

Social Science aspects of Marine/Maritime Research

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MARCOM+
Integrating Marine & Maritime Science Communities



SOCIB
Balearic Islands
Coastal Observing
and Forecasting
System

Outline

- What is social science?!
- Increased need for social science information to support environmental policy
- Science is adapting to address these needs (e.g. Sustainability science)
- Potential contributions of social science to marine/maritime research
- Marine Spatial Planning (MSP) – a tool for integrating science(s) and decision-making (e.g. ICES WG MPCZM 2011)
- Examples of SOCIB studies

What is social science?

- A plurality of fields outside of the natural sciences (e.g. archaeology, business administration, economics, anthropology, geography, political science, sociology, international relations, communication, history, law, and psychology, etc.) – the study of social systems.
- “Hard” or “soft” science? Does it really matter? All are methods of inquiry, all advance “knowledge”.
- Range of methods from positivist (quantitative methods) to interpretative (qualitative methods). Social scientists often apply combined qualitative/quantitative methods.
 - Quantitative methods – e.g. survey research, statistics, indicators, spatial data analysis, economic valuation methods
 - Qualitative methods – e.g. interviews, participant observation, maps, stakeholder engagement techniques.

Environmental policy is adapting to recognize humans as part of ecosystems

e.g. Why is the Commission defining a European Strategy for Marine and Maritime research? (MEMO/08/553)

“In the context of global economic growth, human activities are exerting environmental pressure on oceans and seas which is threatening marine ecology and a sustainable exploitation of marine environments. It is therefore vital to reconcile the promotion of sustainable economic growth in sea-based activities with environmental preservation.”

- Movement towards balancing multiple human activities with conservation goals (e.g. “marine” and “maritime”; social-ecological systems, ecosystem approach).
- This movement is reflected in emerging integrated management processes that seek to combine interdisciplinary scientific research and information with management and policy development (e.g. MSP, ICZM).

Science is adapting to address these needs

Sustainability Science

There is a need for scientific research aimed at developing innovative, adaptive approaches to understanding and managing social-ecological systems with variable, interdisciplinary, and multi-dimensional attributes (i.e. there is no panacea for addressing sustainability problems).

New scientific approaches such as sustainability science have emerged in order to address this need and are more applied, interdisciplinary, and problem orientated than before (i.e. “defined by the problems it addresses rather than by the disciplines it employs, PNAS 2007).

Science that supports the policy and decision-making process (iterative approach).

Potential contributions of social science to Marine/Maritime research (as part of interdisciplinary research and integrated management processes)

- Define the problem/challenge/issue when it is embedded in multiple systems (i.e. economic, governance, social, cultural, ecological) or sectors (scoping research, context).
- Explore the factors (drivers, pressures) associated with the problem in order to better understand and address them.
- Guide research across disciplines, target priority objectives, more efficient use of resources.

Potential contributions of social science to Marine/Maritime research (cont.)

- Identify, involve and accommodate multiple stakeholders.
- Participatory methods - “methods to structure group processes in which non-experts play an active role in order to articulate their knowledge, values and preferences” (van Asselt and Rijkens-Klomp 2002).
- Design measures that match the capacity of the target “clients”.
- Ease the access of clients to the research process and products (i.e. science-policy gap).

Marine Spatial Planning (as a tool for integrating science(s) and decision-making)

- a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process (IOC-UNESCO 2009).
- A tool to support decision-making that depends on inputs from different scientific disciplines and multiple stakeholders.

Marine Spatial Planning Steps (IOC UNESCO)

1. Establishing context and authority for marine spatial planning;
2. Obtaining financial support for marine spatial planning;
3. Organizing the process for marine spatial planning;
4. Organizing stakeholder participation for marine spatial planning;
5. Defining and analyzing existing conditions for marine spatial planning;
6. Defining and analyzing future conditions for marine spatial planning;
7. Preparing and approving the spatial management plan;
8. Implementing and enforcing the spatial management plan;
9. Monitoring and evaluating performance of the spatial management plan;
10. Adapting the marine spatial management process.

Examples of studies from SOCIB - SIAS

- Design and implementation of a system of indicators for ICZM in the Balearic Islands, in partnership with CES, IBESTAT, OBSAM, (Diedrich et al 2010)
- MSP in the Bay of Palma
- Physical and social carrying capacity of recreational boating in Mallorca, in partnership with the Chamber of Commerce of Mallorca (Diedrich et al 2011, Balaguer et al 2011)
- Environmental sensitivity of the coastline of Mallorca
- Perceptions of the private sector of sustainable development in Mallorca (Chamber of Commerce of Mallorca)
- Spatial delimitation ICZM in the Balearic Islands (Balaguer et al 2008)