



ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
l'Exploration de la Mer

For Immediate Release

17 September 2009

650 Marine Scientists Meet in Berlin to Discuss the Status and Future of the Oceans

International Council for the Exploration of the Sea (ICES), the world's largest marine science and advisory body will hold, in cooperation with the German Ministry of Food, Agriculture and Consumer Protection, the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fishery and the German Scientific Commission, its **Annual Science Conference 2009 (ASC) in Berlin, Germany, 21 to 25 September.**

ICES welcomes representatives of the news media to attend the Conference at the Estrel Convention Center. All registration fees are waived for qualified journalists. **A briefing with key ICES scientists and officials will be held on 21 September at 10:00, and is open to all interested journalists.**

Joe Borg (EU Commissioner for Maritime Affairs and Fisheries) and Ilse Aigner (German Federal Minister of Food, Agriculture and Consumer Protection) will participate. An opening lecture on climate of the 20th and 21st century by Professor Mojib Latif (IFMGEOMAR, Germany) and a special programme for early-career scientists and fishermen are a feature of the conference programme.

Discussions on some of the most challenging issues of today's marine science are arranged in 20 theme sessions. The conference will focus especially on new approaches to the study of ecology and biodiversity, climate change and impacts on ecosystems, progress on implementing the ecosystem approach to management, and finally, the renewed attempts to include social and economic approaches in ICES science.

The Annual Science Conference's 20 theme sessions can be grouped under the following headings. In terms of scientific contributions, most attention was received by the blocks on climate change and fisheries and environmental management.

- Climate change and impacts on ecosystems, and interactions with human use: lessons learned, trends and patterns
- The EU Common fishery Policy (CFP), fishery management, and the ecosystem-based approach: from bycatch to social and economical information
- Marine biodiversity, ecology, and ecosystem monitoring: new approaches and technologies
- Behaviour and life-cycle processes of fish, and interactions between wild and farmed fish

The event will bring together 650 scientists, science managers, and other stakeholders from all over the world with a view to debate various aspects of sustainable management of oceans and their resources. To date, approximately 390 papers and 90 posters have been received from the contributors.

The full programme of the 2009 Annual Science Conference with a guide to meetings and events is available on the ICES website:

<http://www.ices.dk/iceswork/asc/2009/index.asp>

–MORE–

Introduction to theme sessions

The following summarizes the background information and the scientific rationale for the theme sessions. The theme-session codes following each paragraph refer to the conference programme on the ICES website.

Climate change and impacts on ecosystems and interactions with human use: lessons learned, trends, and patterns

The trend in the North Atlantic in the past decade has been one of warming. Predictions for the 21st century forecast a continued rise in temperature of 0.2°C per decade. Warmer sea temperatures have already caused shifts in phytoplankton populations, including changes in abundance and distribution. Changing weather patterns are predicted to result in changes in the stability in the water column, changes in upwelling patterns, and shelf sea productivity. Climate change will also affect fishery resources and challenge both fishers and managers to develop sustainable exploitation strategies, but disentangling the effects of climate variability from those resulting from fishing pressure is problematic. Climate and exploitation undoubtedly interact in their effects, such that not only might climate changes cause failure in a fishery management scheme but also that fishery exploitation may disrupt the ability of a resource population to withstand, or adjust to, climate variations. How much this can affect the resilience of populations and ecosystems to climate effects is still poorly known. The long-term perspective provides the opportunity to examine patterns in response to fish population well before industrialized fishing, eutrophication, and pollution took their tolls. The ICES Cod and Climate Change programme over the past decade has stimulated a wide range of research on cod and its environment, and the physical, biological, and human drivers that shape its life history and population dynamics (sessions C, D, E, F, G).

The EU Common fishery Policy (CFP), fishery management, and the ecosystem-based approach: from bycatch and discards to social and economical information

The Common Fishery Policy is the governing framework for fishery management in the European Union. It is under review with major changes expected in a reform by 2012. The 2009 ASC will take place midway through the public dialogue about these issues, which has been initiated by the publication by the European Commission of the Green Paper on the CFP reform in April 2009. Important issues are the regionalization of fishery management, evolution towards co-management, and a greater role for stakeholders in decision-making, results-based management, the role of economic and social analyses in decision-making, revisiting the precautionary approach, Maximum Sustainable Yield, and ecosystem-based approach to fishery management. The recent development of satellite, acoustic, archival, and other forms of electronic tags has resulted in an increasing wealth of information about the spatio-temporal dynamics of the behaviour of marine fish, mammals, and birds, much of it of great relevance to fishery and environmental managers. However, integrating new information into management tools can be difficult and depends on a coordinated effort between researchers in a number of disciplines. To encourage cooperative efforts, and to identify how to break down barriers between different disciplines, successful applications of individual-based data to management situations will be reviewed.

Many programmes of collaborative research and data collection between the fishing industry and science have been initiated in the North Atlantic and elsewhere since the 1990s, often in response to crises in the fishing industry that led to deteriorating relationships between fishers and fishery scientists. The programmes have helped fishers become more involved in the fishery-management process and have built progressively greater capacity in the fishing industry to collect useful data and carry out scientific studies. The programmes have already yielded substantial amounts of data. Case studies of successes and failures in using fishers' data in stock assessment models and decision-making processes will be presented.

