# Draft Theme Session E – Operational Oceanography

**Conveners: Yves Desaubies (France), Guoqi Han (Canada), and Bernard Megrey (PICES)**

## Background and Objectives

The theme session "Operational Oceanography", was initiated by European MERSEA Program and ICES Working Group on Physical and Biological Interactions and co-sponsored by PICES. It was joined and strengthened by the papers originally submitted to another proposed theme session "Harmful Algae Bloom Dynamics: Validation of model predictions (possibilities and limitations) and status on coupled physical-biological process knowledge".

So far there have been numerous operational oceanographic forecast systems on global, basin and regional scales, in which ocean dynamic models are combined with *in situ* and remotely sensed data to hindcast, nowcast and forecast ocean state (currents, temperature, salinity, and biogeochemical variables). More efforts and attention are required for applying operational oceanography to fisheries management and ecosystem sciences, including Harmful Algae Bloom (HAB) issues.

The session aims to present recent advances in the development of operational oceanography and its aspects in support of fisheries research, understanding of large regional ecosystems and environmental management. It hopes to provide a forum to review experience from fishery and ecosystem scientists and from policy-makers on the use of products from operational systems and to assess to what extent the systems meet the requirements of ICES and other agencies engaged in ocean research, monitoring, resource management, and environmental reporting.

## Summary of Presentations

The session has 18 oral presentations and four posters. Contributions covered a wide range of aspects in the context of operational oceanography and applications to ecosystem sciences and fisheries management, including project initiatives, observational monitoring, data exchange and management, model developments, data assimilation, service and products, HAB modeling and prediction, fish recruitment, and emergency response. Presentations cover a wide range of geographic areas from global- and basin-scale (Atlantic, Arctic) applications to regional seas such as in the Baltic Sea, Mediterranean Sea, North Sea, Irminger Sea off the US west coast and in Japanese waters.

## Conclusions

The presentations and discussions in this session indicate that most of the present operational oceanography systems are focused on physical oceanographic aspects. Much more efforts need to be made in advancing biological and fisheries aspects. In addition to many other challenges, a critical issue from the ICES community perspective remains the communications between operational oceanography community and their user groups in ecosystem and fisheries management. Although the session was very well attended, audience was primarily oceanographers. It's the time for the oceanography community and fisheries scientists to sit together to discuss opportunities and needs more closely than ever before. An important task ahead is to understand what operational oceanography can produce and what users require and can really use. One initiative in this direction from this meeting is that Jake Rice from Canada, David Mountain from USA and others are working on to set up a planning group for operational oceanography products that can well serve ICES community.