

With numerous real-world examples, **Modelling and Quantitative Methods in Fisheries, Second Edition** provides an introduction to the analytical methods used by fisheries' scientists and ecologists. By following the examples using Excel, readers see the nuts and bolts of how the methods work and better understand the underlying principles. Excel workbooks are available for download from CRC Press Online.

In this second edition, the author has revised all chapters and improved a number of the examples. This edition also includes two entirely new chapters:

- *Characterization of Uncertainty* covers asymptotic errors and likelihood profiles and develops a generalized Gibbs sampler to run a Markov chain Monte Carlo analysis that can be used to generate Bayesian posteriors.
- *Sized-Based Models* implements a fully functional size-based stock assessment model using abalone as an example.

This book continues to cover a broad range of topics related to quantitative methods and modelling that have direct relevance to fisheries science, biological modelling, ecology, and population dynamics. It offers a solid foundation in the skills required for the quantitative study of marine populations. Explaining important and relatively complex ideas and methods in a clear manner, the author presents full, step-by-step derivations of equations as much as possible to enable a thorough understanding of the models and methods.



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