

## **Towards Sustainable Use of Rangelands in North-West China**

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## Towards Sustainable Use of Rangelands in North-West China

Edited by Victor Squires, Hua Limin, Zhang Degang, and Li Guolin.  
Heidelberg, Germany: Springer,  
2010. 384 pp. US\$ 189.00. ISBN  
978-90-481-9621-0.

As stated by its editors, this volume draws on Chinese language materials, previously inaccessible to English-speaking audiences, to make an important contribution to debates over critical dimensions of environmental management. Drawing on a 2008 conference in Lanzhou, which focused on the problems and possibilities of a systems framework in the implementation of Global Environment Facility (GEF) objectives, it purports both to analyze resource degradation and to offer solutions for the sustainable use of China's extensive rangelands. As such, it offers the prospect of an exciting addition to current scholarship from other geographic contexts on questions of rangeland management, pastoral livelihoods, and futures. In pursuit of these aims, the book presents a series of arguments and supporting data sets derived largely from recent donor-supported pastoral development projects in North-west China. It focuses particularly on GEF-funded initiatives, implemented in conjunction with the government of the Peoples' Republic of China, with which many of the editors and contributors were associated.

As such, the collection has a number of strengths, not least in drawing on a large empirical data set to illuminate issues of rangeland management and sustainability in a critical yet relatively poorly understood context. The chapters are clearly presented and the summaries of key points at the beginning of each chapter are very useful. The book also benefits from the contemporary nature of the data set on which it

draws; this is especially important in the context of rapid political, economic, and climatic change. The book is subdivided into 5 main sections: an introductory section deals with "rangeland systems and people under pressure" while subsequent sections address themes of rangeland degradation; global contexts and objectives; the profitability and sustainability of herding; and finally "the way forward."

In particular, the analysis of opportunities for carbon sequestration in rangelands in Chapter 7—which is part of the third section, "Achieving the Global Objectives"—is a welcome contribution to this widely overlooked aspect of contemporary debates. However, this chapter provides a primarily technical analysis of carbon sink capacities under different vegetation types and land use scenarios, with little or no reflection on broader livelihood implications or policy contexts wherein carbon sequestration goals might be realized. Similarly, Chapter 6, on biodiversity in rangelands, within the same section, provides detailed data sets, in this case on plant diversity in particular, but with somewhat limited reference to wider global biodiversity goals or the practical implications of the reductions in grazing pressure it recommends.

Chapter 13, on environmental education tools, is also of particular interest. This chapter focuses on mainstream education, through curriculum planning for schools, and offers a clear, insightful overview of World Bank GEF-funded projects completed by the authors in primary and secondary schools in the region. However, even bearing in mind the primary purpose and focus of this chapter, the lack of discussion or recognition of local herders' knowledge is notable. Herders are presented solely as the recipients of education, as in the claim that "the environmental education teaching materials developed [through this donor project] have become the main source of environmental knowledge

for the farmers and herdsmen of the project regions" (p 299). A more nuanced discussion of indigenous/local knowledge and "mainstream" science is evident in the book's concluding chapter, wherein it is claimed that "conventional grassland/rangeland science in China has never been concerned with local viewpoints ..." to its detriment and where it urges caution in treating "scientific knowledge as universal and the only version of knowledge ..." (p 334). However, there is little evidence of a focus on herders' viewpoints or knowledge in Chapter 13 or indeed in other chapters.

Such tensions highlight some recurrent issues throughout the book. One issue is its wider vision and contribution. As noted for Chapters 6 and 7, there is generally little attempt to place the insights from the Chinese context within wider debates about rangelands, pastoral futures, and livelihoods. Even given the acknowledged geographic focus of the work, such analysis would have been welcome, especially in the concluding chapters, and would have added more weight to insights emerging from the valuable case study material in the volume. The book would also have benefited from greater editorial contributions in setting out its structure and aims in Chapter 1 and in amending, or at least acknowledging, apparent tensions between chapters. The issue of representations of herders' knowledge has already been highlighted. Other areas of concern are the inconsistent deployment of contentious terms and representations concerning rangeland health and herders' livelihood strategies. There is widespread reference to denuded and degraded pastures throughout the book, especially in the context of "overstocking" and "overgrazing," but very little acknowledgment or analysis of the contested meaning and discursive power of these latter terms, long an issue of critique in pastoral development elsewhere, especially with respect to debates over

nonequilibrium dynamics in rangelands. Uncertainties around measurements of rangeland degradation are also not clearly addressed. For example, Chapter 2 draws on apparently unproblematic estimates of rangeland degradation, while Chapter 3 states that, arguably, the “true extent and magnitude of rangeland degradation [in the region] remains largely unknown” (p 53). Similarly, “carrying capacity,” a term used unproblematically in some chapters, is rather belatedly acknowledged in Chapter 5 as a highly contested concept, whose value in the context of grazing management has been called into question. In an edited book, such tensions are indeed difficult to avoid, but are nonetheless rather striking.

Finally, the issue of social contexts and processes, including customary tenure arrangements, amongst

rangeland communities remains rather underdeveloped. For example, Chapter 9 makes welcome reference to the importance and value of herders’ participation in research and decision-making, but only in very idealized terms: “the participatory level of local people was greatly improved because the project team used the participatory tools during project implementation. Farmers realized that the GEF project is their project and actively contributed their knowledge ...” (p 201). But the detailed and welcome analysis of land tenure issues in Chapter 12 is not always reflected in other chapters, wherein more technical considerations tend to take precedence.

In summary, this is a valuable book that will undoubtedly be of interest to scholars of pastoralism and of the region. Its strengths lie in its presentation and analysis of a

range of primarily quantitative, detailed data sets, such as those concerning climatic conditions; herder incomes; and livestock numbers, productivity, and ecological impacts. However, social science perspectives and insights, especially around issues of culture, discourse, and knowledge, are much less apparent. The book’s primarily technical focus offers important lessons for future development in the region, but these could only be strengthened by more explicit engagement with local perspectives, values, and cultures.

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