Theme Session I
Marine spatial planning: The multidisciplinary approach

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Many coastal zones and offshore areas are worldwide subject to an increase in the number and frequency of human activities, which in turn increase both the pressure on the marine environment and potential spatial use conflicts. A place-based management such as marine spatial planning (MSP) is central in the discussion of an integrated management of multiple human activities in the sea, their combined impacts on marine ecosystems, and the services they provide. MSP manages human activities to resolve potential conflicts over maritime space while balancing multiple objectives such as sustainable use and marine conservation. Hence place-based management measures can contribute to the implementation of an ecosystem-based management of marine areas as it is promoted by European legislations such as the Marine Strategy Framework Directive (MSFD).

Regulating these activities within sustainable limits is a major challenge, not only in terms of finding appropriate indicators that measure the total pressure on the ecosystem but also to understand the ecosystem response to those human-induced pressures.

The political systems are looking for an appropriate balance between the benefits to human wellbeing and the negative impacts on the marine ecosystem that these activities often have. Science can make an important contribution to this debate. So, from an ICES perspective a key question is "What is the role for science, and in particular advisory science?"

This session will therefore showcase MSP or place-based management examples in coastal and offshore waters to illustrate the development and application of underpinning science products in this process, including their legal and institutional framework. Within the session the following key issues may be addressed:

- The analysis of interactions (both conflicts and synergies) between different existing and future human activities such as capture fisheries, aquaculture, renewable energy, and other activities in the coastal zone and offshore areas;
- The development of spatial management scenarios and risk analysis of their impacts;
- The evaluation and monitoring of the effectiveness of an implemented place-based management;

- The analysis, evaluation, and development of improved spatial management approaches, including legal and governance aspects;
- From a sector approach to a multisector approach, incorporating food production, energy, mining, and the sea as a provider of cultural services.

This session is also inviting contributions by the EU-funded COEXIST project (www.coexistproject.eu), which is aiming at developing good practice guidance for the sustainable integration of aquaculture, fisheries, and other uses of the European coastal zones.