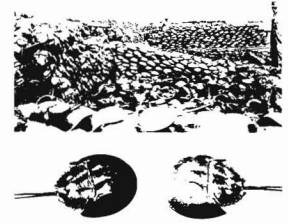


Marine Fisheries REVIEW



On the cover: Horseshoe crab photographs by Judith Krzynowek, NMFS Northeast Fisheries Center, Woods Hole, Mass. Top, hundreds of thousands of horseshoe crabs for fertilizer, June 1924. Photograph courtesy of Delaware State Archives. c/o Carl N. Shuster, Jr., Virginia Institute of Marine Science, Gloucester Pt., Va.



Articles

49(3), 1987

Special Section. Bridging the Gap Between Economic Theory and Fisheries Management: The 10-Year MFCMA Experience	<i>Susan M. Capalbo and Morton M. Miller</i> 1
The Magnuson Fisheries Conservation and Management Act: An Economic Assessment of the First 10 Years	<i>Jon M. Conrad</i> 3
The Magnuson Fisheries Conservation and Management Act: An Economic Assessment of the First 10 Years. Discussion	<i>Ivar E. Strand</i> 12
Bridging the Gap Between Economic Theory and Fisheries Management: Can the MFCMA Produce Economically Rational Management?	<i>Lee G. Anderson</i> 13
Bridging the Gap Between Economic Theory and Fisheries Management: Can the MFCMA Produce Economically Rational Management? Discussion	<i>James E. Kirkley</i> 25
Allocating Harvests Between Competing Users in Fishery Management Decisions: Appropriate Economic Measures for Valuation	<i>J. E. Easley, Jr. and Fred J. Prochaska</i> 29
Allocating Harvests Between Competing Users in Fishery Management Decisions: Appropriate Economic Measures for Valuation. Discussion	<i>James L. Anderson</i> 34
Enforcement of the MFCMA: An Economist's Perspective	<i>Jon G. Sutinen</i> 36
Enforcement of the MFCMA: An Economist's Perspective. Discussion	<i>Louis J. Goodreau</i> 44
Interdependencies Among Fisheries Management, Fisheries Trade, and Fisheries Development: Experiences with Extended Jurisdiction	<i>Richard S. Johnston and James R. Wilson</i> 45
Interdependencies Among Fisheries Management, Fisheries Trade, and Fisheries Development: Experiences with Extended Jurisdiction. Discussion	<i>Douglas W. Lipton</i> 55
Other Articles	
The Horseshoe Crab, <i>Limulus polyphemus</i> , Fishery and Resource in the United States	<i>Mark L. Botton and John W. Ropes</i> 57
The Decline of the Sea Urchin, <i>Tripneustes ventricosus</i> , Fishery of Barbados: A Survey of Fishermen and Consumers	<i>Robert E. Scheibling and Philip V. Mladenov</i> 62
The 1986 Subsistence Harvest of Northern Fur Seals, <i>Callorhinus ursinus</i> on St. Paul Island, Alaska	<i>Steven T. Zimmerman and Mariamna D. Melovidov</i> 70

Continued on page 1.

U.S. DEPARTMENT OF COMMERCE

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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National Marine Fisheries Service

Editor: W. L. Hobart

The *Marine Fisheries Review* (ISSN 0090-1830) is published quarterly by the Scientific Publications Office, National Marine Fisheries Service, NOAA, 7600 Sand Point Way N.E., Bin C15700, Seattle, WA 98115. Single copies and annual subscriptions are sold by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402: Single copy, \$3.75 domestic, \$4.69 foreign; annual subscription, \$7.00 domestic; \$8.75 foreign. Publication of material from sources outside the NMFS is not an endorsement and the NMFS is not responsible for the accuracy of facts, views, or opinions of the sources. The Secretary of Commerce has determined that the publication of this periodical is necessary for the transaction of public business required by law of this Department. Use of the funds for printing this periodical

has been approved by the Director of the Office of Management and Budget.

