

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Great Plains Research: A Journal of Natural and  
Social Sciences

Great Plains Studies, Center for

---

Spring 2006

## Review of *Managing Changing Prairie Landscapes* Edited by Todd A. Radenbaugh and Glenn C. Sutter

Fred Samson  
U.S. Forest Service

Follow this and additional works at: <https://digitalcommons.unl.edu/greatplainsresearch>



Part of the [Other International and Area Studies Commons](#)

---

Samson, Fred, "Review of *Managing Changing Prairie Landscapes* Edited by Todd A. Radenbaugh and Glenn C. Sutter" (2006). *Great Plains Research: A Journal of Natural and Social Sciences*. 826.  
<https://digitalcommons.unl.edu/greatplainsresearch/826>

This Article is brought to you for free and open access by the Great Plains Studies, Center for at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Great Plains Research: A Journal of Natural and Social Sciences by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

**Managing Changing Prairie Landscapes.** Edited by Todd A. Radenbaugh and Glenn C. Sutter. Regina, SK: University of Regina, Canadian Plains Research Center, 2005. 169 pp. Maps, photographs, figures, tables, references, index. \$29.95 paper.

Four primary phases to an ecosystem cycle involve the release of carbon, energy, and nutrients by insects, fire, grazing or other agents; reorganization of the primary resources by pioneer species; exploitation of resources (succession) and redevelopment of more complex ecological relationships; and storage (climax) of resources until an ecological driver initiates a new phase.

What pleases me about *Managing Changing Prairie Landscapes* is the effort by Radenbaugh and Sutter at the start to link the transactions of the ecosystem cycle, unhurried before the late nineteenth century, with the rapid and accelerating landscape-level changes wrought principally by the industrialization of agriculture and by urbanization. Such a link moves prairie conservation from the traditional understanding of patterns in diversity and ecological processes to managing the transactions of capital—"including manufactured capital (consumer goods, buildings, transportation, and communication networks); natural capital (organisms, space, raw materials, and clean air, water, and soil); human capital (knowledge and technology); and social capital (human interactions and social cohesion)"—in order to achieve ecological sustainability. The editors' focus is on the Canadian Prairie Ecozone, and their approach is deliberately interdisciplinary.

This purpose, focus, and approach is shared in most of the book's subsequent chapters. Chapter 3, for example, reviews energy implications for farming practices in Saskatchewan from 1936-1991, questioning whether current practices are sustainable in terms of natural and manufactured capital. And chapter 4, assessing rural Saskatchewan's social capital, suggests that "social energy" as a force is both accumulated over time and essential to the social and economic well-being of the entire community. Future investigations, it contends, should focus on the link between micro- and macrolevel social structures that make an emphasis on social capital attractive to policy makers. Chapter 6 provides a practical, scale-dependent approach to integrating social and natural capital in order to conserve the biodiversity of the Frenchman River watershed of southwest Saskatchewan.

Chapters 9 and 10 explore the impacts of climate change on northern prairie ecosystems, and on productivity and resilience, emphasizing that rural communities will be the first to be influenced negatively by the decline

or loss of natural capital. The importance of these discussions is underscored by the reminder that arid, semiarid, and dry subhumid regions account for nearly 40% of the earth's land area.

The remaining chapters are important contributions to our understanding of the natural capital of the prairie landscape, including knowledge of the stewardship indispensable to conserving migratory waterfowl, the significance of native versus introduced forage, and a substantial contribution to the conservation of endemic bugs.

It is clear that all four forms of capital are essential to managing the prairie landscape on a sustainable basis, making this book a particularly useful resource in an area of considerable contemporary urgency. Its value and relevance extend far beyond the Saskatchewan prairie. **Fred B. Samson**, *U.S. Forest Service, Northern Region, Missoula, Montana.*