

## “ICES-FishMap”

### Demonstrating the feasibility and value of a comprehensive on-line atlas of North Sea fishes

*Fishery scientists possess a wealth of information that is important for the management decision-making process but is not readily available to all interested parties because it is contained in technical papers. In 1993, the International Council for the Exploration of the Sea (ICES) published the “Atlas of North Sea Fishes”, based on data from 1985 to 1987. Since then, much more information has become available and new information is continuously being collected. Therefore, the wish has emerged to produce an electronic atlas that can be annually updated and that allows for flexibility in selecting periods to allow changes in the fish fauna to be studied.*

The information used by fishery scientists for the assessment of commercial fish stocks originates both from the fishing industry itself (catch and effort data) and from fishery-independent research vessel surveys. Over the last decades these surveys have become an integral part of routine fish stock assessment, particularly for forecasting recruitment.

At present, several surveys are conducted in the North Sea aimed at different species, sometimes by individual countries, but often internationally coordinated under the supervision of ICES, the world’s oldest intergovernmental organisation concerned with marine and fishery science. Typically, survey data are routinely analysed to provide data on distribution, abundance, maturity, etc. for only a small group of commercially exploited fish species. The general procedure, however, is to sample at least the size distribution of all species present in the catches. **This has resulted in an accumulation of a large body of data.**

Apart from the now somewhat outdated Atlas published in 1993, **a comprehensive analysis of the distribution of North Sea fishes is largely lacking.** The few published data available refer mainly to commercial species or selected

groups and periods and, quite often, only refer to part of the North Sea. However, the enormous amount of information collected during surveys is of great value and should be of considerable interest, not only to fisheries scientists but also to a wider public. For this reason, the ICES-FishMap project was funded by the European Commission.

**ICES-FishMap** is an **electronic atlas of 15 North Sea fish species regularly caught during IBTS surveys: Herring, Whiting, Cod, Grey Gurnard, Mackerel, Spurdog, Saithe, Sole, Sprat, Plaice, Haddock, Horse mackerel, Norway pout, Red mullet, and Thornback ray.** The atlas uses data collected by research vessels in the North Sea between 1983 and 2004, during two surveys. The data from both surveys are stored in the DATRAS database (also see Technical Leaflet FF-ALL-DATA-01) kept at the ICES Secretariat in Copenhagen. These surveys are the **International Bottom Trawl Survey IBTS** (data from 1965 to 2004) and the **Beam Trawl Survey** (data from 1985 to 2004).

On ICES-FishMap you can make your own distribution maps (North Sea, Skagerrak and Kattegat) for the 15 fish species selected. You can select years and quarters for which you want to see data mapped, which will

**Project acronym:**

ICES-FishMap

**Full title of Project:**

Update and revision of the ICES atlas of north sea fishes: a web-based application.

**EU contract number:**

513661

**Web-site:**

<http://www.ices.dk/marineworld/ices-fishmap.asp>

**Coordinator**

Dr. Henk Heessen  
Wageningen IMARES  
Haringkade , Postbus 68  
1970 AB IJmuiden  
The Netherlands

Phone: +31 255 564646

Fax: +31 255 564644

Email: [henk.heessen@wur.nl](mailto:henk.heessen@wur.nl)

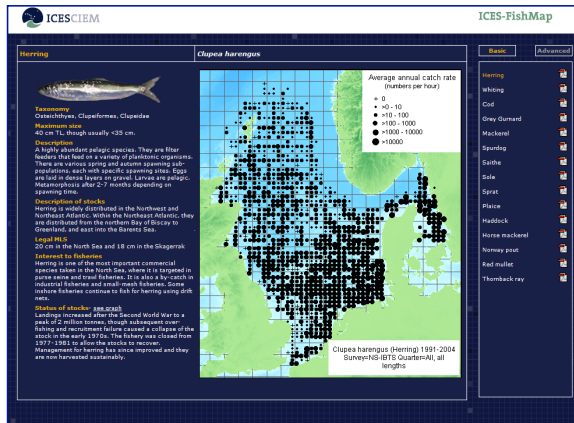
create interactive maps showing (seasonal) distributions, changes in abundance over the past decades, etc. ICES-FishMap also offers a short summary of relevant information for each of the 15 species and gives you the possibility to download and read in more detail about distribution, life history and exploitation (pdf files). In addition, through ICES-FishMap, you will be able to find information on the surveys used, the factors affecting the distribution, the fish communities, and the limitations of the data presented. Also a glossary of technical or biological terms is provided.

The ICES-FishMap project is ultimately aimed at producing such an electronic atlas for a much larger area than the North Sea and based on a variety of surveys. However, as a first step, a pilot project has concentrated on the 15 species mentioned above. In a second phase a total

revision of the Atlas of North Sea fishes has been planned, providing similar information on all (i.e. more or less 150) species caught during research surveys in the North Sea, Skagerrak and Kattegat. Ultimately, it is hoped to increase the coverage to include a large part of the west-European shelf (including information from the Baltic and the Mediterranean). A hard-copy colour NE Atlantic Fish Atlas would then be published.

The pilot atlas developed already provides (limited) ready-reference material that can contribute to the debate on Marine Protected Areas (MPAs). A full-scale atlas would give policy-makers access to a robust reference work that enables them to assess historic precedents, seasonal variations and current status to ensure that future fishery management decisions utilise all relevant and available information.

**“THE PILOT ATLAS DEVELOPED IN ICES-FISHMAP ALREADY PROVIDES (LIMITED) READY-REFERENCE MATERIAL THAT CAN CONTRIBUTE TO THE DEBATE ON MARINE PROTECTED AREAS (MPAS)”**



SCREENSHOT OF THE DISTRIBUTION MAP FOR HERRING. SOURCE: ICES-FISHMAP WEB SITE.