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NOAA COASTAL OCEAN PROGRAM
Decision Analysis Series No. 5



ECONOMIC VALUATION OF NATURAL RESOURCES

A Handbook for Coastal Resource Policymakers



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Coastal Ocean Office

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June 1995

U.S. DEPARTMENT OF COMMERCE
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This publication should be cited as:

Lipton, Douglas W., Katherine Wellman, Isobel C. Sheifer and Rodney F. Weiher. 1995. Economic Valuation of Natural Resources--A Handbook for Coastal Resource Policymakers. NOAA Coastal Ocean Program Decision Analysis Series No. 5. NOAA Coastal Ocean Office, Silver Spring, MD. 131 pp.

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Note to Readers

Economic Valuation of Natural Resources: A Handbook for Coastal Resource Policymakers is the outcome of COP-sponsored environmental valuation workshops. As the text to support the teaching in these workshops developed and as the need to transfer this information to a wider audience of coastal managers than workshop attendees became apparent, it was decided to present the Handbook as a stand-alone document. The Handbook is a unique blend of writing by highly regarded experts in the field specifically tailored for the management community and input by managers who have attended the COP workshops. Each workshop participant is asked to provide comments on the curriculum, teaching effectiveness, and materials. Over the past three years, these comments have helped us to improve all aspects of the training.

The NOAA Coastal Ocean Program (COP) provides a focal point through which the agency, together with other organizations with responsibilities for the coastal environment and its resources, can make significant strides toward finding solutions to critical problems. By working together toward these solutions, we can ensure the sustainability of these coastal resources and allow for compatible economic development that will enhance the well-being of the Nation now and in future generations. The goals of the program parallel those of the NOAA Strategic Plan.

A specific objective of COP is to provide the highest quality scientific information to coastal managers in time for critical decision making and in a format useful for these decisions. To help achieve this, COP inaugurated a program of developing documents that would synthesize information on issues that were of high priority to coastal managers. A three-step process was used to develop such documents: 1) to compile a list of critical topics in the coastal ocean through a survey of coastal resource managers and to prioritize and select those suitable for the document series through the use of a panel of multidisciplinary technical experts; 2) to solicit proposals to do research on these topics and select principal investigators through a rigorous peer-review process; and 3) to develop peer-reviewed documents based on the winning proposals. Seven topics were selected in the initial round, but the series is expanding because of the suitability of findings from other COP-funded research to appear in this synthesis format. The documents already published are listed on the inside back cover.

As with all of its products, COP is very interested in ascertaining the utility of the Decision Analysis Series particularly in regard to its application to the management decision process. Therefore, we encourage you to write, fax, call, or E-mail us with your comments. Please be assured that we will appreciate these comments, either positive or negative, and that they will help us direct our future efforts. Our address and telephone and fax numbers are on the inside front cover. My Internet address is DSCAVIA@HQ.NOAA.GOV.



Donald Scavia
Director
NOAA Coastal Ocean Program

ACKNOWLEDGMENTS

This handbook has grown out of a series of workshops sponsored by the NOAA Coastal Ocean Program (COP). The workshops were developed to meet an expressed priority need on the part of coastal resource managers for more information in the area of environmental valuation. The workshop concept was developed by Rodney Weiher and Katherine Wellman, both at the time in the Economics Group in the NOAA Office of the Chief Scientist, who were asked by COP to formulate a program to meet managerial needs. Nancy Bockstael and Douglas Lipton of the University of Maryland's Department of Agricultural and Resource Economics were brought into the team. Together this team, with coordination from Isobel Sheifer of COP, helped to lay the foundation and framework of the workshops and the handbook that grew out of them.

The handbook contains the written substance of the material being taught at the workshops. The first part of each workshop is devoted to the teaching of a core curriculum by Wellman and Lipton, who have been participating in these workshops beginning with a pilot in Durham, New Hampshire, in summer 1992. The second part of the workshop involves the innovative use of case studies through which workshop attendees get an opportunity to try out these newly studied techniques in actual case situations under the tutelage of a case leader. In addition to individuals already mentioned, case studies have been facilitated by Lewis Queirolo of the NOAA National Marine Fisheries Service, Rebecca Baldwin of the U.S. Forest Service, and Elliot Rosenberg of the Environmental Protection Agency.

Among those making the greatest contribution to the development of this handbook have been the participants in the workshops. By filling out evaluation forms at the end of each session and by their private conversations with teachers and other workshop personnel, participants have helped us improve what we teach, how we teach it, and the sequence of teaching exercises. Participation levels in case study sessions and the kind of discussions that take place have indicated to us which cases were the best tools to promote the learning experience we hoped to achieve.

As the handbook has developed and become refined, we feel it is important to transfer this kind of information to the widest possible audience of coastal managers, regardless of their workshop attendance. To that end, we have undertaken a revision of materials to make the document a stand-alone learning tool and have included cases from many regions of the country to make the scope of this part of the learning truly national. However, it should be noted that a case study for one region can be used by managers anywhere as a guide to understanding environmental valuation. The problems recounted in these cases have general applicability.

Merrill Leffler and Sandy Harpe have been responsible for editing and design of the text.

Economic Valuation of Natural Resources is not a textbook but a guide for policy makers and managers regarding how to assess and understand the economic value of the coastal resources for which they are stewards. We hope it will receive wide distribution and use.