

Preface

The Workshop on Critical Problems of the Coastal Zone was held in Woods Hole, Massachusetts, 22 May–3 June, 1972. The Workshop was cosponsored by The Institute of Ecology and the Woods Hole Oceanographic Institution, and supported by funds supplied by the National Science Foundation and by the Rockefeller Foundation. This volume presents the conclusions and recommendations of the meeting, and summarizes the extensive background material that was available at the workshop and which formed the basis for the decisions reached.

In June 1971, The Founding Institutions of The Institute of Ecology convened a Coastal Ecosystems Study Conference in Houston, Texas. A major conclusion of this conference was that an intensive multidisciplinary workshop on the coastal zone was needed to define the critical problems, to examine and evaluate available information, and to recommend interdisciplinary research needed to achieve an understanding of these complex problems. It was concluded that necessary decisions concerning multiple use of coastal zone resources require a sound factual base, and it has been the goal of the Workshop to provide a compilation and evaluation of available information to define the present status of this factual base. It has been recognized from the start that existing information is inadequate to reach firm and final decisions on many of the problems, and that the Workshop would be one step on the way to develop, improve, and refine both the factual information and the understanding needed for the wise and effective use of the coastal zone.

A steering committee of five was appointed at the June meeting in Houston, Texas, and included Bostwick H. Ketchum, chairman; David Jameson, deputy chairman; Rezneat Darnell, Gerard Mangone, and Ruth Patrick. Planning meetings were held in Durham, N. H., in August and in Washington, D. C., in December with the goal of identifying potential workshop participants and establishing a workshop structure. The steering committee was enlarged in January by the inclusion of eight additional working group chairmen including: John Armstrong, Richard Bader, Donald Hood, J. Laurie McHugh, Dennis O'Connor, Robert Ragotzkie, John Teal, and Robert Warren. Dr. Richard Kolf of NSF/RANN actively participated in most of the planning meetings. Subsequent planning meetings for the purpose of devising a comprehensive set of interdisciplinary topics and for the selection of workshop participants were held in Philadelphia in January and Miami in April.

In preparation for the interdisciplinary workshop deliberations, the participants developed discipline-oriented position papers, which were used as a basis for discussions. At the mid-April planning meeting, the steering committee selected general topics to be addressed during the workshop by interdisciplinary panels. It was felt that deliberations of these topics during an intensive two-week session could provide scientists, government agencies and private groups with an authoritative assessment of coastal problems which could be used as a starting point in the process of making more rational management decisions.

Approximately sixty professionals representing many disciplines were involved in the workshop and in the preparation of the final report. In addition, about forty other contributors were involved in the pre-workshop preparations or attended the workshop for shorter periods of time. The specialists who cooperated in this interdisciplinary project were drawn from a broad range of disciplines including biology, chemistry, ecology, law, economics, engineering, oceanography, and sociology, and from research institutions, universities, government agencies (federal, regional, and state) and private enterprise. Participants at the workshop acted as individuals and not as representatives of their agencies or organizations.

This report represents the professional judgment of the participants on the problems created by man's use of coastal resources. Guidelines and recommendations are presented for actions which can be taken to ameliorate, correct or improve present or predicted deterioration of the coastal environment. The specific conclusions and recommendations of the workshop are summarized in Chapter 1 of this book. All participants at the workshop were involved in the discussions which led to these conclusions and a majority of workshop participants have endorsed these conclusions and recommendations.

The subsequent sections of the report contain the justification for the conclusions and recommendations presented in the summary. These sections were developed through intensive discussion and study by the participants who were divided among the interdisciplinary panels. They were then edited for form and smoothness in a post-workshop session by the steering committee, but great care was taken not to alter emphasis or meaning of important points. The participants who attended the workshop have not had an opportunity to examine the final wording of these expanded sections; therefore, it should not be as-

sumed that every participant subscribes to every statement presented in Parts II and III of the report.

The interdisciplinary environmentally oriented workshop which prepared this book is a relatively new social invention and is an extension of such programs as the National Academy of Sciences Summer Study Groups. Much credit for its development and for its application to the environmental field must be given to Carroll Wilson and William Matthews of MIT, whose Study on Critical Environmental Problems (SCEP) has been a model for other organizations. The workshop concept is unique because it can mobilize and focus the energies of individuals from a variety of scientific and applied fields and thus clarify important questions which would otherwise remain obscure. This type of workshop bypasses the traditional departments of our universities which tend to unduly restrict the free-ranging intellect of its faculty. Also, it does not encourage the reward system that too often credits individuals rather than group efforts which can make individual insights possible. The interdisciplinary workshop encourages cooperation, and it attempts to give equal voice to all participants in the expression of varied opinions and ideas. Such workshops have been productive, so far, by specializing and designing the task that must be accomplished. The goal now is to develop and implement equally productive organizational relationships for conducting the work; work such as that spelled out by the several recommendations of this workshop. This is the task immediately confronting us if the fullest contributions of the natural and social sciences are to be realized by society.

We gratefully acknowledge financial support for the Coastal Zone Workshop which was provided by a grant from the National Science Foundation through the Research Applied to National Needs (RANN) Program and by a grant from The Rockefeller Foundation. Many workshop participants attended the full two-week session with the financial support of their own organizations. Without this broad organizational support, and without the interest and enthusiasm that was shown by other contributors, the participants could not have developed a report of this depth. We wish to thank all those who gave of their time and energy to this workshop.