

LITERATURE

Book Reviews

LAND USE AND THE STATES. By Robert G. Healy. Johns Hopkins University Press, 1976. 233 pp. \$10.00. (Baltimore, MD 21218)

THE STATES AND LAND USE CONTROL. By R. Robert Linowes and Don T. Allensworth. Praeger Publishers, 1975. 243 pp. \$17.50. (111 Fourth Ave., New York City 10003)

Over the past five years there has been a surge of interest in innovative state-level land-use control powers that have been created in some states and proposed in others. The most obvious origin of this wave of legislation was the environmental quality issue, many of whose spokespersons argued that the use of land was a common denominator of such environmental problems as pollution, loss of open space and farmland, urban sprawl, and aesthetic deterioration. Other origins, however, included the reassertion of more traditional regionalist or at least antilocalist arguments: spillover fiscal effects, such as land speculation and undesirable competition for tax ratables among fragmented local jurisdictions; barriers to housing opportunities for low-income families; and the unwillingness of some local jurisdictions to accept certain large developments—power plants, for instance,—whose proponents alleged a “major regional benefit” that should override local self-determination.

Because of this mixture of origins, it is important to examine the implementation of land use laws dispassionately, with careful attention not only to their effectiveness as tools but also to the ends which they serve. The only certain effects of such legislation are an absolute increase in the powers of the state to regulate land use, and a relative increase in the role of the state vis-à-vis the role of local governments. The extent of these effects and their consequences for the achievement of social goals must be investigated empirically; and it is this investigation that each of the two books here reviewed seeks to provide.

At the outset, it must be noted that these books join a literature that already includes several similar studies: Fred Bosselman and David Callies' *The Quiet Revolution in Land Use Control* (Government Printing Office, 1972), Luther Carter's *The Florida Experience* (Johns Hopkins Press, 1975), and Elizabeth Haskell's *State Environmental Management* (Praeger, 1973). Bosselman, Carter, and Haskell describe some or all of the case studies used by

Healy and by Linowes and Allensworth, and these earlier authors make a wide range of policy recommendations, as do the Council of State Governments in *Land: State Alternatives for Planning and Management* (1975) and the Citizens' Advisory Committee on Environmental Quality in *The Use of Land* (1973). What different perspective or information, then, does either of these new studies provide?

Healy's *Land Use and the States* differs in several important and valuable respects from all these other studies, even though it uses case studies from Vermont, California, and Florida that have already been discussed. In the first place, Healy's study, current to mid-1974 and including an epilogue of later developments through October 1975, is the only one to include careful empirical study of the *implementation* of laws. Virtually all others, Linowes and Allensworth included, are limited to theoretical predictions of the likely effects of each law based upon its content and legislative history, and occasionally upon a few initial events after enactment, which may or may not be indicative of longer-term adjustments.

Second, Healy's emphasis is not on the case studies for their descriptive interest, but on the broader problems and issues of state-level land use controls that these three examples — and briefer mention of others in New York, Maine, Connecticut, Maryland, North Carolina, Colorado, Oregon, and Hawaii — may illuminate. He establishes four grounds that may warrant state intervention: interjurisdictional spillovers, divergences between local and broader interests, lands not subject to effective local control, and problems associated with implementing state policies or investments. Using these, he develops a succinct taxonomy of the principal problems that have led to calls for increased state involvement in land use control. Against this background, the case studies and other examples provide insights into the responses to problems that *are* being tried by various states. They show how well these responses are working, what issues have arisen in the process, and lead to a coherent set of policy principles for coordinated state and local land use controls.

Finally, Healy's book, unlike several other studies in this field, is well written. It says what it has to say without watering down, sweeping generalizations, heavy descriptive detail, or academic theory. It hangs together well and argues from real experiences and persuasive logic rather than from abstract models. For all these reasons and its low cost, it will be a welcome study for professional and layman alike.

Healy's recommendations point toward a system of mandatory land-use controls at the local level accompanied by selective reviews of land developments at the state level. He does not hold any particular case as a model for emulation, but concentrates on identifying policy principles, consistent with the problems to be solved and with his criteria for state intervention, to guide future decisions in other states and conceivably at the federal level if land-use legislation should again be considered there. Among the principles he advocates are (1) that power over land-use should be lodged with the level of government appropriate to the problem; (2) that the decision process should be open and political rather than technical and "scientific"; (3) that controls must be based upon explicit goals, empirical knowledge, and understanding of behavioral responses; and (4) that land use controls need not and should not await the adoption of comprehensive plans.

