

Preface

The combination of the two words *Ecologic* and *Economic* in the title of this book, is an unusual one. It is set forth, nevertheless, as a true combination, in the sense of a synthesis of analyses of two systems within the world of actuality. Throughout this book, we stress the need for this synthesis. We constantly assert that no longer can regional development and regional planning be treated in their traditionally narrow contexts. Emphasis on the strict economics of such development and planning, with only passing consideration of physical environment and design, let alone of social, political, and other cultural factors, can no longer be tolerated. Whether we look at the problems of planning and development within the New England states, or metropolitan Budapest, or the environs of Lake Baikal, or in innumerable other regions of the world, we are confronted with the reality that (1) control of ecological and physical disturbances and (2) design of the environment are key elements of economic development and planning work. Even conscious redesign of the environment may be required.

The above view represents a new dimension which must be brought into our current-day analysis. When the research for this book was begun, on the wise use of Continental Shelf resources, the need for this new dimension was not clearly perceived. In many ways the authors stumbled into a full and sharp awareness of this need. This stumbling is reflected in the structure of the book. We cannot say that this book systematically attacks and studies the resource development potentials of a case area, against the background of this broader conception of regional development and planning. Nonetheless, in our attempt to help evaluate the Continental Shelf resources of the United States, with particular reference to a New England site (as was required by the contract which provided the basic support of our research) we have been able to probe somewhat systematically into some of the basic interrelations of this broader conception.

This book is not a traditional work; it contrasts sharply with books the senior author formerly has written or contributed to. It combines many objectives in a way which is not highly structured. A first objective is to make regional planners and other social and environmental analysts at or close to the decision-making level aware of the intricate interrelationships between the economy and the ecosystem, and between economic development and environmental management. For such individuals, it was necessary to present in a broad non-technical fashion some of the conceptual framework and methodology.

A second objective is to demonstrate how existing methodology can be put to work on current problems. Here again, it was desirable to present such methodology briefly and in broad, text-book fashion (and to refer the reader elsewhere for full, technical discussion) while illustrating the use of one or more elements of this methodology in a particular case study.

A third objective is to achieve some scientific advance. Here the authors were motivated not only to develop a conceptual framework more adequate to the task of interrelating the economic and ecological subsystems but also to demonstrate

how the requisite empirical materials can be obtained in order to make such a framework operational.

A last objective is to conduct a case study for the development of an area wherein the interdependence of the economic and ecologic subsystems is explicitly involved. Not only does this require the collection of a meaningful set of highly detailed data and their proper processing, but also forces a formulation, against the background of our extended conceptual framework, of at least a somewhat more adequate methodology than has hitherto been employed.

Because of these several objectives, this book will undoubtedly provoke much criticism. There will be those economists and regional scientists who find the presentation of techniques in Chapter 2 too superficial and not sufficiently refined—but our aim is not to discuss in full these techniques and all the evaluations that have been made of them elsewhere, but rather to acquaint planning analysts and natural scientists with them. There will be those natural scientists who will undoubtedly find Chapter 3 much too oversimplified and insufficiently documented; but again much of these materials are presented merely to acquaint planners and social scientists with the ecologic system. There will be scholars who undoubtedly will claim that a broad conceptual framework such as depicted in Table 4.3 should not be seriously set forth until many, many more of the cells have been filled in with real data and until some formal statistical testing of stability of the production process within the ecosystem is conducted. To meet this criticism would require several decades of research. Such would preclude the opportunity of our having a full reaction from the academic community that might suggest changes in emphasis and approach before committing additional heavy investments in this area of research. Hence we believe that a forceful presentation of our initial exploratory efforts, however tentative, is consistent with wise research policy. Furthermore, we would be pleased if our inadequate materials motivate natural scientists to put together their data and findings in a more consistent, comprehensive framework. Most natural scientists pursuing research in their own specialized domains have failed to effect a systematic, coordinated presentation of their diverse findings within the highly interrelated ecosystem.

Finally, there will be those who find our case studies—e.g., those on ilmenite recovery and on the recreational complex for the Nook site of Plymouth Bay—as insufficiently developed. Admittedly we could have pursued the research for these case studies at greater depth and length; but our purpose is not to present complete, fully documented case studies, each of which could well require a full book-length manuscript. Rather, our purpose is to indicate how case studies can be deepened and made more relevant against the background of our extended conceptual framework and hopefully more adequate methodology.

Hence, while we recognize the validity of many criticisms that the “unfinished” character of this book may generate, we reiterate that our research represents only an initial effort. It is only an initial scientific exploration of the linkages between the economic and ecologic systems. It is only an initial attempt to acquaint analysts at the decision-making levels with such linkages and some of the methodology available for examining the implications of diverse policy alternatives. It is only an initial probe into the application of some of this methodology.

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The senior author assumes full responsibility for the book. At many places he overruled his associates, especially John Kissin, when they urged that more time be

spent on improving, refining, and restating more rigorously parts with which they were dissatisfied, or where they differed from him in matters of analytical judgment.

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