

Sustainable Development in Western China: Managing People, Livestock and Grasslands in Pastoral Areas

By Colin G. Brown, Scott A. Waldron,
and John W. Longworth.
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China has the world's 3rd-largest area of grassland (FAO 2001), covering 42% of its territory and representing its largest terrestrial ecosystem. These grasslands are mainly concentrated in border and ethnic minority areas of Inner Mongolia, Tibet, Xinjiang, Qinghai, Gansu, and western Sichuan, all of which fall within the purview of a national program to "develop the West." The Chinese Ministry of Agriculture has frequently emphasized that the protection and improvement of these grasslands is vital for national ecological security, socioeconomic development in the herding areas, social and border stability, and multiethnic harmony. However, these grassland areas are experiencing dramatic changes in terms of population, market penetration, intended and unanticipated policy impacts, and the economic activities of larger entrepreneurial groups, such as mining or livestock-product corporations.

Official reports indicate that 90% of China's rangelands display some degree of deterioration, and the degraded area is continuing to expand in ways that are attributable to human action. Senior planners consider that "balancing environmental protection policy with poverty alleviation in western China is a pressing problem for national policy that has yet to be addressed" (Han 2004). However, newer grassland policies appear to implicitly favor the development of a smaller number of specialized and capitalized households, often using a high-input model

of individual fenced holdings, stall-feeding, introduced livestock breeds, and fodder production that poorer households struggle to replicate. The policy alternatives for such households include relocation to other sectors or areas. However, compared with the crop-farming areas where some of these policies were first formulated, there are few alternative enterprises in the rangelands. Instead, the implementation of these models has resulted in some socioeconomic difficulties in affected herding areas, debated ecological impacts, and questioning over policy choices.

These are some of the concerns that Brown, Waldron, and Longworth seek to address. This timely book grew from an institutional analysis for the design of a Chinese–Australian grassland research project. The authors also drew on their many years of research on agricultural economics and the Chinese livestock industry. They aim to describe "the way in which the Chinese government has dealt with the problems of grassland degradation and herder livelihoods in the pastoral region" (p 12). The authors recognize that these policy choices are premised on particular interpretations of the issues confronting grasslands and pastoral communities (Chapter 1). They flag problems posed by the paucity and currency of data for determining the *extent* and *degree* of grassland degradation (China's last major grassland census was completed in 1983). They also note that a degradation discourse can help channel project funding into local areas, whereas prescriptive policies can encourage herders to underreport livestock numbers. More fundamentally, the authors recognize that policy choices also reflect understandings about the *causes* of grassland degradation (Chapter 2). This is a highly contested topic, and the authors start from the position that "too many people with too many livestock are eking out meager livelihoods on an ever decreasing and degraded grassland resource" (p 1). While recognizing huge

diversity among the rangelands, they make no reference to nonequilibrium rangeland dynamics or climate change (cf Squires et al 2009), and there is little discussion of different cultural interpretations of grassland management or of indigenous knowledge. Rather, 5 following chapters address different areas that "require 'management' or direction by government," namely, institutional arrangements (tenure and administration), policy instruments (grassland laws and legislation), production and marketing structures, livestock systems and technologies (changing feed and breeding systems), prices and marketing, and people (population pressure, poverty, migration, and resettlement).

In this respect, the book provides much useful and current information about the array of policies, programs, laws, and legislation that relate to grassland management in pastoral areas. This is an admirable effort given the frequently overlapping, grey, or contradictory nature of these materials, and the differences in their interpretation at national and local levels. By providing this information in one location, the book has rendered a very useful service to scholars of China, pastoral policy, rural development, and sustainability issues more generally. Readers of this journal may lament that the Qinghai–Tibetan Plateau receives relatively little attention in comparison with northwest China, which was the focus of the authors' fieldwork. The authors acknowledge that the great diversity of grassland contexts is also problematic for implementing centralized and uniform policy measures—there are "no quick and easy solutions" (p 291), and purely technical approaches, "in the absence of policy-determined institutional structures and incentives, have the potential to make matters worse and, in any event, are likely to be unsustainable in the longer term" (p xii). Grassland fencing, for instance, is one activity that may not be maintained after (or even while) the government program is completed.

Even institutional incentives such as “higher price premiums and securing property rights may have perverse outcomes in terms of grazing pressure if implemented alone rather than as a suite of measures (p 271).” Faced with this “wicked problem” (Mwangi 2008), the authors conclude with a call for continued proactive and sensitive government policies to facilitate adjustment and transition (p 271). This leaves some implicit questions in the book title incompletely addressed: For what purpose and for whom should grasslands in western China be *sustainably developed*? And is it possible to externally *manage* people, livestock, and grasslands effectively?

Fortunately, a growing number of Chinese researchers are also beginning to publish on these topics, particularly from social-science or multidisciplinary perspectives. A paper by Yi et al (2007) is one example. Other recent publications include works by Li and Zhang (2008, 2009), Oronchi and Erdenurtu (2009), Wang (2009), and the Chinese National Committee for Man and the Biosphere (2007, 2008, 2009). Perhaps the emergence of this new generation of local Chinese social scientists and significant new publications on African grasslands (eg Galvin et al 2008; Homewood 2008) herald a refocusing on rangeland institutions under the impact of climate change and globalization. This book, and its

published Chinese version (Brown, Waldron, Longworth 2009), give us much to consider as we begin that process.

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