

unabated, the book deals only with soil erosion and associated impacts. Notably, it does not deal with degradation of irrigated or "slightly used" lands such as tropical rainforests, where serious debate has been recently focused. This is understandable since the author has had a distinguished career concentrating on the problems and needs of erosion-prone areas, including the tropics. He had recently concluded a global review of successes and failures in aid-funded upland development projects with an emphasis on soil and water conservation. The two final chapters (6 and 7) of the volume present special considerations for soil and water management needs in the two most sensitive areas globally, semiarid regions and steep lands.

The primary management objective of the land husbandry approach is to integrate soil erosion protection and rainwater management with the enhancement of farm productivity. As such, it represents a subset of the overall goals of "sustainable development"; environmental (off-farm) considerations comprise the remainder. Implementing this seemingly simple objective, however, represents a drastic departure from the traditional "mind-set" behind most development projects. Reasons for this departure are well stated in Chapters 1 and 4 and include the increasing use of marginal lands, lack of appropriate technologies for such lands, excessive dependence on engineering measures for erosion control, frequent failure of even the best funded implementation projects, perpetual dependence on aid from donors, "top-down" approach to conservation planning, and insufficient commitment to orderly land-use planning and implementation at the national level.

The important requisites to and ingredients of this new approach are well presented in Chapters 2, 3, and 5. Among these are the equal emphasis on the conservation of both water and soil: the design of technologies that are well matched to prevailing site characteristics and human needs, the emphasis of simple and biological erosion and runoff abatement measures, the avoidance of blind adoption of alien technologies, the incorporation of valuable lessons learned from indigenous knowledge, the adoption of creative means of diffusing successful technologies to land users, and the systematic monitoring and evaluation of projects during all phases from conceptualization to postimplementation.

This book is a rarity in that it addresses the importance of land stewardship to many levels of clientele from policymakers to land-use planners and farmers. As we have come to expect from the author, the book is rich with his valuable experiences, well written, quite easy to understand, and would make a useful supplement to current text-

books and references for undergraduate teaching on land degradation and conservation.

SAMIR A. EL-SWAIFY, *Agronomy & Soil Science, University of Hawaii, Honolulu, Hawaii*

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CONSERVING BIODIVERSITY: A RESEARCH AGENDA FOR DEVELOPMENT AGENCIES.

*By a Panel of the Board on Science and Technology for International Development and the U. S. National Research Council. National Academy Press, Washington, D. C. \$19.00 (paper). ix + 127 p.; no index. ISBN: 0-309-04683-1. 1992.*

Like its predecessor, *Research Priorities in Tropical Biology* (National Academy of Sciences, Washington, D. C., 1980), this small book is packed with insight on what needs to be done about the two biodiversity crises—loss of species through landscape conversion and the relatively recent deterioration of the infrastructure whose job it is to provide the information and synthesis needed for understanding biodiversity in the first place.

Given that a global responsibility exists for conservation and stewardship of Earth's biodiversity and that this is no longer a challengeable idea, the panel clearly demonstrates what needs to be done and where the responsibilities lie. From the data-gathering and synthesis mode of biological inventories to the application of these syntheses toward sustainable uses of biodiversity in a realistic socioeconomic and cultural context, the book provides development agencies, those most able to alleviate (or exacerbate) the problems, with achievable targets across a wide spectrum of often intertwined potential solutions. Rather than point a finger of blame, the panel shows what concerns need to be (and until now have not been) funded and philosophically supported at all levels of government to improve a planetary situation that is rapidly becoming lethal. Among these, and perhaps the most important, is the creation of national infrastructures, first in those developing countries where the problems are worst, and in time in all developing countries. Such infrastructures, as the panel rightly documents, need to have competent researchers in solid, in-country institutions. Museums, universities, and government ministries form the foundation of the infrastructure, and the programs of the conservation-oriented nongovernment organizations are the outreach organs. The timeliness of this book (certainly not foreseen by the panel) is that it appears when a new and apparently environmentally savvy Executive takes over the White House. Mr. Vice President Gore certainly must be sent a gratis copy!

TERRY L. ERWIN, *Entomology, Smithsonian Institution, Washington, D. C.*