areas will, it is hoped, offset years of neglect and at last help integrate gender analysis into mainstream perspectives of mountain development.

**Manjari Mehta**

Anthropology Program, Massachusetts Institute of Technology, Cambridge, MA 02139, USA.  
mmehta@mit.edu

### The Patagonian Huemul: A Mysterious Deer on the Brink of Extinction

By N. I. Diaz and J. Smith-Flueck.  
L.O.L.A. (Literature of Latin America) Monograph No. 3, Buenos Aires, 2000, xviii + 150 pp. US\$ 30. ISBN 950-9725-39-0.

In general, deer are a fairly successful group of mammals. They are widespread in most continents, and populations can increase quickly in suitable habitats if they are given enough protection. The huemul is

one of several rare species attracting increasing attention from conservationists. It is being affected by a combination of human activities for reasons that are not all well understood and which are creating some complex conservation problems.

The huemul (*Hippocamelus bisulcus*) is a medium-sized deer, now mainly restricted to Southern beech (*Nothofagus* sp) woodlands in the Andes of Chile and Argentina. It is a poorly known species, little studied by the scientific community and virtually unheard of by the general public. It has declined substantially since Europeans settled in the region and appears to be still declining today. Accounts by the first explorers and settlers indicate that the huemul was formerly widely distributed throughout Patagonia, occurring in large herds in the pampa and foothills, where today they are either rarely or never seen. In the few localities where populations have been estimated, densities are only 0.02–5.6/km<sup>2</sup>, a range that is an order of magnitude lower than deer populations in northern temperate regions. Estimates for the total number of huemul have been put at 1000–2000. What has brought the huemul to this point, and what can be done to protect them for the future?

To help answer these questions, the authors have compiled a review of both historical and scientific information about the huemul. In view of the lack of scientific information about the species, they have made full use of anecdotal accounts made by explorers and early settlers as well as their own observations and have sought to clarify these by drawing on knowledge of the ecology of related species. The book includes sections on the history and current status of huemul, their general biology and life history, taxonomy, social behavior, and habitat use. It includes many figures and good-quality color photographs. It ends, appropriately, with a section on threats and conservation needs.

As with many rare species, there appear to be a number of factors contributing to the decline of huemul. Unfortunately, direct evidence of the relative significance of each of these factors is still lacking. Hunting was clearly important during the settlement period and is still known to occur, but with better protection is now less serious. Huemul also avoid areas grazed by livestock, even those that offer otherwise suitable habitat. The reasons for this are unclear, although it could be due to their susceptibility to livestock diseases or to avoid harassment from dogs. An additional puzzle is a low but variable recruitment rate. Observations of huemul in late winter often reveal that the majority of adult females have no surviving fawns, in spite of the fact that they usually appear in good condition.

An issue that is now of increasing concern is the expanding population of red deer, which have become established in the wild following escapes from deer farms. Red deer have a similar diet to huemul and are not subject to any control or management. At present, there is very little overlap in range with huemul, but the potential effects of competition, disease transmission, or behavioral interference are not known. Answers to such questions are needed to help guide conservation efforts for huemul. Unfortunately, investigations on such rare and inaccessible animals provide few observations, making it difficult to obtain enough ecological information to guide conservation efforts. Improved methods of monitoring huemul populations are urgently needed to enable managers to determine trends quickly, as are reliable capture methods, for both research and captive breeding.

The book is a useful source of information on the current plight of the huemul and is definitely recommended for those involved with conservation in the region or of huemul in particular. It deserves to

be read more widely, for example, by others involved in conservation policy or in research on endangered mammals. Hopefully, this will attract more interest in this little known species and ensure it does not become one of the few deer species to go extinct.

**Robin Gill**

Forest Research, Alice Holt Lodge, Wrecclesham, Surrey GU10 4LH, UK.  
Robin.Gill@forestry.gsi.gov.uk

## African Mountain Development in a Changing World

Edited by Hans Hurni and Joselyne Ramamonjisoa. African Mountains Association (AMA) and Geographica Bernensia, Antananarivo and Berne, 1999. xi + 332 pp. US\$ 15.00. ISBN 3-906151-33-6.

