

2011/3/SSGSUE02 An **ICES/PICES Symposium on “Ecological basis of risk analysis for marine ecosystems”** will be held from the 2–6 June 2014, in Helsinki, Finland, convened by Sakari Kuikka (Finland), Tony Smith (Australia) and Alexei Orlov (Russian Federation). The contents of the symposium support the risk assessment activities of ICES and the conclusions made by ICES Study Group on Risk Assessment and Management Advice (SGRAMA). The symposium will be held in close collaboration with the EU-FP7 funded project ECOKNOWS (Improving fisheries assessment methods by integrating new sources of biological knowledge).

In consultation with the Conveners, the ICES Secretariat will seek appropriate cosponsorship from other international organizations (i.e. [OECD, IIFET, ISEC, International Statistical Ecological Community]). A steering/organising Committee will be established with three members nominated by the supporting organisations.

The goal of the symposium is to review, discuss and assess methodological approaches, case studies and outcomes relevant to effective and efficient interdisciplinary marine ecosystems risk analysis, particularly in relation to resource use and risks of overexploitation. By comparing the different scientific fields focusing on marine risks, the symposium aims to explore how science can identify and quantify uncertainty and develop processes that allow better interpretation of uncertain estimates, leading to management that more effectively and efficiently meets objectives.

The symposium will be based around the following risk analysis themes, which are highly relevant for stock assessment and fisheries management.

1. **Risk identification and risk assessment:** alternative methodological approaches used to identify and assess risks in the marine environment, taking into account the complex structures of ecosystems and available data sets, to improve the predictability of change in marine ecosystems, both in the short and long run.
2. **Risk management:** application of decision analysis and other management approaches to integrated marine management, including multi-criteria decision-making at the ecosystem level and the management of human behaviour by incentives and other economic tools.
3. **Risk communication:** perception and comprehension of risk information and related quality needs for scientific estimates in decision-making relevant to diverse stakeholders.

Supporting Information

Priority:	The symposium will support the strategic goals of ICES to evaluate the uncertainties related to sustainability of marine-related industries and production of integrated advice for the need of decision makers. Further, it will support the aim of ICES to enhance co-operation between ICES and other bodies relevant to risk-based management of marine activities and broadens the diversity of scientists participating ICES activities. In providing scientific advice, one of the main tasks of ICES advisory and scientific activities is to assess risks and incorporate risk analyses in an integrated and scientifically justified way and to successfully communicate these to scientists of other fields, managers and wider audience. This allows identification of potential risks and leads to better opportunities to manage or control these risks. This symposium has specific links to the following ICES Science Plan themes
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and high priority research topics:

ICES Science Plan Thematic Area 2 - Interactions of Human Activities with Ecosystems.

- 2.1 Impacts of fishing on marine ecosystems;
- 2.2 Carrying capacity and ecosystem interactions associated with mariculture;
- 2.3 Influence of development of renewable energy resources (e.g. wind, hydropower, tidal and waves) on marine habitat and biota;
- 2.4 Population and community level impacts of contaminants, eutrophication, and habitat changes in the coastal zone;
- 2.5 Introduced and invasive species, their impacts on ecosystems and interactions with climate change processes.

ICES Science Plan Thematic Area 3 - Development of options for sustainable use of ecosystems.

- 3.1 Marine living resource management tools;
- 3.2 Operational modelling combining oceanographic, ecosystem, and population processes;
- 3.3 Marine spatial planning, including the effectiveness of management practices [e.g. Marine Protected Areas (MPAs)], and its role in the conservation of biodiversity;
- 3.4 Contributions to socio-economic understanding of ecosystem goods and services, and forecasting of the impact of human activities.

Scientific justification:	<ul style="list-style-type: none"> • There is a need to further develop methodologies for planning monitoring scientific programs and assessments to provide better answers to the increasingly complex questions raised by society. • Risk analysis methodology has been developing in different fields and the available databases and other sources of information are more readily available. There is a need to learn from these sources as effectively as possible. Also, our ability to communicate scientific information is improving rapidly as is our ability to receive feedback from stakeholders. • Due to the application of Ecosystem Approach to Fisheries management, there is an increasing need to expand risk related advice to new species. • The project reinforces collaboration with the European Commission and other international organisations such as xx.
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 Expert 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 100 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 requested 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:	This symposium will support the work of ACOM directly by providing tools which will improve the implementation of the ecosystem approach to fisheries, its decision support and risk analyses which lead to strategy evaluations.
Linkages to other committees or groups:	Assessment working groups under ACOM and expert groups under SCICOM (WGMG, WGSAM, SGIMM) .

Linkages to other organizations:	EC, NAFO, NEAFC, NASCO, OECD, PICES
Publication of proceedings	The convenors plan to use IJMS for the proceedings. Convenors agree to the 15-month turnaround schedule for publication.
