

## Resolution to hold an ICES-sponsored symposium (Category 3)

**2009/3/SSGHIE 01** The “**Second International Symposium on the Effects of climate change on the world’s oceans**” will be held in May 2012, at Yeosu (Korea) with the support of IOC, PICES and ICES and [Sarah Hughes, UK] as ICES Convener.

A Steering/Organising Committee will be established with three members nominated by ICES, three by PICES and three by IOC in order to assist the Conveners in planning the Symposium. In consultation with the Conveners, ICES/PICES/IOC secretariats will solicit appropriate co-sponsorship from other international organizations.

### Supporting Information

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Priority ICES is concerned by the diverse effects of climate change in the North Atlantic and most ICES member countries finance research programmes and research projects to observe and predict the effects of climate change in their regions. Also most (if not all) of the countries represented by IOC and PICES have a clear interest in the possible consequences of climate change in the global marine ecosystem.

Therefore ICES, PICES and IOC are the most appropriate scientific entities to provide support for such a symposium and, with respect to ICES, the proposal should have a high priority.

This is the second symposium on the planned series supported by the same international Councils and it will be held in a country fully involved in the IOC and PICES structures.

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Scientific justification Climate change is the most important threat to the Earth. In the best of the IPCC scenarios, it is assumed that the warming will continue during the next decades and, even if we stop the emissions of CO<sub>2</sub>, sea level rise will continue . Some direct effects of climate change at sea are visible (e.g. melting of ice covers), but others still need to be verified with real data and observations. To assess climate change consequences in the world oceans has a high scientific and social relevance.

Although we are now beginning to compile quantitative documentation on the effects and consequences of climate change in the functioning of marine ecosystems, and workshops and meetings are programmed to discuss specific issues, we lack the complete vision at a global scale needed to assess and predict the effects in time and with confidence.

This Symposium will lead us into issues related to the many aspects of climate change in the oceans: sea level rise, changes in thermo-haline ocean circulation, acidification of shallow seas, oligotrophy of temperate seas, changes in species abundance, distribution and phenology, all of which will have serious implications for marine living resources, etc. This Symposium is aimed to bring together experts of different disciplines to exchange observations, results and models at a global scale and to discuss the possible chances to mitigate and protect the marine environment and living resources.

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Resource requirements	There will be significant resource requirements, most of which will be met by the imposition of a Conference Fee. ICES is asked to cover the publication of a special issue of the ICES Journal of Marine Science.
Participants	<p>This Symposium will attract a diverse community of scientist from ICES and PICES, but also from other organisations and countries concerned by the diverse effects of climate change in the oceans.</p> <p>The venue in Korea favour a strong participation of Asian countries which will enrich the diversity of participants. In addition, representative participation of scientists from developing countries is intended. The symposium will be held in close proximity to and perhaps within the context of the 2012 Ocean Expo in Yeosu and also close to a J-COMM meeting in Yeosu. Synergies with these meetings can be expected.</p>
Secretariat facilities	The Secretariat will be involved, as usually, in the general professional and secretarial support, and the Secretariat, as usual, should provide direct assistance during the Symposium.
Financial	The conveners expect a financial support from ICES of 10,000 €. This amount will be dedicated to fund travel and subsistence of keynote speakers or ICES conveners, and to support early career scientists. In addition, the attendance of one or two Secretariat staff at the Symposium, and the presence of the GeneralSecretary/President will place a significant financial burden on the Secretariat.
Linkages to advisory committees	This Symposium could benefit from synergies with ACOM
Linkages to other committees or groups	This Symposium could benefit from synergies with SCICOM, and more specifically with SGEF and the PGCC.
Linkages to other organizations	The Symposium has relevance for the interests of PICES, IOC, IGBP, FAO and other programmes related with UN and the EU, as well as to other actors like WCRP, UNDP, CBD, etc. , and many institutions representing marine councils.
Publication of proceedings	The conveners plan to use the ICES Journal of Marine Science for the proceedings. The volume is expected to exceed 250 pages.

**2009/3/SSGEF02** A Symposium on “Comparative studies of climate effects on polar and sub-polar ocean ecosystems: progress in observation and prediction” will be held during late May or early June 2011, in Seattle, Washington, USA with George Hunt (USA), Ólafur Astthórsson (Iceland), and Michio Kishi (Japan) as Co-conveners.

A Scientific Steering Group has been established to assist the Co-conveners in planning the Symposium with 8 present members (Erica Head and Ken Denman-Canada; Sei-ichi Saitoh-Japan; Ken Drinkwater and Paul Wassmann-Norway; George Hunt, Jim Overland and Mike Sigler-USA). ICES may also appoint a member to the Symposium SSC.

