

## **Mapping Transition in the Pamirs: Changing Human-Environmental Landscapes**

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## Mapping Transition in the Pamirs: Changing Human-Environmental Landscapes

Edited by Hermann Kreutzmann and Teiji Watanabe. Cham, Switzerland: Springer, 2016. xv + 274 pp. US\$ 129.00. ISBN 978-3-319-23197-6.

Anyone familiar with the societies of the Pamirs knows that this fragile ecology is presently going through a great transition. Until recently, the remote and landlocked Pamirs had been a victim of the “tyranny of geography,” whereas today, changing economies and gentle waves of globalization are slowly but surely touching the region. This book looks at the resulting transition and offers metaphorical snapshots of moments in the present, capturing different dimensions of human-environmental interactions and the possibilities, as well as challenges, for sustainability in this complex landscape. The contributors come from different disciplines and include both academics and residents of the region. They address different aspects of vulnerability from both natural and human resource perspectives.

The first two chapters, by Kreutzmann, introduce the geography and landscape of the Pamirs (and also the book) to the reader (chapter 1) and give an overview of the plurality of perspectives and interpretations (Pamir or Pamirs) (chapter 2). Of the remaining 15 chapters, 2 focus on vegetation, 1 on geomorphic features, 1 on water, and 4 on the changing nature and dynamics of pastoralism and pastures in the region. One chapter focuses on the history of Badakhshan in Tajikistan, and several others deal with the political context of human-nature interactions.

The chapter on water by Hagg and Mayer begins with a description of the region's glaciers and peculiar hydrology: while most of the discharge of the Amu Darya river

(formed by the Panj and Vakhsh rivers coming together) derives from the humid parts of Tajikistan and Afghanistan, it is largely consumed in the arid regions of Turkmenistan and Uzbekistan. A climate change-induced rise in temperature of 1.8–2.9°C will lead to significant reduction in the glaciers. The projections of various runoff scenarios suggest that flow patterns could change significantly, with earlier peak flows and reduced July/August flows, resulting in considerable impacts on water supplies and agriculture across the entire region.

The 4 chapters on pastoralism bring out the fragility and complexity of both the pastures and the historical and institutional arrangements affecting their management. Dörre highlights how recently imposed international borders interfere with centuries-old traditions of pastoralism and movement in the region, and how the concept of national independence is making pastoralists ever more “dependent” because the “othering” strategies of modernity and nationalism do not recognize the rights of nonnationals and can lead to pasture-related conflicts, especially in the Fergana region. Liu and Watanabe focus on seasonality of pasture use and vegetation cover changes in the Alai Valley, covering around 8,000 square kilometers in southern Kyrgyzstan. They use interviews as well as satellite data to class the pastures into spring and autumn, summer, and all-season pastures. Based on vegetation density estimated from satellite images and using the grazing model of Howard and Higgins, they conclude that vegetation cover has generally increased, probably because of a significant decline in livestock numbers. They note that summer use of pastures has a negative impact on vegetation sustainability and conclude that “to understand the sustainability of vegetation in the region, future research should focus

on the relationship between biomass production and pasture use seasonality” (p 125).

The chapter by Shirasaka, Song, and Watanabe focuses on the migration of livestock in the Eastern Alai Valley. They note that, in the eastern parts of the valley, where higher reaches lack vegetation, vertical grazing is practiced mainly by outsiders who bring goats and sheep, whereas in-valley residents of the flat part of the valley do not practice vertical grazing. However, in the western valley, where there are significant altitudinal differences between higher summer pastures and lower pastures, vertical grazing is practiced by in-valley residents as well. The recently established *jailoo* committees are not able to deal with issues of unequal pasture use and access arising in the eastern valley. In the next chapter, Watanabe and Shirasaka explore the *kezüü* or *novad* system of cooperation among herders who keep small numbers of sheep and goats. The system's reciprocal arrangements and rules enable them to share their limited labor resources. Together, these chapters on pastures and their management bring out important aspects of pressures on pastures, decisions on herd composition and size, and the effectiveness of local institutions and rule making.

A number of chapters give us an insight into the emerging political economy of human settlements in this region. One considers warlords and extraction possibilities in Afghanistan, another the political ecology in Gilgit-Baltistan, Pakistan; further chapters critically examine the nature of development assistance and aid, including the role of external support in influencing local agency. The concluding chapter by Watanabe notes various concerns and the need to continue studying pastoralism and its sustainability in the Pamirs.

Climate change and globalization together have set in motion a complex set of forces that are having

profound impacts, especially in fragile ecosystems. Mountain societies such as those in the Pamirs, Mongolia, and other parts of Central Asia have evolved over centuries and have developed institutions for careful use of fragile ecosystems. A deeper understanding of the nature of rules, norms, and institutions is essential to understand where the new and formal institutions of state and trade can have unintended and irreversible negative impacts. The chapters in this volume certainly contribute to a better understanding of these issues. The reader will be surprised that a rather slim volume of just 274 pages can provide such a multitude of perspectives on a complex ecosystem and political, social, and economic landscape such as the Pamirs.

Some of the roots of the problems lie in the lack of emergence of effective state institutions after the collapse of the Soviet Union and, in the vacuum, the opportunities that arise for private interests to rule supreme where collective and common interests were once primary factors. Also, lack

of development of local-level institutions results in insufficient decentralization, and opportunities for rent seeking may actually favor centralization of decision making. This can result, for example, in “outsiders” purchasing permits by paying user fees, which do not take into account the scarcity and seasonality of pastures. Thus, governance failures lead to market failures and erosion of the ability of traditional institutions to deal with resource conflicts or monitor sustainable use of resources.

Though the volume includes some discussion of political economy issues, perhaps these could have been articulated more succinctly. Also, while many of the papers demonstrate painstaking efforts to collect a lot of scientific data, they do not seem to devote a similar level of attention to recording or analyzing data on institutions and institutional quality or understanding the changing nature of individual and collective agency. Equally, the impacts of emerging globalization (in terms of emigrants and remittances)

and their effects on the lifestyle and economy of pasture societies are not discussed. If what we observe in Mongolia were also to be true in Central Asia, globalization may be unleashing an unstoppable increase in “sedentarization” and the settling of pasture societies. The future of pastoralism is threatened more by globalization than by ecological changes in the fragile regions where pastoralists live. Finally, there are important demographic and gender issues; and not dealing with these can attract criticism that pastoralism is being romanticized by distant outsiders.

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