



ICES

International Council for
the Exploration of the Sea

CIEM

Conseil International pour
l'Exploration de la Mer

For Immediate Release

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ICES scientists discuss some of the most challenging issues of today's science needed for a better management of our seas tomorrow

ICES, the world's largest marine science and advisory body, will hold its 2007 Annual Science Conference (ASC), in Helsinki (Finland) 17 to 21 September.

This year's ASC promises to provide outstanding papers from world renowned researchers presented in 17 theme sessions on topics which include the ecosystem approach to management with a special focus on the Baltic Sea, structure and dynamics of the sea floor communities in North Atlantic and Baltic waters, and marine biodiversity from a fish and fisheries perspective.

To date, more than 400 contributions from scientists in 29 countries have been received for the Conference, 6% coming from Finland and an impressive 7 % from Russia.

The full programme of the 2007 Annual Science Conference is available on the ICES website:

<http://www.ices.dk/iceswork/asc/2007/2007ASCProgramme.pdf>

Gerd Hubold, General Secretary of ICES, said today:

"The ICES Annual Science Conference brings together about 700 marine scientists from all over the world to present their latest research results and discuss how these can be applied to improving the sustainable management of the oceans and their resources. Highlights of this year's programme are new studies on marine communities and the analysis of long time series to identify possible impacts of climate change on marine biodiversity and ecosystems. This year's venue in Helsinki puts major emphasis on Baltic Sea research, which is reflected in more than 70 contributions on all aspects of this sea area. We are very happy to see a strong involvement of scientists from the new Baltic member states and Russia in the ICES community which reflects the growing importance of applied marine science in these countries."

ICES welcomes representatives of the news media to attend the Conference. All registration fees will be waived for qualified journalists.

A briefing with key ICES scientists and officials immediately prior to the opening of the Conference will be held in the Press Room at the Marina Congress Centre on 17 September at 12.15, and is open to all interested journalists.

Highlighted themes from the ICES 2007 Annual Science Conference

The reference codes used below refer to the codes of the various Theme Session papers in the conference programme. The examples have been chosen as an information service and do not in any way reflect the views of ICES.

Emphasis on the Baltic

The ICES ASC is organized each year by one of the 20 ICES Member States around the North Atlantic and its focus changes accordingly to cover both general scientific items and regional developments. This year's ASC in Helsinki puts a significant emphasis on the Baltic area. 23 papers have been produced by ICES scientists for a theme session devoted specifically to the Baltic Sea, some 50 more papers with reference to the area can be found in other Theme Sessions. Under the forthcoming HELCOM Baltic Sea Action Plan this area will be a test case for better management of human activities in an ecosystem context. Massive scientific input will be needed to underpin this political process, and Theme Session (C) is providing such information.

New knowledge on plankton, sea floor communities and fish is presented and there are papers that discuss an ecosystem approach to management of the Baltic Sea in accordance with the policy laid down by the World Summit in Johannesburg 2002. Paper C:06 presents first results of a major World Bank funded project for the development of ecosystem health indicators needed for better management. Baltic ecosystem changes and species' distribution is described in papers D:03 and G:21, as examples. The ecosystem of the open waters in the northern Baltic Sea has changed during the past decades. A special feature of the Baltic as compared with other regions is the low biodiversity and the enormous gradient from freshwater in the north to marine conditions in the southern Belt Seas.

Increasing concern about new species such as round goby *Neogobius melanostomus*, Conrad's false mussel *Mytilopsis leucophaeata*, Chinese mitten crab *Eriocheir sinensis* and the jelly fish *Mnemiopsis leidyi* invading the Baltic has led to intensive research on the impact of such "new kids on the block" for the traditional inhabitants. Papers E:05 and E:06 from the Theme Session on Biodiversity are examples of such studies, showing how shortage of spawning grounds can hamper the invaders or how higher salinity can support them.

