GIS/Spatial Analyses in Fishery and Aquatic Sciences (Vol. 3)
Appendix G. Book Reviews (485-488)

APPENDIX G. BOOK REVIEWS

GEOFF MEADEN
DIRECTOR
FISHERIES GIS UNIT,
CANTERBURY CHRIST CHURCH UNIVERSITY (UK)

Amongst those working in the field of fisheries management or research it is universally known that the plight of world fish stocks varies from poor to disastrous. What is less well known is that the causes of this sad plight are nearly all based on spatial disequilibrium. This lack of balance may be man-made or less frequently it may be caused by some natural imbalance. Whatever the cause, the use of GIS has provided managers and researchers with an extremely powerful tool with which to investigate the problems. The series of Symposia that have given rise to these Proceedings (Books) have been invaluable in disseminating information about fisheries GIS. My job means that much of my working life is spent using GIS for fisheries related purposes and by far the most useful information source that I have to hand are the editions of the first two Books. This third edition also continues in this tradition. From experience I would say that these Books are the only sources that provide information on what is at the cutting edge of this spatial analysis tool in a wide range of fishery associated fields. Anyone working in fisheries cannot fail to be educated by its contents.

XU LIUXIONG
DEAN AND PROFESSOR
COLLEGE OF MARINE FISHERIES SCIENCE AND TECHNOLOGY,
SHANGHAI FISHERIES UNIVERSITY (CHINA)

Scientific understanding of the temporal and spatial distribution of fish stocks is the basis for the management and conservation of fishery resources. GIS technology, as an effective means of describing the spatial distribution of marine living resources, has been applied by more and more fishery scientists focusing on marine/aquatic related matters. This book covers diverse topics through case studies on the latest developments of applications of GIS technology in dealing with marine or aquatic related issues, such as spatial numerical analysis, methodological problems, applications of specialized GIS software, simple mapping of spatial data, etc. In this connection, I believe this Book is a useful reference tool from students to experts in fisheries and aquatic sciences.

PHILIP SCOTT
PROFESSOR
INSTITUTE OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES,
UNIVERSIDADE SANTA ÚRSULA (BRAZIL)

The experience gained by researchers and key people in fisheries stock management and research over the globe using several facets of GIS 'power' applications is resumed in this Book. This Book certainly is an important reference publication in the relevant fields. More importantly, I believe that this Book will help to create successful studies of GIS/spatial analyses in fishery resource managements and related pioneer projects and also help to produce innovative spatial approaches in the fisheries and aquaculture areas.

KRISTIN M. KLEISNER
Graduate Research Assistant
Rosenstiel School of Marine and Atmospheric Science,
University of Miami (USA)

GIS is an essential tool for understanding the spatial context and extent of a species and for mapping habitats. In the fishery sciences, the use of GIS is a relatively new, but rapidly growing field. As with any new approach, there is a paucity of references. This Book represents an important collection of papers representing work in the area of fisheries and GIS. The peer-reviewed articles illustrate many applications of the use of GIS, from the analysis of fishing patterns and the spatial statistics of autocorrelation to the evaluation of potential impacts of marine protected areas and fisheries closures and the ability to identify and map Essential Fish Habitat. While the examples are diverse, the applications are far-reaching and demonstrate the power of GIS and spatial analysis. This Book is an important resource for any researcher working in or interested in this field.

KAZUTOSHI WATANABE
ASSOCIATE DIRECTOR OF RESEARCH
NATIONAL RESEARCH INSTITUTE OF FISHERIES ENGINEERING,
FISHERIES RESEARCH AGENCY (JAPAN)

Fisheries science includes the study of geospatial phenomena on the hydrosphere and related areas. This Book shows the availability of GIS in getting a better understanding about such phenomena. The variety of papers containing methodologies of geospatial analysis and applications of GIS, from a local to a global point of view, is highly informative to researchers and students of fisheries science. Also, well-designed thematic maps provided by the authors will be thought-provoking to all readers.

NORM GOOD
FISHERIES BIOLOGIST (STOCK ASSESSMENT)
QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES AND FISHERIES (AUSTRALIA) (CURRENT)
CMIS/E-HEALTH RESEARCH CENTRE,
A JOINT VENTURE BETWEEN CSIRO AND THE QUEENSLAND GOVERNMENT (AUSTRALIA)

Global fish stocks are generally in decline or at risk of collapse. Traditional methods of stock assessment and management strategy evaluations currently lack in vital information for predicting future stock levels reliably. The Proceedings of the Third Symposium on GIS/Spatial Analysis in Fisheries and Aquatic Sciences (this Book) adds considerable value to the spatio-temporal analysis of fish stock distribution and abundance. Many of case-studies employ stock assessment models with the inclusion of environmental factors, which is a vast improvement on traditional methods. This Book would be a valuable resource for advanced fisheries science courses and stock assessment analysts. Additionally, case studies using high-resolution GIS data provide a powerful argument for fisheries management to invest in alternative data sources for stock assessment.

ROBERT MIKOL
GEOSPATIAL ANALYST (EX- FISHERMAN)
UNIVERSITY OF ALASKA FAIRBANKS (USA)

The publication of this Book is another significant milestone in the science and practice of GIS and Spatial Analysis for our planet's fisheries and aquatic sciences. Kudos for the Fishery-Aquatic GIS Research Group! The symposium and papers delivered are a wealth of knowledge for researchers, managers and students alike. The Shanghai Symposium focused on the problems and research confronting developing nations. The discussions and methods presented in this volume are valid for all nations and agencies, particularly those who need to make management-quality decisions on a tight budget.

Kim Duckworth
Research Data Manager
Ministry of Fisheries (New Zealand)

Over the past two decades GIS has emerged as an important tool for fisheries research and management. The Third Symposium and its proceedings (this Book) provide a unique opportunity to share experiences with regard to the application of this tool. This Book conveys insight into how GIS tools may be used to enhance our understanding of fisheries. It would be useful resource for many professionals concerned with the study or management of fisheries.

WILLIAM L. FISHER
RESEARCH ECOLOGIST
USGS AND OKLAHOMA COOPERATIVE FISH AND WILDLIFE RESEARCH UNIT,
DEPARTMENT OF ZOOLOGY, OKLAHOMA STATE UNIVERSITY (USA)
AND
PRESIDENT-ELECT
AMERICAN FISHERIES SOCIETY COMPUTER USER SECTION

Current applications of GIS in fisheries and aquatic sciences reflect the increased availability of geospatial data, advances in remote sensing technology and information sharing. The proceedings from the Third International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences published in this Book build upon the proceedings of previous two symposia by providing innovative and cutting-edge GIS applications for fishes, invertebrates and plants in freshwater, marine and estuarine systems. This Book includes several examples of how remotely-sensed environmental data (e.g., sea surface temperature, chlorophyll) and fishery catch data (e.g., trawl, purse seine, acoustic survey, electronic logbook) are used in GIS with spatial analyses to model spatial distributions, habitats and hot spots of commercially-important species. A theme of the symposium was to encourage the use of GIS and aquatic information by developing countries. One way to accomplish this is through information sharing using web-based portals. This Book contains a description of GISFish, which was created by the Food and Agriculture Organization of the United Nation's Fisheries and Aquaculture Department. GISFish is a one-stop website for global GIS, remote sensing and mapping information for inland fisheries and aquaculture. Fisheries scientists and GIS practitioners will have no doubts to find this Book a valuable resource for exploring the many uses of GIS and spatial analysis for managing fisheries and aquatic sciences.