

Woods Hole Sea Grant: Coastal Zone Management/Resource Management

Science and Economics in the Management of an Invasive Species

Hoagland, P. and D. Jin

BioScience, Vol. 56, No. 11, pp. 931-935, 2006 WHOI-R-06-007

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Troubled Waters: Taking Stock of the Gulf of Maine

Helpful to educators and students.

Campbell, L.A., K. Lignell, and M. Waterman

Nor'easter, Vol. 3, No. 2, pp. 12-21, 1991 WHOI-R-91-011

Although the Gulf of Maine is one of the world's most productive ecosystems, it is also a resource at risk. This sea within a sea, which extends from Cape Cod Bay in the southwest to the Bay of Fundy in the northeast, has abundant marine and coastal resources, but it is threatened by unprecedented pressures from coastal development, resource use, and pollution. In order to ensure that the Gulf of Maine can sustain its productivity, marine scientists, educators, government agencies, marine-dependent industries, and citizens in the three states and two provinces bordering the Gulf must coordinate research efforts on the Gulf as a total ecosystem, improve marine water quality, develop coastal and marine resources in a responsible manner, encourage public involvement, and strengthen international relations.

Some Initial Effects of Hurricane Hugo on Endangered and Endemic Species of West Indian Birds

Haney, J.C., J.M. Wunderle, and W.J. Arendt

American Birds, Vol. 45, No. 2, pp. 234-236, 1991 WHOI-R-91-004

Hurricane Hugo, a category 4 hurricane with sustained winds of 140-150 miles per hour and gusts over 180 miles per hour, was perhaps the most violent storm ever to hit islands of the eastern Caribbean. The hurricane passed directly over or near Puerto Rico, Montserrat, Guadeloupe, and Dominica. Each of these islands harbor endangered, threatened, or otherwise vulnerable species of endemic forest birds. Hurricane Hugo's initial impacts on and consequences for some West Indian birds following the storm's landfalls during mid-September 1989 are reported, along with damage to each island. Hugo's impacts on birds are contrasted with those of other historical hurricanes, and implications for future conservation strategies for island birds are noted.

Integrating Tourism in Multiple Use Planning for Coastal and Marine Protected Areas

Agardy, M.T.

In: Miller, M.L. and J. Auyong (eds.), Proceedings of the 1990 Congress on Coastal and Marine Tourism. A Symposium and Workshop on Balancing Conservation and Economic Development, Honolulu, Hawaii -- 25-31 May 1990, Vol. I, pp. 204-210, 1990 WHOI-R-90-018

Coastal and marine areas the world over provide food, transportation, recreation, and energy resources to increasing numbers of people each year. As demands for these resources rise, the potential for user conflicts is radically heightened. Traditional uses of coastal resources are often displaced by profitable but non-conservative technologies which preclude effective, comprehensive, and long-term management. This situation can even be avoided or counteracted by instigating proactive multiple use planning in which all users can be accommodated in a sustainable way. Tourism is one use which can be encouraged in coastal management plans aimed at achieving sustainability, since it is essentially non-extractive and non-degrading if properly controlled. Tourism can provide economic and political incentives for management and for conservation, and can have additional benefits to local communities and regional economies. Tourism is especially important as a component of planning in tropical coastal areas where ecosystems are heavily burdened with stress and where growth and development are important national priorities. Examples where tourism has been or is becoming successfully integrated into multiple use planning include parts of Quintana Roo, Mexico; the Galapagos Islands in Ecuador; and the Lesser Antilles.\

Caribbean Coastal and Marine Tourism: Coping with Climate Change and Its Associated Effects

Gable, F.J.

In: Miller M.L. and J. Auyong (eds.), Proceedings of the 1990 Congress on Coastal and Marine Tourism. A Symposium and Workshop on Balancing Conservation and Economic Development, Honolulu, Hawaii -- 25-31 May 1990, Vol. I, pp. 248-255, 1990 WHOI-R-90-019

Options Prices for Groundwater Protection

Edwards, S.F.

Journal of Environmental Economics and Management, Vol. 15, pp. 475-487, 1988 WHOI-R-88-012

This paper reports results from a contingent valuation study of households' willingness to pay to prevent uncertain, future nitrate contamination of a portable supply of groundwater. Probability of future demand, change in the probability of future supply, and an attitudinal score for interests in the well-being of future generations are significant, positive determinants of option prices. Several implications of these results for aquifer management policy are highlighted in the paper.

An Economics Primer for Coastal Zone Management: Basic Concepts and Methods from Microeconomics, Public Finance, and Environmental and Resource Economics

[Only available on loan from the National Sea Grant Library](#)

Edwards, S.F.