Chemical pollution is still a problem in the Baltic. Although DDT and PCBs were banned all around the Baltic Sea three decades ago, their effects can still be seen in the reduced shell thickness of contaminated bird eggs (I:07). New threats to the Baltic marine ecosystem may arise from increased maritime traffic and oil and gas transport. ICES scientists are active in compiling relevant information and analysing potential risks (C:02, C:10).

Climate Change and human impacts affect marine life

In the wider context of the North Atlantic, climate change and human impacts on marine life are important research items. The seemingly uniform sea contains numerous different bio communities and a clear picture of life below the sea surface is only slowly appearing. A major scientific effort was the ICES North Sea Benthos Project in 1986 and 2000. After years of laborious detail analyses of samples of macroscopic and microscopic organisms, the first results are now presented (Theme Session A). We see a well established pattern of sea floor assemblages which remained stable over a period of 14 years (A:06, A:21). Others have changed. Some changes within sea floor communities were related to large-scale fluctuations in the North Atlantic and others were due to adverse impacts of human activities, e.g. fishing (A:20). However, some human induced changes may be reversed. In the Southern North Sea, a diverse sea floor community recovered three years after sand extraction activities had stopped (A:12).

Ecosystem effects of climate changes are now recorded from many places and scientists from countries around the world present their findings at the ICES ASC. For example, warming in the Bering Sea has resulted in a northward shift in the distribution of numerous subarctic species on the eastern Bering Sea shelf (D:04). In Korean waters, surface seawater temperatures have increased and squids, mostly *Todarodes pacificus*, and Pacific anchovy,

Engrauls japonicus, have become dominant in fishery catches off Korea in recent years (B:01). In the Barents Sea, increasing temperatures reduce the extent of frontal zones which in turn are important for plankton and fish survival (B:21), and distributional changes of important fish species are predicted (D:23).

Many marine ecosystems are also still facing severe chemical pollution. Examples are given from different regional areas (e.g. North Sea/Atlantic coast, Mediterranean, St. Lawrence estuary, Canada or the Baltic Sea) in Theme Session (I). Exposure to contaminants may impair sexual maturation and/or reproductive success of eel (I:26) and snails (I:12). Contaminants can also have an impact on Baltic salmon when these fishes are fed with contaminated herring or sprat (I:30). In order to detect and monitor pollution effects, indicators are needed (I:09, I:14). As a measure of the general health status of organisms a set of criteria (“traffic-light system”) is developed (I:01). Even without further inputs of chemicals, climate change may increase the risk of toxic impacts on mussels living at their tolerance limits in terms of temperature or salinity in the Baltic Sea (I:13). Possible consequences for future ecosystem health and its assessment will be discussed in the Theme session.

Monkfish and Anglerfish across the World

Fishing is one of the most important human activities in the sea, but many traditional stocks are depleted and new species are being exploited. Monkfish (or anglerfish) has become an increasingly important resource for fisheries and ICES is taking stock of our knowledge. All you ever wanted to know about these monstrous looking animals can be found in Theme Session K at this Conference!

Monkfish in southern European waters can grow up to 13 cm/yr and reach maximum sizes of more than 1.5 m (K:21). At the US coast female fish of 140 cm were observed, whereas males only grow up to 70 cm (K:04). These fish seem to benefit from warmer water and have established new populations closely related to higher bottom temperatures around Iceland since 1998 (K:02). Unfortunately, up to 28% of anglerfish caught in the Iberian fisheries are discarded due to small size (K:21). A related monkfish species in the southwest Atlantic has recently become a main target of the fisheries (K:19). A total of 34 up to date contributions are presented under the convenership of Jean-Jacques Maguire (Canada), Pilar Pereda (Spain), Rafael Duarte (Portugal), and Helen Dobby (UK).



Monkfish (*Lophius piscatorius*) (Photo courtesy of Anders Salesjö, www.sjoharen.com)

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 44 staff members provides scientific, administrative, and secretarial support to the ICES network of marine scientists.

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