

rewards. It is possible to leave the drudgery of closed form analytical derivations, etc. to the computer. One has to, of course, get efficient with writing the codes and instructing the package to carry out the same. This is not as daunting as it sounds. This book would be an ideal starting point for all the *mathematicians, engineers and econometricians* willing to get acquainted with *Maple* and symbolic computing in general.

Finally, the reader should not be mystified by seeing *econometricians* in the august company of mathematicians and engineers (subtitle of the book). In the context of symbolic processing, it is perhaps only justified. One should recall that Prof. Herbert A. Simon (Nobel Laureate, Economic Sciences, 1978), with the study of problem-solving with computer programs, was among the pioneers of computer simulation of human cognition, which later on emerged as the field of AI.

As mentioned at the outset, symbolic processing packages enable asking 'what if', and constructing vibrant models. Perhaps the econometricians would now answer one of the interesting riddles. In the 1970s, the famous 'Club of Rome' report employed a multivariate implicit model which invariably led to the doomsday prediction of the global economic senescence. Notwithstanding these models of normative economics, the last quarter century has seen amazing regional recoveries and supply-side driven prosperity. The econometricians can now look forward to building a closer to reality global economic model, more effortlessly.

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Green Politics: Global Environmental Negotiations 1. Anil Agarwal, Sunita Narain and Anju Sharma (eds). Centre for Science and Environment, 41 Tughlakabad Institutional Area, New Delhi 110 062. 1999. 409 pp. Price not stated.

The battle between science and politics is nowhere more evident than in the realm of environmental negotiations. The world we live in is unequal and divided – unequal in terms of resource endowments, geographic and demographic patterns and the historical paths nations have charted; divided due to the nature of economic and political power nations wield today on account of such inequities. If such a world has to sustain itself, it has to frame for itself sets of governing principles which would recognize these inequities but embody a pervading belief that every actor in the global playfield has an equal right to fulfil his/her aspirations while pledging for the common good. These principles need to be embedded in sound science but equally in sound ethics. This is the real challenge of environmental negotiations, taking place in a battlefield of unequals in terms of power, but equals in terms of sharing aspirations for a better life. The present volume – the result of a massive collaborative effort between more than 120 individuals and institutions all over the world – is a bold attempt at helping the weaker players live up to the challenge of facing this battle in an informed and organized way. The Centre for Science and Environment (CSE), New Delhi deserves to be commended for organizing a network of this magnitude and bringing out such a fact-rich and well-designed publication as a decentralized network output.

Post 1972, the year of the United Nations Conference on the Human Environment at Stockholm, the world has seen a plethora of environmental agreements which have been largely a result of a number of alarmist scenarios painted by scientists. These relate to perceived threats faced by the global community due to a host of intermingling factors like climate change, biodiversity loss, ozone layer depletion and production of Persistent Organic Pollutants (POPs). All of these have become subjects of prolonged and acrimonious international debate, often culminating in major international agreements.

Unfortunately, a majority of these debates has remained restricted to a small minority of the scientific community. There is a need to mobilize the wider scientific community as well as representatives of the wider civil society, especially of the developing countries, if the outputs are to accurately reflect the varying perspectives of all possible stakeholders in the negotiation process, particularly those whose very survival is contingent upon the use of goods and services from their immediate environment. There have been very few attempts to demystify the complex pipeline of global environmental decision-making for these potential participants. It is this gap that the book begins to fulfil.

The first three chapters of the volume take a close look at three major environmental agreements – the United Nations Framework Convention on Climate Change (UNFCCC) in force from 1994, the Convention on Biological Diversity (CBD) in force from 1993 and the United Nations Convention to Combat Desertification (UNCCD) in force from 1996. These chapters take the reader on a guided tour of these conventions, unravelling in intricate detail the political nuances that marked the negotiation processes and the post-convention meetings of the Conference of Parties. They also summarize the state of scientific knowledge which provoked the negotiations; but simultaneously bring out the subtle value positions inherent in such knowledge. At places, the volume goes even further to challenge a 'mainstream' scientific paradigm, suggesting alternative perspectives. In pages 22–23, for example, it contests a World Resources Institute study on greenhouse gas emissions where the earth's ecological sinks are apportioned on the basis of a country's share in global emissions, suggesting instead an apportioning on the basis of a country's population. The results following from the two approaches are indeed strikingly different in terms of the relative share of industrialized and developing countries in causing the global warming problem. Similarly, throughout the discussion on the CBD in Chapter 2, it builds up a critique of the Northern position that biodiversity resources predominantly located in the South are 'a common heritage' while commercial products developed through

use of these resources are available only for purchase, highlighting, in the process several Southern initiatives which attempt to counter this position in practical terms.

