

**Session I**  
**Monitoring requirements, observation technologies and methods (e.g. acoustics) for pelagic organisms at local and basin scales for input into ecosystem based fisheries management assessments**

**Conveners: Olav Rune Godø (Norway), Verena Trenkel (France), and Martin Dorn (USA)**

To improve our ability to manage sustainable fisheries, nations are adopting an ecosystem approach to fisheries (EAF) management that will include knowledge beyond that of the targeted species. As a minimum, more knowledge about multispecies assemblages, their trophic interactions and biomasses will be required to monitor performance of EAF. Information demands increase substantially under EAF. Therefore modelling and use of indicators will be necessary for integrating complex observational data within the assessment process and may also be essential for identifying data needs and sampling priorities, defining survey strategies, and addressing cost effectiveness concerns. Effective communication among scientists from different disciplines is also essential under this approach. In particular, interaction among those involved in development and implementation of advanced data collection and sampling technologies and those involved in modelling should be enhanced. The potential for acoustic data to provide both quantitative and qualitative indicators over a range of trophic levels and spatial and temporal scales has made it an attractive tool. Integrated monitoring studies based on acoustics can also provide new insights into ecosystem function that assist in the parameterisation of ecosystem models. In particular we focus this session on the monitoring requirements for trophic groups such as zooplankton, micronekton and fish with the use of existing and new tools such as multi-beam sonars/ echosounders and both conventional and unconventional platforms (e.g. vessels, buoys, moorings, gliders and AUVs).

Papers are welcome on the following topics:

- monitoring requirements for EAF in different regions (e.g. based on ecological/fisheries models)
- enhanced use of existing technologies (e.g. acoustics from fishing vessels)
- new technologies (e.g. multi-beam sonars/echosounders)
- new platforms and observation strategies that utilize advanced technologies
- use of models for developing enhanced survey strategies and sampling approaches
- multi-species observations and validation methods (e.g. optical and nets)
- case studies where modelling approaches have demonstrated the extent to which new technologies or methodologies can provide insights regarding ecosystem function and dynamics, or where modelling has been used to identify information needs that can be provided by these types of technologies.

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