These recommendations are quite general and suggest the book's principal limitation. It falls back upon generalized recommendations toward the end rather than providing specific guidance. In addition, one must note that the case studies Healy used did not address several of the major problems that he identified at the beginning, such as distortion of housing apparatus. In the end, his interest is primarily in "environmental" land use controls rather than in exclusionary zoning and other socio-economic land use issues. Despite these criticisms, however, it is an upbeat, interesting, and readable study.

Although it has a similar title and subject matter, Linowes and Allensworth's *The States and Land Use Control* is a strikingly different study, and in general the comparison is not a favorable one. As noted above, this material was written at least one or two years earlier than Healy's and its case studies—primarily Hawaii, Vermont, and Maryland, with briefer discussions of Oregon, Florida, and Maine—appear to have been developed almost exclusively from a review of secondary sources rather than from first-hand research. As a result, the conclusions are less illuminating and certainly less convincing than Healy's.

In addition, Linowes and Allensworth frame their case studies in a different context than Healy. Where Healy uses identifiable current problems, Linowes and Allensworth use a rather short and unnecessary chapter on academic, descriptive theory (the "systems concept" applied to state government, which reappears only in an equally theoretical and discrete final chapter), followed by an interesting but necessarily cursory chapter on the history of state planning. Probably the most valuable perspective in the book is contained in the second chapter, called "State Planning is not New." This point is well

taken. Few if any studies in this field have paid attention to the successes, failures, or other evidence of previous state planning efforts, and thus miss an important source of potential insight into the possible fate of current efforts.

With the exception of this one historical chapter, however, Linowes and Allensworth's study is both less interesting and less valuable than Healy's. Its style is occasionally awkward, it indulges the presentation of various extraneous points that are of greater interest to the author than to the reader, and it needs more rigorous editing to bring its many bits and pieces together into clear lines of argument.

A more fundamental problem, however, is that the apparent purpose of this book is not to analyze state planning efforts dispassionately but to debunk them, to make room for the authors' preferred solution. Their central point can be summed up as "none of the state planning efforts so far have been clearly proven effective, so what we need instead is reform of state enabling legislation." This is a quite different recommendation from Healy's: a radical localist solution, accompanied by corollary recommendations that states avoid creating any comprehensive land use controls even for so called "critical areas", and that they focus instead on specialized controls for particular land uses.

Even if one agrees with this idea, which is open to considerable disagreement, it is fair to note that the authors have made only a utopian case for it. They are sweepingly critical of the innovations that *are being tried* on the grounds that these innovations are only partially successful so far and that they ignore what the authors consider to be the political realities of state government. However, nowhere do they address the political realities of achieving their own proposed solution, nor do they cite a single state in which the reform of state planning enabling legislation has even been tried.

Unfortunately, therefore, Linowes and Allensworth's study is not only rather rough and awkward reading, but unconvincing. It is valuable that we are reminded of the history of state planning, and it is certainly useful to see the reform of enabling legislation suggested as one other possible approach to state land use planning controls. However, the case for this approach must be made in a more realistic and positive way than by casually dismissing present efforts and substituting the unproven idea of enabling legislation reform.

However, it is only fair to note that neither of these books gives any rigorous attention to at least two issues of great significance in predicting the future of state land-use control efforts. One is the extent to which effectiveness of land-use controls is related to the *level* of con-

trol (local vs. state) or the *nature* of control (taxation vs. zoning). If the problem is in the nature of the control system, for instance, a shift to a stronger state role may have little positive effect, while bringing problems of its own; and only limited discussion has been presented concerning the problems of increased state control. Second, neither book makes a thorough case concerning the transferability of innovations in a few states to others. Linowes and Allensworth argue that Hawaii and Vermont are atypical or even unique states, whose innovations are not easily transferable. This leaves us with the unanswered question of how effective land use guidance *can* be achieved in other states. Healy leaves us with principles, but not with political strategies for their implementation. For answers to these and other questions, we shall have to await further investigations.