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Departments

NOAA/NMFS Developments
 Foreign Fishery Developments
 Publications

85
 91
 100

Bridging the Gap Between Economic Theory and Fisheries Management: The 10-Year MFCMA Experience

SUSAN M. CAPALBO and MORTON M. MILLER, Editors

Preface

This Special Section of the *Marine Fisheries Review* contains the edited proceedings of a symposium held 18 September 1986 at the annual meetings of the American Fisheries Society, in Providence, R.I. The symposium was sponsored by the National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA). The aims were twofold: To provide a partial economic assessment of the effectiveness of the Magnuson Fishery Conservation and Management Act (MFCMA), enacted in 1976, and to highlight economic issues related to implementation of the Act.¹

The MFCMA extended U.S. jurisdiction over marine fisheries out to 200 miles and gave the domestic industry preferential access to stocks of fish traditionally shared with foreign fishermen. Since the Act's implementation in early 1977, U.S. activity in the 200-mile "Exclusive Economic Zone" (EEZ) has accelerated, while direct foreign fishing has declined. Foreign fishing interests, however, have maintained a presence in the EEZ through joint ventures (JV's) with U.S. operators. Under the JV's, U.S. fishermen contract to off-load their

catches at sea onto foreign processing vessels. From modest beginnings in 1979-80, JV catches grew to nearly 1 million metric tons (t) in 1985, which amounted to approximately one-fourth of total U.S. catches in the EEZ. More recently, new U.S. factory ships have been placed in service on both coasts and this can lead to a further reduction in foreign fishing operations in the EEZ.

Ten years is not an overly long period upon which to base rigorous empirical assessments of the MFCMA. The reduction in foreign fishing and other trends (e.g. increases in U.S. catches and in the number of U.S. vessels) indicate that this legislation may be having a lasting impact on resource stocks and the economic viability of the U.S. fishing industry. However, analysis of the trends and assessments of the Act's effectiveness have been limited by a lack of monitoring procedures and incomplete data. These difficulties are compounded by the stochastic nature of the processes that need to be modeled, and by the more conventional measurement and aggregation problems that hinder policy analysis. The following papers and accompanying comments recognize (and to some degree reflect) these analytical hazards. Nonetheless, we, the editors, believe the papers and comments are an insightful contribution to the literature on fisheries management, and a useful starting point for more advanced evaluations of the effectiveness of MFCMA.

In the first paper, Jon Conrad observes that there were significant increases in landings and net revenues in the 7-year

period following enactment of the MFCMA (1977-83). However, net revenues have begun to decline, and "...the industry and resources on which it is based appear headed toward a second (but now purely domestic) equilibrium." Under these conditions, "...revenues equal cost and the imputed value of the resource is driven to zero (rent dissipation)." Conrad is wary of current management policies which he believes are "ineffective in limiting catch to a target yield and controlling the entry of vessels or the level of fishing effort." New policies are required with "...the potential to encourage efficient (least cost) harvests and maintain stocks of fish and shellfish at levels producing net benefits to the industry at large." The paper goes on to discuss the merits of introducing incentive-based policies such as transferable quotas or landings taxes.

The search for a better approach to fishery management, however, can be difficult. The discussant for Conrad's paper, Ivar Strand, calls attention to some of the weakness in the NMFS data bases for testing alternative hypotheses concerning the net benefits of the MFCMA. He also cautions against drawing conclusions based on weak lines of causality. Simple "before-after" comparisons should be avoided. Measures of the difference between the value and the distribution of the gains or losses that would have occurred with the policy and without the policy are required to make more useful policy evaluations. Comparisons need to be adjusted for factors other than the exogenous policy which

¹Proceedings were dedicated to Frederick J. Prochaska, distinguished scholar and author of many works in food and resource economics and related fields. Dr. Prochaska was known especially for his contributions to knowledge and understanding of the complexities of fisheries management. His untimely death, prior to the meetings, has left a void in the fisheries and academic communities