African mountain areas rarely receive the attention offered regions such as the Himalaya or Alps, although 45% of the continent has slopes greater than 8° and some 3 million km<sup>2</sup> lie above 2000 m. The mountain zones are often the most productive, having a better combination of soils and rainfall than many lowland regions. About 100 million people are thought to live in these areas. However, of greater economic and political importance today is the fact that the highlands are vital sources of water, timber, and minerals for the economic development of the lowlands. The lowlands have become the focus of most development initiatives, leading to tensions between highlands and lowlands in some areas. In Africa, as elsewhere, many highlands are also border zones (eg, in Burundi) and remain areas of political unrest.

This book is the proceedings of a workshop organized by the African Mountains Association (AMA) and the African Highlands Initiative (a program within the

International Centre for Research on Agroforestry, ICRAF) in Madagascar in 1997. The workshop was the fourth of a series that began in 1986 in Ethiopia and met subsequently in Morocco (1990) and Nairobi (1993). During this period, the international framework for mountain research and policy changed dramatically. First was the adoption of Chapter 13 on mountains as part of Agenda 21 at the Rio conference in 1992. This was followed by FAO's designation as Task Manager for Chapter 13 in 1994 and the inauguration of the Mountain Forum in 1995.

The papers in this book represent some of the work carried out in Africa during this exciting period. Of the 18 main papers, 12 are in English and 6 are in French; all have appropriate French or English summaries. The editors point out that they represent just part of the research currently under way in Africa, concentrating on Eastern Africa and especially Madagascar. The range of topics includes soil and water management, biodiversity, and farming systems.

Research on soil and water conservation provides a focus for 7 chapters, ranging from studies of soil analysis through GIS in Kenya to a discussion of the World Overview of Conservation Approaches and Technology (WOCAT) strategy for decision support and management for soils and water. The GIS analysis by Mati et al, for example, was used to explore relationships between key soil variables and water availability and their susceptibility to erosion in the Upper Ewaso Ng'iro. This is part of the largest basin in Kenya, and the analysis clearly highlights how the best soils were found on the mountain slopes that were also susceptible to erosion. Another study in this basin assessed the utility of stream-flow modeling, with particular reference to developing an understanding of the flow patterns between highlands and lowlands in a situa-

tion where much of the new investment and water demand is in lowland areas. A particularly interesting point regarding the improvement in accuracy was that, despite instrumentation, it was the local knowledge of staff that really counted in making sensible judgments about the validity of flow data.

From a more traditional perspective, Léa et al explore the link between the local geology, erosion processes, and climate in an intensive rice production zone in Madagascar, leading to a strong call for policies to prevent erosion, especially through detailed land-use planning to avoid zones of particular sensitivity. Finally, in this group, work on alpine wetlands in Lesotho by Grab and Morris highlights problems arising from the commercial exploitation of water in the Highlands Water Project. Road construction plays an important role in removing the turf cover, and local climate change may alter the nature of alpine degradation. These factors, in addition to the more commonly documented grazing problems, need to be taken into account when discussing the dynamics of highland wetlands in Lesotho.

Another group of papers focuses on biodiversity conservation, particularly problems associated with deforestation. Most of the papers reflect the concern in Madagascar resulting from the clearance of highland tree cover for agriculture. A study using satellite images in the Manongarivo Massif (Gautier et al) indicates that clearance has taken place despite the area being part of a protected zone. Once again, the principal contributor is the pressure for rice production, reflecting increased population. Similarly, Ralaivavony argues that conservation policies are needed to preserve biodiversity but that simple 'top down' policies will not work. The economic pressures to maintain livelihoods are far too strong. He reports on a project that tries a more participatory approach and

seeks to find a common language between the different perspectives of local communities and the state. As Ralaivivony states, such work requires enormous patience and compromise and is unlikely to be resolved through relatively short-term projects.

A final group of papers represents the input of social scientists who examine the impact of farming systems, gender, and broader management practices on highland landscapes. Several of the papers noted earlier point the finger at slash-and-burn agriculture. However, only the work of Messerli and Pfund begins to explore the complex net of relationships that drives farmers to continue to practice 'Tavy,' or pluvial rice cultivation by slash-and-burn, which is so common in the highlands of Madagascar. They employ a form of sensitivity analysis that requires the detailed specification of the key actors and all the relationships between them as a starting point. It is then possible to trace the impact of particular policies on both households and the landscape through the way farming systems are chosen. It is a very time-consuming approach but highlights the fact that the concentration on Tavy, far from being simply the result of poor household agricultural practice, reflects the impact of the wider policy arena where self-sufficiency in rice is an established priority. They argue that a sustainable approach would require more intense farming on the valley floors, which would meet the food demand targets but, at the same time, help limit the removal of upland tree cover.

