

Socio-Oceanography 2025

Integrating human and ecological dimensions into participatory monitoring to foster immersive learning and action at the local level

Session co-leads:

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Summary

This workshop will develop a practical framework for monitoring, evaluating, and learning (MEL) in small-scale fisheries and MPAs. Led by the Global Socioeconomic Monitoring for Coastal Management Initiative, it emphasises interdisciplinary approaches that combine scientific and Indigenous knowledge. Participants will explore how participatory monitoring can enhance social-ecological resilience and promote more effective, community-driven marine resource management.

Abstract

This session tackles the challenge of co-developing a practical, participatory framework for monitoring, evaluating, and learning (MEL) about small-scale fisheries and marine protected areas management. More specifically, the workshop will debate how to promote, commit to, and apply interdisciplinary and transdisciplinary monitoring approaches that bridge scientific and Indigenous knowledge to foster social and ecological resilience at the community and regional levels. Led by the Global Socioeconomic Monitoring for Coastal Management (SocMon) Initiative, this session will connect marine and social scientists to joint initiatives that help to answer the following questions: i) How do fisheries livelihoods and marine ecosystems influence, and are influenced by global stressors, such as climate change, marine plastic pollution or by local-regional stressors, such as demographic pressure and economic development?; ii) How can we develop capacities by strengthening a global network for local-level monitoring of the state of fisheries livelihoods and marine and coastal ecosystems?; and iii) How can we use interdisciplinary and participatory approaches to monitoring to support engaging stakeholders and ecosystem stewardship to foster robust marine resource management?

One of the challenges to addressing these questions is that the science supporting biodiversity and fisheries management has historically overlooked the contribution of social sciences. Such a perspective masks essential considerations, such as local perceptions and traditional knowledge, poverty, and food security. As a result, monitoring and scientific approaches focusing only on biological indicators lack legitimacy, leading to resource users' miscomprehension of scientific outputs and, ultimately, a lack of compliance and trust in the governance framework. Participatory approaches that involve local communities in monitoring and decision-making processes are required to address local people's needs and livelihoods.

An interdisciplinary approach prioritising biophysical and human dimensions is critical for marine resource management to succeed long-term. The session will explore how to integrate social and ecological sciences and use participatory monitoring to overcome management challenges. Experiences from SocMon case studies will provide some initial support to the discussion. Marine and social scientist participants will be encouraged to share their stories about how they currently address these challenges.

In this session, participants will 1) discuss integrative socioeconomic and ecological project design for data collection and monitoring that can be scalable and replicable across regions; 2) go through activities on how to facilitate immersive and experiential learning for the local community by involving them in field data collection and analysis; and 3) explore the application of complex, rigorous data analyses to participatory approaches encompassing qualitative and quantitative social-ecological indicators.

Three main outputs are planned from the workshop discussion: First, a draft framework for applying interdisciplinary and transdisciplinary monitoring approaches to small-scale fisheries and marine protected area management. Second is a journal paper outlining case studies in which participatory monitoring contributed to community empowerment and successful fisheries and MPA co-management. Finally, the participants will propose a joint project to refine and apply the proposed framework.