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WATER RESOURCES OF THE WORLD. By Frits van der Leeden. Water Information Center, 1975. 568 pp. \$32.50 (14 Vanderventer Ave., Port Washington, NY 11050)

Water Resources of the World presents country-by-country statistics on streamflow, groundwater, irrigation, total and consumption water use, water-use projections, and other water resources. In addition, there are data on characteristics of major rivers (including water quality for some); data on characteristics of oceans, major lakes, and reservoirs; data on hydroelectric and thermal generating capacities; and information on the availability of hydrologic data in developing countries.

Climatic information is generally limited to monthly averages. Estimates of the spatial and temporal characteristics of precipitation, useful in hydrologic studies, are not provided. The climatic data that are given could be used to compute average monthly or annual water balances of a region. Supporting information on land use, population, and national economy facilitates the use of water resources data for making comparisons. However, kinds of data and lengths of records vary so much between countries that only limited comparisons are possible.

Most water quality or hydrologic studies require information more detailed or specific than you will find in *Water Resources of the World*. Nevertheless, the book does

indicate the availability of certain information and identifies the sources of the water resources data reported. It should serve as a useful reference for those involved in water resources studies.

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EDITOR'S REVIEWS AND NOTES

LAND USE, OPEN SPACE, AND THE GOVERNMENT PROCESS: THE SAN FRANCISCO BAY AREA EXPERIENCE. Edited by Edward E. Smith and Durward S. Riggs. Praeger Publishers, 1975. 197 pp. \$13.50. (111 Fourth Ave., New York City 10003)

The Commonwealth Club of California commissioned this study of open space preservation in the Bay Area. Jones and Stokes Associates performed the study, which was edited for publication by Edward Smith and Durward Riggs, officers of the Club.

The book is two-thirds description, one-third prescription. The first two chapters of Part I describe existing open space and future requirements for open space as they relate to regional population trends and urban land use patterns. The third chapter of Part I is a status report entitled "Methods of Preserving Open Space."

In Part II (four chapters), the subject is government and private sector influences on open space preservation. Local government, intergovernmental cooperation, and powers to regulate development are emphasized. The editors remind us that open space preservation depends as much on orderly development as it does on land acquisition.

Much of the description in Parts I and II is a bland recitation of governmental powers and organization. It tells what can be done, rarely what is being done. How much is not being done comes through in Part III, "Alternatives," especially in the last chapter, "Regional and State Coordination: The Real Issue." If the Bay Area is to achieve a goal of 3.4 million acres of permanent open space set by the Association of Bay Area Governments in 1972, then new tax policies, greater reliance on private ownership, strengthened local planning, and, most important, an effective, statewide open space agency will be required.

The contents do not really live up to the promise of the title, but this book does contain useful information and can be consulted with profit by anyone working to preserve open space.

ENVIRONMENTAL DATA HANDLING. By George B. Heaslip. John Wiley & Sons, 1975. 203 pp. \$19.95. (605 Third Ave., New York City 10016)

Environmental data are gathered by means of field or laboratory observations, electronic monitoring devices (transducers), and remote sensing, which, it has been said, includes everything from a hand-held camera on a stepladder to an ERTS satellite. This introductory text and reference book is concerned with transducers and remote sensors and the processing of the electronic signals they generate by analog and digital computers.

The combination in one volume is significant. Mr. Heaslip covers the whole spectrum of techniques and interactions that are usually the subjects of separate volumes. There are chapters on analog FM recording of test and survey data, magnetic data tape recorders, time code, analog data display techniques, digital pulse code modulation (PCM) data, computer output microfilm, and digital computer use for physical-features detection and classification in addition to five chapters generally on remote sensors. Every chapter places heaviest emphasis on how things work. Diagrams are plentiful and clearly drawn. The need for proper design of data acquisition systems is stressed.

Two mathematical, background chapters are presented on computer number systems and the techniques of dynamic analysis. These chapters underscore a weakness of writing throughout the book. In a text and reference work, the reader expects utmost clarity of explanation and example. That standard is not met in this book. To give one example, the term "dynamic analysis" is neither defined in the chapter devoted to explaining its basics nor listed in the glossary at the end of the book. The book's length, 200 pages, and the number of "References," 16 poorly-cited titles, seem inadequate for a volume in an environmental sciences and technology series.