In Ethiopia, Wood describes the problems facing highland wetlands development, which until relatively recently was the focus of much activity. As with 'Tavy,' Wood reports that the real problems facing sustainable development of this biotype come from the way that state policies are interacting with local management techniques. While

many farmers possess detailed and appropriate knowledge of the dynamics of the wetlands, policies on land ownership and production are beginning to lead to their over-exploitation in order to meet state and household demands. In this example, the problems lie less with technology than with the development of suitable institutions that can shield local ecologies from pressures generated from outside.

This collection provides a useful addition to the growing number of works dedicated to the study of African mountains. The case studies are not just valuable as statements of local interest but provide an indication of the state of research into African mountain systems. It is noticeable that there is a gradually increasing awareness that such research must move beyond an exclusive concentration on physical denudation processes to encompass an understanding of the social and political framework of livelihoods. Nevertheless, there remains a dearth of studies examining the policy arena and incorporating a greater awareness of the directions of general development policy. In this respect, work carried out in other highland areas in Latin America and Asia could provide some useful methodological guidelines.

**Don Funnell**

The Geography Laboratories, University of Sussex, Falmer, Brighton BN1 9SJ, UK.  
donf@susx.ac.uk

### High Mountain Pastoralism in Northern Pakistan

Edited by Eckart Ehlers and Hermann Kreutzmann. *Erdkundliches Wissen 132*. Franz Steiner Verlag, Stuttgart, 2000. 209 pp. DM/CHF 88.00. ISBN 3-515-07662-X.

The authors of this compendium provide 6 fascinating pictures of people and their lives in the high mountains of Northern Pakistan. They present and discuss pastoral-

ism and pastoral practices and their role in complex livelihoods that are being dramatically transformed. Although they live in a remote area, the people and societies in Northern Pakistan depend on and inter-relate with the global, outside world. The struggle for sustainable livelihoods requires adaptation to related dynamics and opportunities without endangering local natural and societal resources. The authors present the corresponding dynamics and challenges in a highly differentiated manner, resuming the long-standing tradition of research on the potential of high mountain economic and ecological systems. They dedicate their book to the memory of Carl Troll (1899–1975), the outstanding German geographer and scholar in this field.

The authors combine their investigations with a plea to conserve and preserve the upper reaches of mountain environments as an indispensable token of future sustainability and a viable protective resource for generations to come. They place particular emphasis on the key role of local farmers being aware of ecological necessities. They link their publication to the conviction that development decisions must be based on sufficient knowledge and expertise about local and regional conditions.

The compendium is the result of vast empirical research carried out by the Pakistan-German Research Project known as The Karakorum Culture Area since it began in 1989. In presenting the combined potential for sustainable future development of montane agriculture and animal husbandry, 2 questions are addressed: (1) How can the agricultural system provide the basis for a growing population without overexploiting available natural resources? And (2), what promising combinations of production strategies are there in the different ecological zones? Finally, the authors raise the question of the role and function of high mountain

agriculture and related livelihood systems in a world dominated by a market economy, where low levels of sustainability determine competitiveness.

Appropriately, the authors place agriculture in the much broader context of a rural economy. They perceive rural livelihood strategies as combinations of activities in agriculture, including irrigated crop farming, animal husbandry, and forestry, as well as local industries and services, including tourism and mountaineering. Contributions by social networks of extended family systems and external support from nongovernmental and governmental organizations complement the economic base of the rural population. The authors conclude that, because of its significant share of household incomes, agricultural production still constitutes an important safety valve for the population of Northern Pakistan.

The book contains 6 case studies focusing on different localities in the eastern Hindu Kush, Karakorum, and western Himalayas, all in the northern areas of Pakistan. The synthesis section places pastoral practices in high mountain regions in an overall perspective of high mountain agriculture and offers a well-founded, common conceptual framework. In addition, it provides a concise review of state-of-the-art research activities in the field of high mountain pastoralism.