Chapters four and five bring the reader up-to-date with the state of negotiations in the areas of POPs and forests, respectively, which have still remained inconclusive. While in the case of POPs – toxic chemicals which persist in the environment without breaking down – the North's unwillingness to make appropriate financial commitments is proving to be the stumbling block, lack of consensus towards a forest convention seems to stem from the very definition of sustainability. As in previous chapters, the authors critique the mainstream criterion for 'green' wood, arguing that direct control of local people needs to be made central to the issue of sustainability.

The next two chapters – six and seven – wade through the murky linkages between the world's economic system and the whole gamut of environmental concerns, ranging from multilateral investment agreements to intellectual property rights regimes related to biological resources. Indeed, the authors once again go beyond the analytical mode to lay down a proactive agenda for the South for protecting the rights and innovations of local communities in the face of Trade Related Intellectual Property Rights (TRIPS) provisions of the General Agreement on Tariffs and Trade (GATT) which are in contradiction to the CBD agreement regarding use of biological resources.

The remainder of the book – chapters eight and nine – explores the evolving institutional framework meant to support the agreements covered earlier. The emergence of the Global Environment Facility (GEF) as the international financial mechanism for enabling developing countries to take action for protecting the global environment has resulted in a new funding 'climate' where cost incrementality is set to become a guiding principle. This basically means that the GEF funds only that part of a project cost which results in global benefits – something which is almost impossible to determine in the case of most projects, especially in the biodiversity area. The authors question this idea as well as several more concrete issues like the GEF's push for protected

areas at the expense of sustainable use of biodiversity, as emphasized by the CBD. Finally, the book ponders over the idea of a World Environment Organization as an umbrella organization, bringing the environmental conventions together and acting as a countervailing influence on the World Trade Organization.

If the purpose of the volume is to bridge the gap between the often information-starved civil society of the South and the world's negotiating platforms, it serves the purpose adequately. If the aim is to provide the serious specialist researcher a pithy capsule on the science and politics of the environmental negotiations, it does an admirable job. The layout of the volume is extremely attractive with rich graphic material supporting the text throughout. It is a pity though that such a well-researched volume is without an index and a glossary. One hopes that CSE would keep its promise of continuing the series, and in the process, its efforts at opening eyes wide shut.

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The Environment History of South and South-east Asia: Nature and the Orient. Richard H. Grove, Vinita Damodaran and Satpal Sangwan (eds). Oxford University Press, YMCA Library Building, Jai Singh Road, New Delhi 110 001. 1998. 1036 pp. Price: Rs 1250.00.

This book meets the aspirations of nature lovers as well as persons dealing with natural history. It is one of the very few books depicting the environmental history of south and south-east Asia. The editors, Richard H. Grove of the Australian National University, Vinita Damodaran of the University of Sussex, UK and Satpal Sangwan of the National Institute for Science, Technology and Development Studies, New Delhi, have done a commendable job in editing papers written by eminent scholars in their

respective fields. The book, which is the outcome of a conference held in 1992 at New Delhi under the auspices of National Institute for Science, Technology and Development Studies, contains 31 papers under six units and two parts. The first part deals with 'Constructing nature and changing the landscape', while the second part deals with 'Colonial forest management and its impact on indigenous societies'. The first part has four units, viz. (i) The pre-colonial period; (ii) The colonial state and construction of nature; (iii) The colonial scientific community and its environmental agendas; (iv) The ecological demands and transforming impact of colonialism. The second part has two units, viz. (i) Forest management, 1840–1940; (ii) The damaging impact: Colonial forest management and indigenous societies.

Bridget Allchin deals vividly on the early men and environment in south-east Asia from 10,000 BC to 500 AD, while the aspect of deforestation in pre and protohistoric south Asia has been discussed lucidly by George Erdosy.

India has been known for her contribution to the world in the field of ecological knowledge and early ecological knowledge in India has been dealt with by J. Donald Hughes.

Water is a valuable resource which has been put to use by people of ancient India through different kinds of devices. Ranabir Chakravarti has dealt with creation and expansion of settlements and management of hydraulic resources in ancient India.

It is quite logical to think that the forests were quite intact in south and south-east Asia during pre-colonial India and its adjoining tropical countries. Anthony Reid has lucidly described the relation between humans and forests in pre-colonial south-east Asia.

The climate in India is similar to neighbouring countries like Thailand, Myanmar, etc. The editors are quite correct in incorporating articles written on Thailand by Janice Stargardt.

The second unit includes papers dealing with the colonial State and the construction of nature. Richard Grove deals with indigenous knowledge and the significance of south-west India for Portuguese and Dutch construction of tropical nature. Satpal Sangwan deals with the aspect entitled 'From gentle-