

Forests in a Full World

Woodwell, G. M. with contributions from Ullsten, O., Houghton, R. A., Nilsson, S., Kanowski, P., Larson, E. D., Johansson, T. B. and Kerr, B., 2001. Yale University Press, New Haven and London. Pp. xxii and 231. ISBN 0-300-08882-5. RRP AUD\$35.40

CONRAD SLEE¹

THE loss of forests globally, and particularly the rapid deforestation occurring in tropical areas is a concerning issue. *Forests in a Full World* is a book about the role of forests at a turning point in the human economy where natural capital has replaced human capital as the limitation to further development. This represents the "full world" which provides little space for forests and their values. The book is the product of Woods Hole Research Centre and follows on from the report: *Our Forests . . . Our Future* (1999) by the World Commission on Forests and Sustainable Development. The book is a logically arranged collection of essays from experts in the field of forest management, which give relevant economic considerations to the sustainable use of forests. It is directed at readers with an interest in the fate of forests globally, particularly those with a desire for some technical information. The book gives reasons for deforestation in the past, the stages in which it occurs, and challenging options for increasing the role of forests in a degraded landscape.

The book has eleven chapters, covering topics such as the status of global forests, their influence on climate, how they relate to agriculture, the biotic losses that are part of forest loss, the importance of forests to hydrology, forests for timber and fibre, the role of plantations, energy from forests, alternatives to intensive forest use, ecological planning in a full world and, how forests influence global security. Woodwell covers forest biology and ecosystem functioning, whereas the other authors cover issues related to human uses of forest, and the requirements for sustainable management. The centre of the book contains four colour maps of past and present forest distribution, and there are many

tables and figures throughout the book that support the chapters.

The central message of the book is the recognition that forests play a critical role in maintaining life-support services, plus the reasons and processes of forest loss. The book links deforestation with the exponential growth and development of the human population. It identifies stages of landscape impoverishment starting with the removal of trees, leading to shrublands that are grazed, space for agriculture, and then deterioration of soil through erosion and exposure of rock. Population expansion, increased demand for agricultural land and increased world market value for timber, were suggested as reasons that have encouraged transition of forested land to other uses. The skill of corporations to minimize costs and the pursuit of money by governments to deal with debt or trade issues, were reasons given for some of the underlying demands that lead to forest loss.

Renewable energy from plantation fuelwood was discussed, which was taken further to include non-forest crop fuels, and a greater focus on efficiency and conservation of energy to reduce forest demands. However, there did seem to be excessive information non-forest crops for energy, which detracted from book and its relevance to forests. Another shortcoming was that of the four maps presented; it was not clear why two maps of South America were included as they essentially showed the same information as the global maps, with only a few discrepancies. Also, the South American maps lacked description of what the colours represented and lacked a date for "before human disturbance".

The book is generally easy to read, with well-structured chapters and cited references. The book presents some interesting opinions, but not all of the chapters are linked in an effective manner. However, I generally enjoyed the book and I would recommend it to technically minded people that have an interest in what affects forests globally, and the importance of addressing forest loss.

¹ School of Natural Sciences, Edith Cowan University, Joondalup, Western Australia, Australia 6027.