

## Resource and Environmental Management in Canada: Addressing Conflict and Uncertainty

*Edited by Bruce Mitchell.* 2004. Third Edition. Oxford University Press, Don Mills, Ontario, 608 pages. Can \$46.50 Paper.

Canada is a resource-rich country. The nation's history and folklore are a story of resource exploitation and the people who trapped, fished, farmed, mined and lumbered. In many ways, much has not changed as evidenced by the national wealth accrued from natural resources, the dependence of many towns and regions on primary resource use, and the growing social conflicts centred on the type and intensity of resource use and conservation.

It is generally acknowledged that all natural ecosystems are more or less human-dominated. Recent, well-cited studies have estimated that humans appropriate over 30% of the total terrestrial net primary production. This is a remarkable level of consumption for humans that represent roughly 0.5% of the total heterotroph biomass on Earth. Spatially-explicit studies have identified appropriation levels that range from > 6% for South America to > 80% for south-central Asia. North America falls in between with a human appropriation level of 23%.

Given these levels of human domination of the earth's resources, it is understandable that the notions of conflict and uncertainty would be chosen as thematic foci for a book on resource and environmental management; conflict among differing values and ideologies, and uncertainties over adequate scientific and social knowledge.

A long-standing textbook, now in its third edition, *Resource and Environmental Management* is intended primarily for undergraduate university students. The book's 20 chapters are broken down into three parts: (1) emerging concerns, (2) enduring concerns, and (3) contemporary responses to these concerns. Emerging concerns include ecosystem health and ecological integrity, globalization and neo-conservatism, First Nations and resources, feminist perspectives, climate change, and water security. Enduring concerns focus on traditional resource issues such as fisheries, agriculture, forestry, wildlife management, mining, and parks and protected areas. The third part addresses some of the approaches used to develop resource and environmental visions. Among others, these include search conferences, ecosystem approaches, adaptive management, environment impact assessment, participatory approaches, governance issues, and environmental justice. The majority of contributing authors are geogra-

phy and environmental studies academics.

In any collection of contributed essays, consistency in style and quality is always a challenge. Conflict and uncertainty act as foundational themes and tie together all chapters. Most, if not all authors, attend to this theme and regularly make reference to other chapters in the book. Many of the chapters have been rewritten and updated for this edition and seven new chapters have been added. The editor has prefaced each major section with a good synthesis and summary of each chapter thus helping the reader to situate the individual contributions.

Authors provide a sound scientific and technical analysis of each resource issue, generally up-to-date resource statistics, and policy implications. The strength of the edited volume is the authors' attention to the social, cultural and political dimensions of resource and environmental management. A former forest ecology professor of mine was wont to proclaim: "Forestry is more about people than it is about trees." The same can be said for all other resource issues. Because of the essential human dimension, ecosystem-based natural resource management is not rocket science – it's much more complicated than that. The amalgam of biophysical, cultural and social complexities fuel conflict and promote uncertainty. This inherent complexity of resource and environmental management is highlighted throughout the text. Well discussed, as well, are a number of significant mechanisms that attempt to deal with the often intractable and inherently stochastic dimensions of institutional human behavior.

I found some of the essays unnecessarily long-winded and somewhat pedantic. Twenty chapters weighing in at over 600 pages do not make for easy or necessarily enjoyable reading, especially given the diversity of chapter topics. The chapter on forest management is noticeably remiss in addressing contemporary sustainable forest management paradigms. No mention is given, for example, of the current developments in the emulation of natural forest landscape disturbances, a key concept in sustainable forest management. As an edited book it does not possess the thrill or the fast-paced narrative of a single author. As a textbook, it has all the information, but you may find yourself simply dipping into chapters of specific interest.

JOHN MCCARTHY

Holy Rosary Parish, 175 Emma Street, Guelph, Ontario  
N1E 1V6 Canada