Ehlers and Kreutzmann, the editors of the volume, discuss 3 different adaptive and socioeconomic livelihood strategies relevant to Northern Pakistan: mountain nomadism, transhumance, and combined mountain agriculture. Mountain nomadism is developing into a sort of closed-frontier nomadism, with sedentarization and confined migration cycles. Thus, it faces decline in many situations and has become a feature of historical interest. Although all 3 practices can still be found, combined mountain agriculture (*Almwirtschaft* in the

German-speaking Alps) dominates at present. Combined mountain agriculture, with its seasonal migrations connecting the different production zones, represents a flexible strategy and provides considerable potential for adaptation. Crop production and animal husbandry remain linked through production of fodder and manure.

Transformation in the high mountains of Pakistan is partly caused by endogenous sociopolitical change such as the abandonment of independent kingdoms and fiefdoms. Most important, however, are exogenous causes and the related new roles played by external agents of change. The construction of the Karakorum Highway, inaugurated in 1978, is the symbol of change and has been enhancing incorporation of these peripheral mountain societies into the lowland economies and the world market. This opening brought about a change in dependency on local natural resources. Out-migration affects both consumption patterns and labor availability for local production. Imports of subsidized grain from the Pakistani lowlands compete with local production and affect local food consumption. Chemical fertilizers replace dependence on farm manure, and modern implements such as tractors and threshers increase the productivity of crop farming. All this has substantially affected pastoral practices with heterogeneous consequences: whereas in some cases, a sharp decline in the use of high pastures is observed, in other valleys, due to improved accessibility by motorable tracks, use has increased and intensified. The general pattern demonstrates an increased dependency on external goods in relation to a continuously growing population. Although overgrazing of pastures or underfeeding of animals extends to almost one third of the pastureland, no irreparable damage is expected. Lower pastures and temperate-range pastures converge into high-

er-yielding cropland, which is considered favorable.

The case studies reveal interesting trends in the overall transformation process, for example,

- Since young men attend schools or are trained in modern crafts and trades, agricultural work in general and herding in particular—a typical male occupation—become less attractive. In some areas, this has led to the pooling of herds, with families taking turns herding. This has brought about a change from household-based herding to communal, cooperative herding. Alternatively, there are trends in professional specialization. Certain tasks are carried out on a salary basis.
- Local markets and food imports from lowland Pakistan improve the overall supply of food. As deficits in household production can be met by purchasing food, the population becomes less dependent on subsistence production. However, such external dependence may increase the vulnerability of the population to communication breakdowns.
- Off-farm income and remittances from migrant laborers render traditional forms of mixed mountain economy uncompetitive. Traditional forestry is particularly affected in this respect. Although a lack of manpower has led to abandonment of fields, agriculture and animal husbandry still provide a wide range of basic nutritional requirements. Abandonment of fields and reduced exploitation of high pastures can also constitute an advantage for the fragile environment. Increased market orientation also provides a potential for focusing on high-quality products. The potential of the expedition and trekking industries to produce lucrative additional cash income has only been realized for particular families and villages so far. Changed labor and

income opportunities may lead to altered use of summer settlements. When motorable tracks improve accessibility, use of such areas is intensified.

- Large households are generally able to compensate for the absent labor force. In smaller households, women frequently have to replace absent laborers and carry out work that is usually done by males. This may lead to a bad reputation for the particular household and to a higher workload for women, although religious leaders define which kind of work can be carried out by women. Share-tending, again a communal and cooperative strategy, is increasing, especially among smaller households.
- Socioeconomic differentiation

between and within villages increases in these transformation processes. The transition particularly favors men, who actively utilize the opportunities of education and employment. Women are still confined to their homesteads and villages. Often they have to face increased workloads. Wealthier families with regular off-farm income have the opportunity to delegate tasks to relatives, shareholders, and tenants, thus transforming social structures.

Though an outsider's perspective, this compendium contributes to understanding of the enormous and rapid change in living conditions in Northern Pakistan. The research highlights particular adap-

tive strategies and options for sustainable livelihoods that do not drain the natural resource pool. The common perspective and conceptual framework for the extended field research allow consistent and coherent conclusions. These are a challenge in the debate on the potential for sustainable development by and among local societies and people. The authors also call upon Pakistani researchers to supplement the picture with their perception and views. It is to be hoped that an internationally recognized editor would help make Pakistani views known to a larger community.

**Manuel Flury**

Interfaculty Coordination Office for General Ecology, University of Berne, 3012 Berne, Switzerland.  
manuel.flury@ikaoe.unibe.ch