Woods Hole Oceanographic Institution Technical Report WHOI-86-1, 128 pp., 1986 WHOI-T-86-001

While the economic impacts of resource use pervade discussions of coastal zone management, most discourses tend to be ill-defined and incomplete, and to lack a solid basis in economic theory. This primer was written to eliminate this confusion for non-economists who seek insight into economic thought and into how economic analysis can contribute to coastal zone management. Its contents include:

Introduction: Conflicts Between Private and Public Interests in the Coastal Zone; Some Basic Concepts in Economics; Some Analytical Methods in Economics; Thinking Economically; Economic Impact Analysis of Protecting Water Quality in Coastal Ponds: A Case Study in Rhode Island; A Benefit-Cost Analysis of Hypothetical Development on Cape Cod, Massachusetts; Conclusions; and a bibliography and index to key words, as well as figures and tables.

A Bibliographic Listing of Coastal and Marine Protected Areas: A Global Survey

[Only available on loan from the National Sea Grant Library](#)

Silva, M.E., E.M. Gately, and I. Desilvestre

Woods Hole Oceanographic Institution Technical Report WHOI-86-11, 156 pp., 1986 WHOI-L-86-001

A review of existing or proposed marine protected areas was undertaken as part of a larger project to consider the establishment of protected status for the marine area of the Galapagos Archipelago. This bibliographic listing includes over 600 books, articles, technical reports, and personal correspondence reviewing approximately 1,000 coastal and marine protected areas in 87 countries. The bibliography consists of country-by-country listing of marine protected areas, a listing of special topics from the bibliography, and a numerical and alphabetical listing of sources.

Conflict Resolution in the Assignment of Area Entitlements for Seabed Mining

Broadus, J.M. and P. Hoagland

San Diego Law Review, Vol. 21, No. 3, pp. 541-576, 1984 WHOI-R-84-013

Houston's Little Sisters: A Cross-cultural Perspective on Offshore Oil

Nadel, J.H.

Human Organization, Vol. 42, No. 2, pp. 167-172, 1983 WHOI-R-83-008

Wetlands Regulations and Public Perceptions in Massachusetts

Leschine, T.M. and S.R. Casella

Coastal Zone '80, pp. 1789-1808, 1980 WHOI-R-80-023

This paper reports on the results of a 1979 survey of wetlands property owners in two Massachusetts coastal towns (Marshfield and Falmouth). The survey obtained socioeconomic information, as well as information on the characteristics of wetlands property and its ownership, on property owners' perceptions of wetlands and wetlands values, and their perceptions of and experience with wetlands regulations at the state and local level. Among the findings discussed in the paper, the authors concluded that those wetlands resources which are viewed as public may evoke different sympathies than those which are viewed as private. Also, the public sense that wetlands resources are valuable and worth protecting is stronger than the public awareness of what the goals and procedures of existing state and local regulatory programs designed to protect wetlands are.

A Profile of Wetlands Regulations in Coastal Massachusetts Towns: Local Regulatory Activity and the Public Perception of Effects

[Only available on loan from the National Sea Grant Library](#)

Leschine, T.M. and S.R. Cassella

1979 WHOI-R-79-023

Environmental Impacts of Industrial Energy Systems in the Coastal Zone

[Only available on loan from the National Sea Grant Library](#)

Hall, C.A.S., R.W. Howarth, B. Moore, C.J. Vorosmarty

1978 WHOI-R-78-015

Salt Marshes and the Constitution: An Introduction to Constitutional Issues in Environmental Protection

[Only available on loan from the National Sea Grant Library](#)

Friedman, J.M.

1977 WHOI-R-76-012

Some Questions and Answers About the Law of Harbors and Great Ponds

[Only available on loan from the National Sea Grant Library](#)

Friedman, J.M., R.A. Donnellan, and G.A. Nickerson

1976 WHOI-G-76-001

Regulation of Harbors and Ponds of Martha's Vineyard

[Only available on loan from the National Sea Grant Library](#)

Friedman, J.M., R.A. Donnellan, and G.H. Nickerson

1976 WHOI-T-76-002

In August 1975, the Martha's Vineyard Commission requested assistance from the Woods Hole Oceanographic Institution (WHOI) Sea Grant Program for assistance in problem identification and management prospects for the harbors and great ponds of Martha's Vineyard. James M. Friedman, a lawyer in WHOI's Marine Policy and Ocean Management Program, agreed to undertake the leadership of this project. The objectives of the study, outlined in this technical report, were: 1) to provide a legal analysis of the powers of the Martha's Vineyard Commission and the towns of Martha's Vineyard with regard to the regulation of harbors and great ponds; 2) once these powers have been defined, the Commission will, in cooperation with the towns, shellfish wardens, riparian groups, fishermen, and other interested citizens, identify those problems which result from the increasing and varied use of harbors and ponds; 3) the Commission will propose a

management scheme (if possible through existing legislation) to deal with the problems that have been identified.

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