Inshore Fisheries Management

Reviews: Methods and Technologies in Fish Biology and Fisheries

VOLUME 2

Series editor:

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Inshore Fisheries Management

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SPRINGER-SCIENCE+BUSINESS MEDIA, B.V.

A C.I.P. Catalogue record for this book is available from the Library of Congress.

ISBN 978-90-481-5874-4 ISBN 978-94-017-1892-9 (eBook)
DOI 10.1007/978-94-017-1892-9

Printed on acid-free paper

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General Series Preface

Reviews: Methods and Technology in Fish Biology and Fisheries published by Kluwer Academic Publishers is a book series dedicated to the publication of information on advanced, forward-looking methodologies, technologies, or perspectives in fish and fisheries. This series is especially dedicated to relevant topics addressing global, international concern in fish and fisheries. Humans continue to challenge our environments with new technologies and technological applications. The dynamic creativity of our own species often tends to place the greatest burden on our supporting ecosystems. This is especially true for aquatic networks of creeks, lakes, rivers and ocean environments. We also frequently use our conceptual powers to balance conflicting requirements and demands on nature and continue to develop new approaches and tools to provide sustainable resources as well as conserve what we hold most dear on local and global scales. This book series will provide a window into the developing dynamic among humans, aquatic ecosystems (both freshwater and marine), and the organisms that inhabit aquatic environments.

There are many reasons to doubt the increasing social and economic value technology has gained over the last two centuries. Science and technology represent stages in human development. I agree with Ernst Mayer when he said in *Toward a New Philosophy of Biology* (1988) that "endeavors to solve all scientific problems by pure logic and refined measurements are unproductive, if not totally irrelevant." Living aquatic systems are extremely complex environments that appear alien to most human beings. We only "go there" in a limited capacity and for relatively short periods of time. To reduce these biological systems to simple physio-chemical processes that can be controlled by technology, and made subject to arbitrary management decisions or broad arm-waving policies is to deny their unique nature. That is certainly not what is meant by *"Methods and Technology"* in this series. Rather, I want to provide a forum for discussions on the living systems themselves and the organisms inhabiting them through new applications of science and technology with special emphasis on aspects of fish and fisheries under-represented in the current literature.

Our understanding of aquatic biology in freshwater and marine environments demands a careful and protracted approach ranging broadly from studies of genes, regulatory processes, isolating mechanisms, individual behavior, population structure, biodiversity, to interactive ecosystems. The tools and technologies that allow these investigations change rapidly, always removing old uncertainties and creating new ones. The intent of this series is to monitor that change and document perspectives and developments that mark a fundamental re-evaluation of nature in aquatic habitats and its role in relationship to human society and resource management.

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SERIES EDITOR'S PREFACE

All countries with a coastline have multiple inshore fisheries falling under direct federal or state management. These fisheries tend to be small, both in harvest and economic value, in comparison with large demersal and pelagic species harvested in offshore waters. Most of these fisheries are localised activities where fishers have limited knowledge of factors leading to distribution, abundance, and behaviour of the target species in relation to larger scale species and ecosystem issues. These fisheries are frequently small, family-owned activities or cooperatives that persist through significant changes in resource abundance and the economic value of their harvest because the fishery is rooted in community and social values that spread far beyond the effects of the fishery alone. In that sense, inshore fisheries are a social-biological phenomenon not linked to the economic avarice of larger scale fishing for aggregate resources in the open ocean. That does not mean the different aspects of inshore fisheries are of "small" concern, indeed recent literature in fisheries policy and science has held up inshore models as case studies of how traditional, community-policed fisheries can help provide sustainable harvests. Society as a whole, however, has put a low priority on research and assessment of inshore stocks, at least until that is all that is left to harvest after broad scale depletion of other, more economically viable fisheries.

The diverse mosaic of legal and political jurisdictions controlling this fishery in Europe confounds the management of inshore fisheries. There has also been a recent movement to implement a more global approach, in the European context, to fisheries policy and management. This volume represents the first thorough approach at documentation of the diversity of management structures for inshore fisheries in Europe. As such it portrays all of the deficiencies, myths, and lack of clear scientific data associated with inshore fisheries found throughout Europe. To address these deficits various authors suggest a more integrated approach that balances the social, economic and environmental needs across large ecosystem scales for the management of this important European fishery. Because of the long history of inshore harvest and the deep cultural ties to fishing found throughout Europe, the "reinvention" of inshore fisheries management in this area may well serve as a model for future fisheries in transition throughout the world.

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PREFACE

This volume has its origins in two workshops held under the auspices of the European Social Science Fisheries Network (ESSFiN), a Concerted Action funded by the European Commission under the FAIR Programme. During the earlier stages of the Concerted Action frequent reference had been made to the importance of inshore fisheries in Europe but no attempt had been made to document the nature of these fisheries and their management. As a result, a small working group was convened in Gruissan in southern France in March 1998 with the purpose of comparing the nature and status of inshore fisheries and the characteristics of their management in seven west European countries. The results of this initial exercise came as something of a surprise. Not only were Europe's inshore fisheries subject, as expected, to huge diversity, but there was considerable variation in the institutional arrangements for their management, with a somewhat stronger level of central direction than many of us had anticipated and relatively weak involvement by fishermen themselves. But possibly the most surprising feature was the lack of consensus over the definition of inshore fisheries and a consequent inability in most countries to put a precise value on their contribution to the fisheries sector. The group met again in September in Amsterdam, partly to review the earlier findings but mainly to search for common denominators and to identify some key issues facing the management of inshore fisheries.

The chapters which make up the volume have evolved from presentations at the two workshops, with considerable rewriting and updating of the original drafts. The editors would like to record their gratitude for the unfailing promptness and civility with which the authors responded to requests for additional information and recommendations for changes to the text, often under what may have appeared at times to be undue provocation. We would also like to pay tribute to the contributions to the two workshops by members not represented among the authors of individual chapters - Karine Dusserre of the Projet du Parc Naturel Régional du Pays Narbonnais, Duncan McInnes of the Western Isles Fishermen's Association and Erland Eklund of the University of Helsinki - and also express our appreciation of Keith Scurr's draughtsmanship in preparing the maps and diagrams for publication. Finally, we must acknowledge the financial assistance of the

European Commission through its grant establishing the Network (FAIR CT95-0070) under the Fourth Action Programme.

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