LOSING GROUND: ENVIRONMENTAL STRESS AND WORLD FOOD PROSPECTS. By Erik P. Eckholm, W. W. Norton & Company, 1976. 223 pp. \$3.95 paper. (500 Fifth Ave., New York City 10036)

Worldwide food shortages make headlines. Meanwhile, unnoticed, we are destroying the basis of food production on earth. In this study supported by the United Nations Environmental Program, Erik Eckholm of the Worldwatch Institute carefully documents accelerating destruction of bioresources in plains, desert, mountain, forest, tropical, and marine environments.

The book is not long—187 pages of text and another 30 pages of notes and additional sources—but every page counts. Examples of environmental stress are taken without prejudice from around the world, ancient and modern; no area or culture group or civilization escapes indictment. The research is impressive. Extensive use is made of rarely-seen technical reports and international documents; the notes and sources alone are worth the paperback price.

In his foreword, Maurice Strong writes that *Losing Ground* "goes to the heart of the issue of human survival." The prospects are not very bright. Eckholm doubts "a sudden cataclysmic global famine." Rather, he sees chronically depressed conditions for the poorest one-fourth of mankind:

Marginal people on marginal lands will slowly sink into the slough of hopeless poverty. Some will continue to wrest from the earth what fruits they can, others will turn up in the dead-end urban slums of Africa, Asia, and Latin America. Whether the deterioration of their prospects will be a quiet one is quite another question.

PEOPLE OR PENGUINS: THE CASE FOR OPTIMAL POLLUTION.

By William F. Baxter. Columbia University Press, 1974. 110 pp. \$1.95 paper. (562 West 113th St., New York City 10025)

A reviewer can hardly improve upon the title for explaining what this book is about, nor can he resist quoting Baxter on penguins:

My criteria are oriented to people, not penguins. Damage to penguins, or sugar pines, or geological marvels is, without more, simply irrelevant. . . . Penguins are important because people enjoy seeing them walk about rocks; and furthermore, the well-being of people would be less impaired by halting use of DDT than by giving up penguins. . . . I have no interest in preserving penguins for their own sake.

Nothing could be further from the main concerns of ecological thinking, the notion of a land ethic, or the "rights" of non-human organisms. The case has been made before on the same grounds, but here we have it stripped to its essentials and brilliantly argued. The first three chapters are primers of environmental economics on defining a "good" environment and understanding the problem of the commons and its regulation. Baxter's control strategy, set forth in the final two chapters, relies on effluent taxes geared to the dollar-value of harm

caused to people per unit of pollution. Present "tailor-made" strategies rest on legally-mandated requirements and class action suits, which hold no incentive for reducing pollution. He shows how an effluent tax system would work internationally. All of this is quite persuasive and leaves the reader wondering whatever happened to the idea.

According to Baxter, clean air and clean water are luxuries; to have them we must divert resources from the productive economy. These sacrifices of "productive efficiency" are his main concern. Others will have different priorities, but the case for optimal pollution poses hard questions of law, policy, economics, and public welfare that cannot be ignored.

WHEN VALUES CONFLICT: ESSAYS ON ENVIRONMENTAL ANALYSIS, DISCOURSE, AND DECISION. Edited by Laurence H. Tribe, Corinne S. Schelling, and John Voss. Ballinger Publishing Company, 1976. 178 pp. \$15.00.

The essayists in this book are all academics: economists (2), sociologist, lawyer, philosopher, engineer, and physicist. Their essays are products of a RANN-National Science Foundation project carried out by the American Academy of Arts and Sciences. The Academy gathered together a prestigious group in December 1971 to discuss "the incorporation of humane values into environmental decision making." Discussions continued until September 1974.

There are some fresh thoughts and insights here, if you will avoid the preface and ignore the authors' almost ritual incantations as to the interim, tentative, and indefinite nature of their conclusions. I recommend especially "Failures of Discourse: Obstacles to the Integration of Environmental Values into Natural Resource Policy," by Robert H. Socolow, and "The Rights of Nature," by Charles Frankel. What they write is, in the truest sense of the word, humane.

A companion volume to these essays, *Boundaries of Analysis: An Inquiry into the Tocks Island Dam Controversy*, will be reviewed in a future issue.

