

Symposium on “Marine Socio-Ecological Systems - MSEAS 2020: Navigating global change in the marine environment with socio-ecological knowledge”

2016/3/SSGIEA07 A Symposium on “Marine Socio-Ecological Systems - MSEAS 2020: Navigating global change in the marine environment with socio-ecological knowledge” will be held in 2020, in Yokohama, Japan with Rich Little (Australia, SPICES), Marloes Kraan (Netherlands, ICES), Mitsutaku Makino (Japan, PICES), Doug Lipton (US, ICES) and Keith Criddle (US, PICES) as Conveners.

A Scientific Steering Group will be established to assist the Conveners in planning the Symposium, with suggested participation of Jan Jaap Poos (Netherlands), Olivier Thebaud (France), Alan Haynie (USA), Jörn Schmidt (Germany), Ingrid van Putten (Australia), Evangelia Drakou (Netherlands), Eva Plaganyi (Australia), Katell Hamon (Netherlands), Sophie Gourguet (France).

Symposium coordinators: Alex Bychkov (PICES), Wojciech Warzynski (ICES)

Supporting Information

Priority: Policy and decision-makers responsible for activities that affect the marine environment must weigh how to adapt to or mitigate the impacts of human activity across a range of spatial and jurisdictional scales (global, national, regional to local) and time frames (near-term, long-term, infinite). The marine environment as a source of foods, energy, minerals, environmental services, and vector for maritime transit is an essential component of the world economy. Investments in “blue growth” are escalating across the globe, supported by well-established economic sectors (shipping, fishing and seafood processing, coastal aquaculture, coastal tourism, conventional exploitation of oil and gas, etc.) and emerging sectors (kinetic and thermal energy, deep-sea oil, gas, and mineral resources, blue-water aquaculture, marine biotechnologies, etc.). The challenge is to enable current and future growth of maritime activities, while ensuring their long-term sustainability from ecological, economic and social points of view. This challenge implies managing human impacts on marine ecosystems and, in turn, managing the impacts of ecological changes on coastal populations, industries and society at-large. This requires extension of traditional disciplinary and interdisciplinary scientific methods and development of new trans-disciplinary approaches to better integrate policy and decision making systems and to better account for risk and uncertainty, evolving social preferences, and environmental justice. Development of new decision support tools that are robust to the current uncertainties in our understanding and limits to the predictive ability of social-ecological system models has been identified by the World Economic Forum and OECD as one of the most important emerging areas of science. This was also the focus of the MSEAS 2016 symposium, which sought to establish an interdisciplinary, international dialogue on how to include human dimensions within research, science and management efforts intended to support the long-term management of marine and coastal ecosystems.

Considerable progress has been made in characterizing the options available to policy and decision makers, visualizing synergies and tradeoffs of activities in the

marine environment. Central challenges include: identifying the spectrum of economic, social and ecological values and objectives of society, and understanding the hierarchical, dynamic nature of the human and biophysical systems, all in the context of high uncertainty. Simulation models offer a way to evaluate the robustness of alternative adaptive decision-making systems in the context of a highly uncertain decision-making environment.

Building on the success of the MSEAS 2016 symposium, MSEAS 2020 will bring together experts from around the world, from a range of disciplinary areas to focus on the science to support integrated planning and decision making for the marine environment. It will characterize the spectrum of “user specifications” for decision support from relevant policy-makers, from local to national scales; match these needs with the most appropriate assessment and evaluation approaches; and identify the major multi-disciplinary and technical challenges that need to be addressed in order to deliver robust policy and decision making systems for different decision making contexts (e.g. local government, regional planning, national/international policies) in the marine environment.

In summary, the objectives of this symposium will be to:

1. Provide a focused international forum for the presentation and discussion of frontier research on marine social-ecological systems.
2. Foster closer collaboration among biophysical, economic and social, decision-support researchers and policy-makers.
3. Review the theoretical and technical strengths and weaknesses of current social-ecological models.
4. Identify short-term opportunities for increased cross fertilization of cross-disciplinary/cross-domain approaches and longer-term strategic research directions, including potential case studies.

Scientific justification:	<p>The symposium will focus on the integrated assessment of multiple ocean uses across sectors, including: fisheries, renewable energy, coastal development, oil and gas, transport, and the need for conservation. Emphasis will be on the methodological and empirical challenges involved in including the human dimensions in integrated ecosystem assessments. As was highlighted during MSEAS 2016, exploring tools to specifically evaluate coupled social-ecological systems is sorely needed, is timely, and is just beginning to be done.</p> <p>Understanding these complex social-ecological systems is a challenging new area of research that combines multidisciplinary, interdisciplinary and transdisciplinary components. The integrated marine focus is relatively new, as previous research efforts have either been terrestrially focused or dealt primarily with single sectors.</p>
Resource requirements:	<p>Primary funding will be achieved through registration fees, as is typical. The conveners will seek additional sponsorship from participating institutions and other agencies which have active interest in the topic. These funds will be used to support keynote speakers, participation of postgraduate students and early career scientists, and to support publication.</p>
Participants:	<p>There is increasing global interest in this topic which we expect to be reflected in participation from scientists and practitioners from Asia, Europe, North America, and Australasia. In addition, the scope of the symposium with its multi-disciplinary and multi-sectoral focus will ensure considerable interest. We would anticipate that around 200-250 delegates will attend.</p>
Secretariat facilities:	<p>The conveners requested PICES support for advertisement, pre-planning, development of a web page and management of registration, and the general organisation of the symposium. ICES support is thus requested for advertising mainly.</p>

Financial:	The conveners humbly request ICES to contribute €10,000 to fund travel support for early career scientists. (approved by SCICOM pending Council allocation of funding in November 2018)
Linkages to other organizations:	Linkages to other organisations will be pursued, including PICES, IMBER, IIFET, Belmont Forum, Future Earth and others
Publication of proceedings	After communication with the local organizer, the journal 'Fisheries Science' has been approached for the proceedings