## Supporting Information

Priority	High priority.
Scientific justification and relation to action plan	The GLOBEC Regional Program, Ecosystem Studies of Sub-Arctic Seas (ESSAS), which is now also part of IMBER, was established in 2005. Its object was to use a comparative approach in developing predictions of how climate change would affect the sustainability of goods and services obtained from the sub-arctic seas. ESSAS held an initial Symposium, sponsored by GLOBEC and PICES and supported by ICES, in May 2005, in Victoria, British Columbia. This symposium was attended by 224 scientists from 16 different countries (8 of which were ICES members) and resulted in a special volume of Deep-Sea Research II in 2007 with 32 papers. In 2010, ESSAS will be half way through its expected 10-year life span, and several of its component national programs have or will be just finishing their field programs. Thus, it is appropriate to hold a second ESSAS Open Science Meeting to showcase the progress made both within the working groups of ESSAS, as well as in the national and international programs affiliated with ESSAS. The meeting also will be used to help identify remaining gaps in our knowledge and point the way for future work within ESSAS. We also anticipate that this Symposium will provide an opportunity for exploring ways ESSAS can interact with IMBER, ICED, ICES, PICES and other international programs, as we proceed in our comparative ecosystem studies.
Resource requirements	There will be significant resource requirements, and several organizations have been approached to help including ICES, PICES, IMBER, ICED, NPRB, NOAA Alaska Fisheries Science Center, NPFMC, NSF, Research Council of Norway, etc. Significant funds will be raised through participant's fees.
Participants	A wide range of scientists from climatologists and physical oceanographers to biological oceanographers and fisheries scientists and social scientists are expected from all of the countries interested in the sub-arctic and polar regions, including from several ICES member countries, are anticipated.
Secretariat facilities	The local ESSAS organizing committee along with the PICES Secretariat will organize the logistics of the meeting and thus help from the ICES Secretariat will not be required.
Financial	We request financial support in the amount of 10000.
Linkages to advisory committees	ACOM, SCICOM

Linkages to other committees or groups	Results from the symposium are potentially of interest to any committee or group working in or interested in the subarctic. These would especially include AFWG, NWWG, WGCC, WGECCO, WGFCCIFS, WGLESP, WGOH, WGOOFE, WGPBI, WGPE, WGRP, WGSE, WGZE, etc.
Linkages to other organizations	The topic of this symposium has very close relevance to the interests of PICES and IMBER who are co-sponsors of the Symposium. It is also expected to be of interest to ASOF, AMAP, SEARCH, etc.
Publication of proceedings:	We also request a volume of the ICES Journal of Marine Science be used to publish some of the papers from the Symposium. Our objective is to publish 2-3 special volumes from the Symposium in different journals on some of the topics of the sessions. Topics presently under consideration are gadoid-invertebrate interactions in sub-arctic seas, comparative studies of sub-arctic and antarctic ecosystems, field and modelling studies results from the Bering Sea studies (BEST / BISERP), a session on social science, etc.

2009/3/SSGHIE03 The **2nd International Symposium on Integrated Coastal Zone Management**, will be held 3–7 July 2011, at Arendal, Norway, with Erlend Moksness as Convener.

A Scientific Steering Group has been established with some members of ICES Working Groups on the Scientific Steering Committee from among the ICES network of research institutes in order to assist the Conveners in planning the Symposium.

## Supporting Information

Priority	Coastal Zone issues are a strategic initiative covering several topics of the ICES Science Plan.
Scientific justification	The coastal zone includes both coastal waters and narrow strip of land separating the marine and terrestrial environment. The coastal zone thus offers a myriad of goods and services ranging from production to protection. Despite its relatively small coverage in percentage of global surface area, this zone is highly productive and sustains a high biodiversity. Growing pressure from increasingly diverse human activities coupled with climate change impacts threaten the functional integrity of these coastal ecosystems. A multi-disciplinary approach towards understanding drivers, pressures and impacts is required as well as the integration of data and information in policy and management. The first International Symposium on Integrated Coastal Zone Management (ICZM) was hosted by the Institute of Marine Research, Norway and held during 11-14 June 2007 in Arendal, Norway. The international attendance and multi-disciplinary contributions to this symposium demonstrated the need for international fora to discuss and develop integration of science and policy and paved the way forward for new symposia. The second ICZM symposium will be hosted by the Institute of Marine Research, Norway and held during 3–7 July 2011 in Arendal, Norway. This international multi-disciplinary conference is intended to promote science and integration of knowledge for the sustainable management of coastal resources. It will provide a venue for scientists, engineers, managers and policy-makers to discuss recent advances and innovative ideas, share experiences and develop networks.
Resource requirements	No resources required from ICES.
Participants	Between 150 and 200 participants are expected.
Secretariat facilities	No secretariat involvement will be expected.
Financial	No ICES funding is requested.
Linkages to advisory committees	The topic is related to the ICES Advisory Committee via the themes impacts on coastal habitats, impacts on coastal systems, ICZM and coastal governance.
Linkages to other committees or groups	WGICZM, SSGHIE, SSGSUE.
Linkages to other organizations	None
Publication of proceedings	Conveners do not plan to use the ICES Journal of Marine Science for the proceedings.

