

## Book Review

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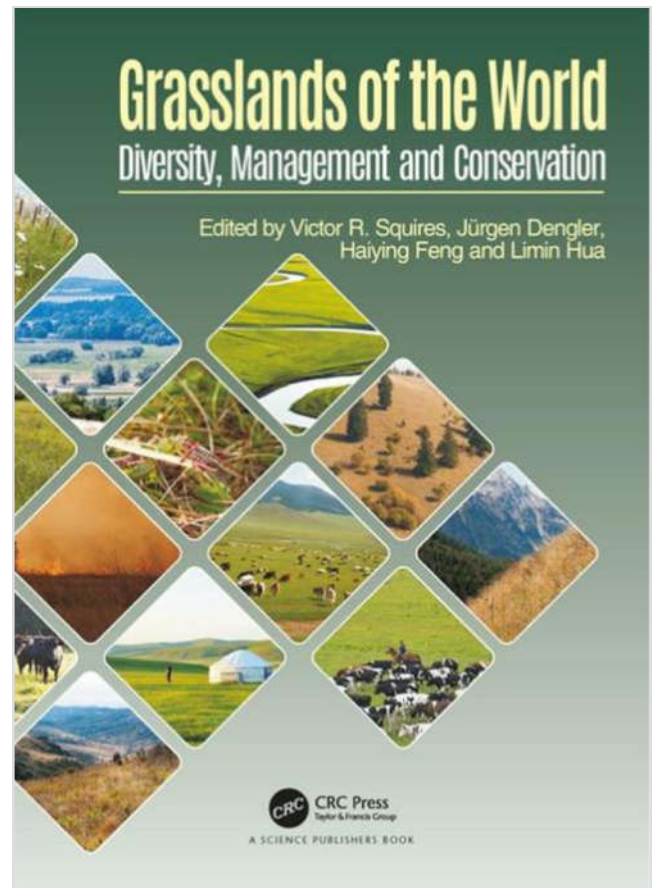
# Global overview on grassland diversity, management and conservation

Squires, V.R., Dengler, J., Feng, H. & Hua, L. (eds.) 2018. *Grasslands of the World. Diversity, Management and Conservation*. CRC Press, Boca Raton. 412 pp. Hardcover, ISBN 978-1-4987-9626-2. 135.50 €.

Grasslands comprise one of the most extensive ecosystems of the world. They are present in most climatic zones, as natural grasslands in dry and/or cold climates (savannas, arctic-alpine, steppes) or azonal soils (saline, rocky, sandy...), as managed semi-natural grasslands in the zonal soils of forested biomes. However, most grassland types are seriously threatened, even though their conservation is essential not only because of their contribution to biodiversity and to ecosystem functioning, but also because they provide major ecosystem services, not least their use as pasture for feeding cattle, sheep and other domestic animals.

The increasing risks grasslands face encouraged the editors of this book to produce this updated review of the extent, diversity, ecology and management of grasslands worldwide, as well as their threat factors. After an introductory chapter about the origin and spread of grassland ecosystems, and their relationships with fire, grazing animals and humans, the book is organised in several chapters focused on regional grassland types, written by international teams of grassland experts.

The regional chapters are organised in two large sections. The first one consists of eight chapters devoted to Palaeartic grasslands (chapters 2-9), while the second one has six chapters describing grasslands from India, North America, Southern Africa, Eastern Africa, Southern America, and Australia (chapters 10-18). These two sections are by no means comparable. The Palaeartic section, contributed by the Eurasian Dry Grassland Group (EDGG), shows a high degree of consistency, starting with a synthesis (chapter 2) of the regional approach followed in the section, the main grassland types, and an overview of the current extent of and conservation issues affecting the major grassland



types across the seven regions covered: Western and Northern Europe, Eastern Europe, Mediterranean Basin, Russia, Kazakhstan and Central Asia, China and Mongolia and Japan. These chapters follow a similar pattern: they all provide a geographic context and describe the main grassland types focusing on their origin, naturalness, ecology and dominant grasses and herbs before subchapters devoted to Agronomic use, Value of grasslands (biodiversity, ecosystem services), Threats, Conservation and, finally, Management and Restoration.

The six chapters focused on the grasslands of America, Africa, India and Australia show varying degrees of complexity. In general, they aim at a similar organisation of subsections, but the information contained in these chapters is not at the same level. First of all, grassland typology is not so consistent as in Palaeartic chapters; in some cases it is mostly based on agronomic criteria, and therefore not so informative for grassland ecologists. Nevertheless, every bit of information is important, especially for those regions that so far lack up to date comprehensive

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reviews. Moreover, some chapters provide very valuable insights about aspects of these grasslands that are otherwise inaccessible for the international community. As an example, I would like to highlight the subsection about Ethnic Grasslands in the Indian chapter, where old and natural grasslands linked to specific ethnic groups are described with regard to their ecology, geography, biodiversity, management and threats.

The book concludes with a section composed of three chapters dealing with a variety of issues related to grassland management and conservation. These include the impact of climate change on Chinese grasslands and the people depending on them (chapter 16), future prospects

for North American grasslands regarding human society (chapter 17) and a final chapter summarising threats to grasslands and future perspectives (chapter 18).

Overall, this is a very useful book for all those interested in grasslands around the world, such as grassland ecologists, conservation biologists and practitioners. It is also a good starting point for a future consistent typology of grasslands at a global scale and for putting together all the issues related to their conservation and management.

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A 10 m<sup>2</sup> plot with *Paradisea liliastrum* and *Stipa pennata*. Binntal, Canton Valais, Switzerland. Photo: S. Boch.