BOOKS RECEIVED

THE CHANGING DREAM. By John V. Tunney. Doubleday & Company, 1975. 120 pp. \$5.95. (Garden City, NY 11530)

THE COSTS OF CONGESTION: AN ECONOMETRIC ANALYSIS OF WILDERNESS RECREATION. By Charles J. Cicchetti and V. Kerry Smith. Ballinger Publishing Company, 1976. 112 pp. \$15.00 (17 Dunster St., Cambridge, MA 02138)

DESIGN AND CONTROL OF CHEMICAL PROCESS SYSTEMS. By J. R. Borer. McGraw-Hill Book Company (UK), 1974. 152 pp. (1221 Avenue of the Americas NYC 10020)

THE ECONOMICS OF NATIONAL FOREST MANAGEMENT. By Marion Clawson. Resources for the Future, 1976. RFF Working Paper EN-6. 117 pp. \$4.50. (1755 Massachusetts Ave., N.W., Washington, DC 20036)

THE ECONOMICS OF NATURAL RESOURCE DEPLETION. Edited by D.W. Pearce. with the assistance of J. Rose. John Wiley & Sons, 1975. 220 pp. \$15.00. (605 Third Ave., NYC 10016)

THE ECONOMICS OF REFUSE COLLECTION. By Peter Kemper and John R. Quigley. Ballinger Publishing Company, 1976. 181 pp. \$13.50. (17 Dunster St., Cambridge, MA 02138)

ENERGY AND HUMAN WELFARE—A CRITICAL ANALYSIS. Edited by Barry Commoner, Howard Boksenbaum, and Michael Corr. Volume 1: *The Social Costs of Power Production.* 217 pp. \$14.95. Volume 2: *Alternative Technologies for Power Production.* 213 pp. \$14.95. Volume 3: *Human Welfare: The End Use of Power.* 185 pp. \$14.95. 3-volume set: \$40.00. Macmillan Information, 1975. (866 Third Ave., NYC 10022)

ENERGY FOR SURVIVAL: THE ALTERNATIVE TO EXTINCTION. By Wilson Clark. Anchor Books/Doubleday, 1975. 652 pp. \$4.95. (Garden City, NY 11530)

ENERGY: THE SOLAR-HYDROGEN ALTERNATIVE. By J. O'M. Bockris. John Wiley & Sons, 1976. 365 pp. \$27.50. (605 Third Ave., NYC 10016)

ENVIRONMENTAL GEOLOGY. Edited by Frederick Betz, Jr. Dowden, Hutchinson & Ross, 1975. Benchmark Papers in Geology, v. 25. 390 pp. \$27.50. (Box 699, 523 Sarah St., Stroudsburg, PA 18360)

ENVIRONMENTAL INDICES. By Herbert Inhaber. John Wiley & Sons, 1976. 178 pp. \$14.50. (605 Third Ave., NYC 10016)

ENVIRONMENTAL IMPACT OF NUCLEAR POWER PLANTS. Edited by R. A. Karam and Karl Z. Morgan. Pergamon Press, 1976. 546 pp. \$35.00. (Maxwell House, Fairview Park, Elmsford, NY 10523)

ENVIRONMENTAL LAW AND THE SITING OF FACILITIES: ISSUES IN LAND USE AND COASTAL ZONE MANAGEMENT. By Michael S. Baram and others. Ballinger Publishing Company, 1976. 255 pp. \$16.50. (17 Dunster St., Cambridge, MA 02138)

ENVIRONMENTAL MANAGEMENT: ECONOMIC AND SOCIAL DIMENSIONS. Edited by George F. Rohrich. Ballinger Publishing Company, 1976. 324 pp. \$17.50. (17 Dunster St., Cambridge, MA 02138)

THE INTERNATIONAL POLITICS OF NATURAL RESOURCES. By Zuhayr Mikdashi. Cornell University Press, 1976. 214 pp. \$12.50. (124 Roberts Place, Ithaca, NY 14850) pub date 4/30/76

INTERPRETING THE ENVIRONMENT. By Grant W. Sharpe. John Wiley & Sons, 1976. 566 pp. \$14.95. (605 Third Ave., NYC 10016)

INTRODUCTION TO INSECT PEST MANAGEMENT. Edited by Robert L. Metcalf and William H. Luckman. John Wiley & Sons, 1975. 587 pp. (605 Third Ave., NYC 10016)