**2009/3/SSGSUE04** A Symposium on “Forage fish interactions: Creating the tools for ecosystem based management of marine resources” will be held from 8–12 November 2012, at Ifremer, Nantes (France) convened by Stefan Neuenfeldt (DK) and Myron Peck (DE) (and two external convenors). The symposium will be held in close collaboration with the EU-FP7 funded project FACTS (Forage Fish Interactions). In consultation with the Conveners, the ICES Secretariat will seek appropriate co-sponsorship from other international organizations (i.e. PICES will also be approached for co-sponsorship).

The goal of the symposium is to review and discuss recent methods that enable us to quantify the links between forage fish and the other components of the ecosystem (from plankton to top predators and humans). By exchanging information on how to model the ecosystem-based consequences of different management options, the symposium will advance the knowledge needed to address the ecosystem-based approach to fisheries management. The symposium will be based around three themes:

- 1 ) Drivers of change: How do various extrinsic (environmental) drivers control the productivity and distribution of forage fish stocks within various ecosystems world-wide? What is the trophodynamic role of specific species in specific systems and how have those species responded to changes in climate-driven processes?
- 2 ) Management of marine resources: In specific systems, what are the economic and ecological costs and benefits of different forage fish management strategies? What tools exist or need to be developed to allow management to assess economic and ecological changes in a meaningful way?
- 3 ) Unique Traits: Across systems, what commonalities exist among different forage fish stocks from a biological and ecological perspective and in terms of their effective / ineffective management? What general lessons can be learned that will aid in the development of sustainable exploitation particularly in light of maintaining food security for developing nations?

## Supporting Information

Priority:	Due to the central position of forage fish in marine ecosystems and the high commercial value of these species, understanding the strength of interaction among forage fish and various ecosystem components is crucial for developing and implementing ecosystem-based fisheries management.
Scientific justification:	Forage fish are mostly defined as small- to medium-sized pelagic fish that provide food for predatory fish as well as marine mammals and seabirds. Recent dramatic changes in populations of forage fish in various ecosystems world-wide have brought these species into the limelight. From an ecosystem standpoint, the occurrence of multiple stable states indicates that unintended effects of fishing on forage fish stocks may lead to ecosystem states that are difficult to reverse and that have important and expensive consequences for societies. Reliable modelling tools are needed in ecosystem-based management, that are able provide robust estimates of both the direct and indirect effects of changes in forage fish exploitation on other ecosystem components. For example, managers require estimates of cascading effects, how changes in the exploitation of higher trophic levels influence forage fish and the dynamics of lower trophic levels. Furthermore, the benefits (revenue) of forage fish harvest must be weighed against all other costs in terms of changes in other ecosystem goods and services, a task that can be accomplished via bio-economic analysis. The symposium should also serve as a forum to exchange ideas and views across disciplines and stakeholders. The project reinforces collaboration with the European Commission and other international organisations such as PICES.
Resource requirements:	The symposium will be funded by the project and by a conference fee.

Participants:	A Scientific Steering Group will be established with members nominated by relevant Working Groups or other relevant ICES bodies from among the ICES network of research institutes in order to assist the Conveners in planning the Symposium. We anticipate a maximum of 80 participants and about 30 presentations from ICES member and other countries.
Secretariat facilities:	Secretariat involvement is expected in general professional and secretarial support, and assistance during the symposium.
Financial:	ICES is expected to contribute to funding of the Book of Abstracts, rent of conference facilities, travel and subsistence of keynote speakers, and to support for early career scientists.
Linkages to advisory committees:	By considering the provision of tools that would help implement the ecosystem approach to fisheries, this symposium will support ACOM directly.
Linkages to other committees or groups:	SCICOM through SSGSUE and many other expert groups.
Linkages to other organizations:	PICES, EC, NAFO, etc
Publication of proceedings	The convenors plan to use IJMS for the proceedings. Convenors agree to the 15-month turnaround schedule for publication.