

Preface

Approaching 9 billion people in 2050, mankind will need the ocean resources even more so than today: for food, for energy, for transport, for minerals, and for space. Sustainable, responsible and effective use of marine resources requires information, knowledge, a thorough discussion on scenarios, alternatives and trade-offs, and a system of good governance. A proper understanding of the ocean ecosystems is fundamental to all of these issues and requires great effort and collaboration.

This atlas provides an overview of the information collected during nearly 40 years of such ongoing efforts and collaborations. The long-term commitment and international cooperation are only possible because of the passion, fascination and dedication of those involved, to understand nature and to make a difference for generations to come. There are not many scientific fields where so many nations and so many scientists work together to understand and advise on the natural environment. In that sense, this atlas is unique, not just for its scientific encyclopaedic information, but also as an inspiring example of dedication and cooperation.

The content is the product of single-minded effort by Henk Heessen, Niels Daan and Jim Ellis to combine information and data on the distribution, natural history and exploitation of Northeast Atlantic fishes. They have shown considerable dedication to complete the task, and have provided an outstanding example of what can be achieved by working together on a common cause. In doing so they were supported in their endeavour by the contributions of 28 other scientists representing 14 different research organisations, and over the past four decades by many hundreds of scientists involved in data collection at sea. The role of the International Council for the Exploration of the Sea (ICES) to create a focal point for this survey community and encourage collaboration has been crucial to their achievement. The atlas provides not only unique distribution data, but also updated accounts of the biology of many fish species, which no other publications can match.

By bringing together such a wealth of information for over 200 different taxa, the authors provide a major source of information on the recent distribution and biology of most demersal and small pelagic fish in northern European seas from the Porcupine Bank to the Baltic Sea, and from the Norwegian Deep to Brittany. Data were used from 72,000 hauls made by research vessels in the years 1977-2013. By drawing on the international datasets available in the ICES DATRAS database, as well as additional regional Spanish surveys on Porcupine Bank, Norwegian surveys for *Pandalus* in the Norwegian Deep, and Dutch surveys in the coastal area, this volume provides a wealth of detail for the fisheries science community and highlights the potential for further analysis of these data. The atlas goes clearly beyond the more general descriptions available so far, making use of quantitative information to present the distribution, and areas of higher abundance for an extensive area of northern Europe. Updated accounts are also provided for the biology of many fish species for which no single book provides comparative information. The volume highlights how important it is for keeping high standards of data collection and species identification to maximise future potential uses of the survey data bases maintained.

Although the information from these internationally coordinated or national surveys has already been extensively used for managing our fisheries on a restricted number of commercially valuable species, the atlas shows distribution patterns across existing management units. Moreover, the information on the entire fish fauna of shelf waters might be useful when implementing the Ecosystem Approach, the EU Marine Strategy Framework Directive and the Blue Growth ambitions of the EU and national governments.



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and



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