

Sustainable Management of Wetlands – Biodiversity and Beyond. Jyoti Parikh and Hemant Datye (eds). Sage Publications India Pvt Ltd, B-42 Panchsheel Enclave, New Delhi 110 017. 2003. 444 pp. Price: Rs 650.

The book under review gives a comprehensive account of different wetlands, ecology, biodiversity, socio-economic aspects, conservation and management strategies for sustainable utility of the ecosystem in India. These are presented in 12 chapters.

The first chapter by Y. N. Rao and Hemant Datye gives an appraisal of wetlands of India. It describes the definition, classification, distribution, economics and policies. 'Wetland mapping: a remote sensing perspective' is presented in the second chapter by P. S. Roy and Mukunda Dev Behra. It highlights the results of mapping some of the major wetlands using remote sensing techniques. The third chapter by M. V. M. Wafar and Sayeeda Wafar discusses the coral-reef ecosystem, its biodiversity, economic contribution, threats and conservation. The fourth chapter, 'Mangrove ecosystem of India: status, management and policy' by Sanjay Deshmukh and T. A. Rao, describes the ecosystem and its importance in the marine environment and conservation aspects. Man-made wetlands are described in chapter five. 'Wetlands and river systems: some experiments in their ecodevelopment planning and integration' by Prakash Gole. Man-made wetlands are more than the natural wetlands. Several approaches have been suggested to improve the quality of the rivers. The sixth chapter, 'An approach to indicators for wetland planning and monitoring and policy' by Hemant Datye and Jyoti Parikh, describes the indicators for the proper management of this system. The seventh chapter, 'Economic assessment and wetland management' by Jyoti Parikh and Hemant Datye, describes the economic contribution of wetlands. The salient features of the ecosystem of the Keoladeo National Park (KNP) over 10 years is presented in the eighth chapter by V. S. Vijayan and Lalitha Vijayan. The ninth chapter, 'People's participation in wetland conservation through conservation education: a case study of Keoladeo National Park, Bharatpur' by Prashant V. Mahajan, discusses ecological, economic and management perspectives of this

park. In the tenth chapter, 'The valuation of biodiversity within protected area: alternative approaches and a case study' by Kanchan Chopra outlines the critical issues about valuation and explores two specific approaches for valuation of KNP. The need and approach for a wetland protected-area network in India is described in chapter 11 by B. C. Choudhury and T. L. Raghu Ram. In the twelfth chapter, Jyoti Parikh, Hemant Datye and T. L. Raghu Ram have discussed the national wetland strategies and action plans.

Wetlands form one of the major basic, useful ecosystems on earth and are now under threat. The book under review may be useful to maintain sustainable utility of this ecosystem. I would recommend it to students, academicians, scientists, environmentalists, policy makers, legal advisors, social workers, etc.

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Methods of Risk Assessment of Transgenic Plants. IV. Biodiversity and Biotechnology. Klaus Ammann, Yolande Jacot and Richard Braun (eds) Birkhauser Verlag, P.O. Box 133, CH-4010, Basel, Switzerland. 2003. 177 pp. Price not mentioned.

During the last 50 years or so, the global population has more than doubled from about 2.5 billion in 1950 to about 6 billion today. Population projections of the United Nations estimate that the numbers would increase to about 10 billion by 2050. And what is most alarming is that: 95% of this increase will be in the developing world. It has been argued strongly that despite the undesirable impact of the Green Revolution, such as reliance on unsustainable inputs (fertilizers, irrigation, pesticides and non-renewable energy resources), and consequences such as salinization, soil degradation, etc., it saved the world from mass starvation, social upheaval and environmental disaster of immense magnitude. If we had to feed

this burgeoning population through increase of farm land alone, we would have witnessed a far serious impact on global biodiversity, primarily due to habitat loss through expansion of agriculture. The challenges ahead are formidable. The Green Revolution is slowing down. Annual growth increases in cereals have come down from about 3% in the seventies and eighties to only about 1%. For the developing countries, this decline in yield growth rate means that in all probability, productivity may not meet the demand of the growing population.

Recent advances in modern biology offer possibilities of genetic enhancement that are either difficult or cannot be accomplished through the conventional methods of crop improvement. These new tools of biotechnology can help provide the much needed technical advance to provide fresh impetus to the Green Revolution and extend benefits of modern science to rain-fed regions of this country. They have been largely bypassed by the resource-intensive technologies of the Green Revolution. The seed-embedded technology of genetic enhancement has the potential to offer immense benefits to millions of malnourished and poverty-stricken farmers of the rain-fed regions. Transgenic crops with improved resistance/tolerance to biotic and abiotic stresses, and nutritional upgradation of the staple food crops, will benefit the subsistence farmers substantially. However, as Conway, Rockefeller Foundation points out, this technological advance can make significant impact to the developing world provided other important components such as improved economic environment, micro-credits, and education and training, particularly to the rural women are also made available.

Perhaps the most contentious issue in relation to deployment of transgenic crops is the one that relates to impact on biodiversity. In many cases, developing countries happen to be centres of diversity for some of the main food crops. This genetic diversity of land races, adapted to local ecological conditions and farming practices, is of crucial importance to the sustainable crop-improvement programmes.

The book under review is an edited account of an international workshop in Bern on the effect of transgenic plants on biodiversity. The topics covered have been grouped under four sessions: (i) Impact of agricultural biotechnology on