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## Environmental Management and Economic Development

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## BOOK REVIEWS

### ENVIRONMENTAL MANAGEMENT AND ECONOMIC DEVELOPMENT

GUNTER SCHRAMM and JEREMY J. WARFORD, Editors  
Baltimore: Johns Hopkins Press, 1989. Pp. 208.

Abstracting from the introduction, there are two parts to the book. The first part, consisting of chapters two through six, provides: (1) the usual litany of environmental problems in developing countries (although those problems are not limited to developing countries) and the factors which "produce" them; and (2) the usual litany of needed "policy" changes which must be made to change the factors to stimulate positive "environmental behavior" and reduce the adverse environmental effects and natural resources degradation of economic activities. However, if the situation is to be improved, two problems must be addressed: (3) how are the needed policy changes to be achieved; and (4) how are the changed policies to be implemented. Items (3) and (4) involve political will and substantial institutional changes, at all levels of government. The various authors are silent on how the former is to be found and the latter is to be achieved.

The second part of the book, consisting of the last five chapters, provides detailed analyses of particular cases involving agricultural and forestry operations. These analyses: (1) illustrate the adverse consequences of some of the "policy" failures enumerated in the first part; and (2) indicate, via empirical analyses, the components of alternative policies/programs which would yield reasonable sustainable utilization of natural resources, if they were implemented. The material in these chapters is interesting, well presented, and relevant to practitioners.

Mahar demonstrates quantitatively how government policies and actions have induced deforestation in the Amazon region. They have resulted not only in deforestation, but in most cases have yielded economically inefficient activities from society's point of view. Five policy reforms to preclude such results are suggested; no estimate is made of the probability that any one of them will be adopted.

Newcombe provides an excellent quantitative analysis of forest-crop agriculture-livestock systems in Ethiopia, illustrating how useful information for decisions can be generated with limited information. Anderson presents a similar quantitative analysis of the economics of afforestation and soil conservation projects, using data from Nigeria. His analysis shows that, if both productivity and environmental effects are adequately included, such programs can have positive net benefits to society.

Armitage and Schramm focus on demand for and supply of fuelwood in Africa, presenting estimates of the role of fuelwood in total energy use in various countries. Factors determining continued use of fuelwood in relation to other possible fuels are delineated. The typical pattern in the various countries is the increasing overexploitation, that is, beyond sustained yield, of forests to provide wood for fuel, as wood or charcoal, for urban areas. In various countries, the deficit increases each year, which has consequences in other sectors such as agriculture, for example, via increasing use of cow dung for fuel instead of fertilizer. The authors describe the *set* of measures the government of Malawi is implementing in order to reverse the degradation of forest resources in that country. The measures affect both supply and demand, consisting of: incentives to promote tree planting by smallholders and commercial users; increasing stumpage fees and vastly improving the system for collecting the fees; protecting and managing indigenous forests; directly promoting tree planting by farmers with various incentives; developing more energy efficient tobacco drying technology, household stoves, and charcoal production technology. The very important lesson is that it is the total *set* of measures which is necessary; "few, if any, of the individual elements can have an impact alone" (p. 167).

Dixon focuses his discussion on watersheds, lucidly emphasizing: (1) the linkages from mountain crest to the sea (and implicitly beyond); and (2) that actions and policies *external* to a watershed can, and usually do, have major impacts on watershed activities and productivity. These facts then require consideration of watershed management as involving multilevel economic, governmental, and natural systems (implicitly with technology imposed). This in turn requires: (1) "multilevel integrated analysis" (p. 190); and (2) implementation of the results of the analysis. Dixon does not indicate how the integrated analysis is to be achieved, given the always multiple agencies involved. (Various examples of analysis/planning efforts in the United States in multilevel contexts could have been cited; are there examples in developing countries?) Unfortunately, even if integrated analysis is achieved, which in itself is no easy task, achieving integrated management via linkages among multiple agencies is much more difficult, contrary to Dixon's statement (p. 198).

Some comments: One, the book deals with analysis and policy for environmental management at the macro level. There is very little which reflects how the results of the analyses: can be transferred from the office buildings in the capitol to the hills, valleys, plains where actual "management" takes place; can be translated into language and useful tools that those in the field can apply. This is true despite the repeated statement of the necessity for inducing micro decisions which are consistent with macro policies.

Two, the book is NOT about "management," in the fundamental sense that management of a resource involves a *set* of activities, e.g., analysis, planning, permitting, cruising timber, operations, monitoring, charging. The book is about governmental policies which affect the decisions and therefore the practices of public and private managers of natural resources.

Three, the focus of the volume is primarily on agriculture and forestry. Environmental problems and environmental management in urban areas are ignored, despite the fact that three-fifths to three-fourths of the global population currently lives in urban areas, with all estimates indicating that proportion will continue to increase. The editors clearly did not try to include those problems. However, anyone who has been involved with environmental problems in developing countries would expect a book with the given title to include the urban scene.

Four, on page three the editors write, "On balance, the problems are getting worse, and environmental stress and destruction are becoming the norm rather than exception in most of the developing world." Yet in the next paragraph they write, "there are grounds for at least some cautious optimism." The evidence presented in the book does not really support that optimism. Improvement in analyses is far from being sufficient to reverse the downward trend. As the authors write on page 3:

Management of natural resources should thus become a standard consideration in macroeconomic and sector analysis, and the physical linkages between sectors need to be critically examined. Governments must overcome major institutional obstacles. New approaches, which would provide incentives and rewards to policymakers, must be developed to increase interagency cooperation, avoid overlapping jurisdictions, and prevent vested interests from paralyzing these new initiatives.

Five, the book is another collection of essays, gathered under one heading. Inevitably, there is considerable repetition, various authors making the same point(s). Of course it takes substantially less effort to edit such a book than it does to write a concise, well-structured book. The question is, how well does this book serve the reader? There is relevant and useful material, especially in the last five chapters. What would have been considerably more useful would have been a volume in which the problems and prescriptions identified in chapters two through six would have been synthesized, and the case materials used cogently for illustrations. A number of trees would have been saved. The editors certainly have the experience to do so.

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