Book Review

Vegetation Fires and Global Change. 2013. By ***Johann G. Goldammer*** and 58 contributing authors. Kessel Publishing House, Remagen-Oberwinter, Germany. 398 pages. Softcover. ~US$48 (€35). ISBN 978-3-941300-78-1.

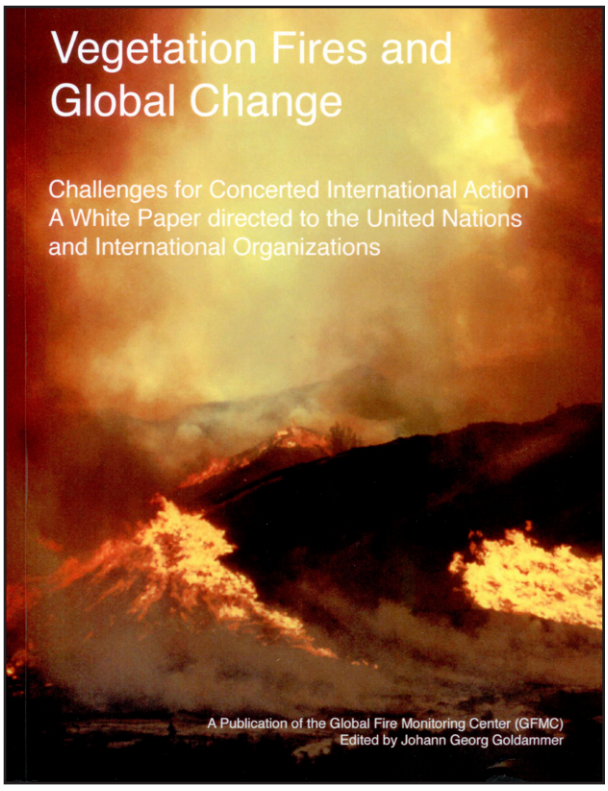
Scientific syntheses on wildfire and fire use over the past 30 years have typically been conducted at sub-continental scales, often focused on specific topics such as ecological effects. *Vegetation Fires and Global Change* is a rare attempt to pull together concepts, patterns, and trends of wildfire throughout the world, covering a broad range of mostly biophysical issues. Targeted at internationally relevant themes and proposed actions, this ambitious undertaking is comprised of nearly 400 pages and 25 chapters, with contributions from 58 different authors. Johann Goldammer of Freiburg University, Germany, makes a good case for why such a synthesis is necessary and takes a strong editorial hand in providing thematic continuity, vision, and effective summaries.

The term "global change" in the book title might suggest that climate change is a primary focus. In fact, this is not the case. Land-use change, resource management, cultural traditions, and policies generally have more far-reaching effects on wildfire than climate change is expected to have. The effects of climate change are discussed where appropriate, but the editor and authors are to be complimented for putting this issue in the proper context.

The book is divided into four sections: introductory material; fire regimes, effects, and likely changes by continent and subcontinent; overarching issues (modeling, smoke, economics, etc.); and conclusions and a vision for the future. Most readers will find the nine chapters on fire regimes to be the most informative because they generally are effective syntheses of key ecological and management issues, including a good sample of relevant literature.

Although several of the biogeographically oriented chapters are effective summaries, the highlight of the book is the information on boreal wildfire provided in multiple chapters. Perspectives from multiple continents and authors, enriched by recent empirical data and modeling, present a strong case for the importance of altered fire occurrence in changing not just boreal ecosystems, but carbon cycling and global emissions. These are systems that will in many cases be difficult to manage, and a warmer climate will almost certainly instigate significant changes regardless of attempted intervention.

The chapters on overarching issues are more uneven in content and impact. The chapter on modeling fire in the circumboreal (note again the boreal focus) is especially interesting, communicating technical issues in a readable fashion. Two chapters that address fire emissions, one on modeling and one on human health effects, are particularly relevant for human populations adjacent to wildland areas



that will be increasingly affected by fire. This issue is already affecting perceptions of fire and policies in some parts of the world. Although editor Goldammer provides an interesting chapter on the interaction of fire with cultural landscapes in Eurasia, a separate chapter on social dimensions of fire is disappointing. In general, social issues receive inadequate scientific analysis and discussion in the book, perhaps because most of the authors have expertise in the biophysical sciences.

Vegetation Fires and Global Change is in excellent condition from an editorial perspective, with a minimum of errors. Although many scientific books reproduce color figures in black and white (often poorly) to save money, this book has many color photos, maps, and other figures—a pleasant surprise considering the moderate cost of the book. Writing quality is somewhat inconsistent, with some chapters containing more technical jargon than others, but that can be expected when many of the authors are not native English speakers.

This book will be especially helpful for students who want a better understanding of international fire issues, and the biogeographically oriented chapters provide an opportunity for provincial readers (especially in North America) to become familiar with topics and regions outside their normal purview. Although *Vegetation Fires and Global Change* suggests that we are on the cusp of significant changes in wildfire in some parts of the world, it is not alarmist. A follow-up to this volume will be needed in about 10 years to quantify trends in fire phenomena and evaluate recent projections of fire occurrence and effects.

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