The concept of an ecosystem approach to management of human activities (EAM) has been broadly accepted. Sound management within the EAM includes considering not only the direct effect on the exploited resource, but indirect effects on trophic levels and the complete foodweb. Questions on stability of foodwebs in the contexts of overexploitation, species extinctions, and climate will be addressed using Ecological Network Analysis (ENA).

Several ICES Member Countries have banned discarding of organisms as part of their management policy. In European Union waters, the practice of discarding part of the catch at sea is currently legal. The European Commission, though, is reviewing its policy on discards and is considering several

instruments, ranging from technical measures to a total discard ban, in order to reduce unwanted catch. Discard data have been collected in the ICES Convention area for at least 15 years within national projects or as part of the EU fishery data collection regulation. Data collections will be analysed, technical measures be assessed, and different management strategies to reduce unwanted catch and discards evaluated.

The EU legislation determined that, “The Common Fisheries Policy shall ensure exploitation of living aquatic resources that provides sustainable economic, environmental, and social conditions”. Similar multiple objectives are common in marine legislation and agreements describing the interests of society. Most of the marine risks creating major concern for society are caused by human activities. It is obvious that the solving of these problems must also be based on solutions that take into account the interests and behaviour of humans. Moreover, most of the management actions first have an impact on human behaviour and only thereafter on ecosystems. Therefore, human sciences are needed when evaluating the likely success of suggested management options. Current experiences will be evaluated. (Sessions J, K, L, M, N, O, P, R.)

Marine biodiversity, ecology, and ecosystem monitoring: new approaches and technologies

Understanding of marine ecology and biodiversity are increasingly benefiting from novel biochemical, biogeochemical, and molecular approaches and techniques. Plankton species diversity can be accurately assayed using molecular approaches, including DNA bar-coding and community metagenomics. Material flow (e.g. nutrient uptake) and trophic relationships in pelagic foodwebs can be traced using biochemical markers, trace elements composition, and stable isotopes. These and other technical advances are transforming the research areas of plankton population and community ecology, and improving our understanding of species diversity, distribution, abundance, and adaptability. The new knowledge gained is critical for determining marine ecosystem function and health; understanding global biogeochemical cycles; and modelling and predicting impacts of climate change, acidification, and associated stressors. In addition to these new tools for understanding and assessing marine ecosystems, the conventional monitoring and ecosystem observation methods including the application of indicators will be presented (sessions A, I).

Behaviour and life-cycle processes of fish, and interactions between wild and farmed fish

We now have a range of methods available for tracking the motion of individual fish, thanks to recent advances in data storage tags and other hardware, as well as advances in methods for data analysis. This has allowed us to turn to the more ambitious questions of what the fish is doing and why. Depleted fish stocks, degraded habitats, and uncertainty in forecasts of future ecosystem states emphasize the need to include the conservation of life-cycle diversity, population connectivity, balanced population structure, and associated population resilience as objectives for fishery management. Special attention will be brought to values of fish culture (focusing on cod and salmon farming) and related challenges both for the environment and human society. Life-cycle diversity within populations and knowledge transfer between generations are increasingly recognized as factors that can influence population resilience and thus fishery- and habitat-recovery actions. An entire theme session is devoted to the topic of death in the sea with a view to looking at the various sources of mortality that cause fish to die at an early stage (sessions B, H, Q, T).

Special theme session

In addition, an evening theme session will focus on best practice for presenting and communicating scientific information and advice to managers and policy-makers.

Note to editors

The **International Council for the Exploration of the Sea (ICES)** coordinates and promotes marine research in the North Atlantic. This includes adjacent seas such as the Baltic Sea and North Sea. ICES acts as a meeting point for a community of more than 1600 marine scientists from 20 countries around the North Atlantic.

Scientists working through ICES gather information about the marine ecosystem. Besides filling gaps in existing knowledge, this information is also developed into unbiased, non-political advice. The advice is then used by the 20 member countries, which fund and support ICES, to help them manage the North Atlantic Ocean and adjacent seas. The annual budget is DKK 30 million/EUR 4 million.

ICES plans and coordinates marine research through a system of committees, more than 100 working groups, symposia, and an Annual Science Conference. Most meetings take place either at the ICES Headquarters in Copenhagen, Denmark or in the member countries.

ICES has been based in Copenhagen, Denmark since 1902. Today, its Secretariat with 46 staff members provides scientific, administrative, secretarial support and data management expertise to the ICES network of marine scientists.



For further information please contact:

General inquires

Marianne Brandt, Assisting Secretary
International Council for the Exploration of the Sea
Tel Direct (+45) 33 38 67 02
Mobile (+45) 21 64 67 01
E-mail marianne.brandt@ices.dk

Inquiries to the German Ministry

Matthias Leonhard Maier, Policy Officer
Federal Ministry of Food, Agriculture and
Consumer Protection
Tel Direct (+49) 228-99529-3751
Mobile (+49) 170-9220942
E-Mail leo.maier@bmelv.bund.de

Scientific inquires

Cornelius Hammer, German Delegate to ICES
Federal Research Centre for Fisheries
Institute of Baltic Sea Fisheries
Tel Direct (+49) 381 811 6101
E-mail cornelius.hammer@vti.bund.de

Inquiries to the German Ministry

Kristine Rotheiler, Press Officer
Federal Ministry of Food, Agriculture and
Consumer Protection
Tel Direct (+49) 30-185293172
Mobile (+49) 160-90576487
E-Mail kristine.rotheiler@bmelv.bund.de