

Theme session C

Assessing and analysing marine spatial planning - knowledge - indicators – visions

Conveners: Andrea Morf (Sweden), Kira Gee (Germany), Riku Varjopuro (Finland)

Background

Presently, in the area of marine/maritime spatial planning (MSP), there is a fast institutional development process under way, at least in the European countries, driven both by needs and by the EU MSP directive (2014). MSP has to deal with boundary crossing problems (ecosystem, administration, knowledge types) of complex character (complex, changing systems, uncertainties, knowledge gaps). Managing marine uses in space implies a process that has to deal with many stakeholders with different interests, values and knowledge in highly varying ecological, societal and institutional contexts. Ideally, this requires integrative, participatory, and iterative forms of planning with focus on process and not just outcomes.

The development is supported by research and development projects facilitating national processes, as well as cross-border and transdisciplinary learning and sharing. Insights so far indicate that there is a high diversity in settings but also many common problems. These include differences in institutional systems, cross-border understanding and coordination, lack of resources and continuity, a need for mobilisation and education of authorities and stakeholders at different levels, a high need for method development (digital and process-related) and problems with data availability and harmonisation across borders. A fast development of a professional field of expertise is under way as well, requiring education and training. For this, complex collaborations across marine basins and fields of science and practice are needed, which presently suffer from a lack of continuity in financing and commitment.

The session call and its aims

Supported by EU policy (i.e. the MSP and Marine Strategy Framework Directives), MSP has become the tool of choice for many countries in implementing sustainable maritime development and promoting ecosystem-based management. With many countries already applying MSP and others well on track with national MSP programmes, this is a good time to take stock of MSP developments and question its current ambitions and successes. Questions must be asked regarding the ultimate objectives of MSP, for example how it is linked to an ecosystem approach to management, how it might facilitate blue growth and promote ecological sustainability, and how it contributes to more inclusive and participatory maritime governance. There are a number of recently concluded and on-going projects and initiatives in MSP, both in the Baltic and the North Sea, the Mediterranean, the Atlantic and beyond the European seas.

The session was intended to collect active and interested researchers and practitioners and discuss the state-of-the art in MSP and ways beyond. It was arranged jointly by the ICES Working Group for Marine Planning and Coastal Zone Management (WGMPCZM, <http://www.ices.dk/community/groups/Pages/WGMPCZM.aspx>) and the MSP Research Network (<https://www.msprn.net/home>). The session consisted of three sections (1. Developments in MSP and comprehensive approaches, 2. Evaluation and assessment, and 3. Tools and approaches to link specific sectors into MSP) with 13 oral presentations and 4 posters presented briefly in the last part of the oral session. The final discussion consisted of interactive group work in 6 groups and a plenary, discussing the important take home messages in relation to challenges and solutions for MSP and a research agenda. The following text highlights important messages from the individual presentations and overall discussion.

Questions posed

The session aimed to open up perspectives on both marine spatial planning (MSP) and integrated coastal management (ICM) from a critical systems perspective, assessing the state-of-the-art and recent developments in MSP, and asking the following:

- MSP developments: what are current ambitions and successes?
- How is MSP conceived? (visions) – e.g. with respect to sustainable development (or in relation to recent developments such as EBM, ICM etc.)
- What knowledge does it draw on? (inclusiveness)
- How can progress and success be measured? (indicators and evaluation)

The session brought to the fore different visions of MSP:

- The use of MSP to consciously respond to climate change. Climate change is likely to affect the distribution of ecosystem services, leading to changes in the intensity and distribution of resources and uses. “Climate smart” ocean planning incorporates evidence related to climate vulnerability and risk assessment and strengthens its adaptive capacity by ensuring that climate-related aspects are more strongly reflected in MSP policy and plans.
- MSP as a tool to facilitate sustainable development, taking a holistic, strategic development-oriented perspective from the start rather than responding to the (recent) development of a single (new) sector, for example.
- The role of MSP in addressing various relevant marine topics and concerns was discussed. The field is rapidly evolving as more and more countries have introduced MSP. The systems differ and the challenges are multiple, leading to the necessity to address policy integration and separation of duties between policy sectors, levels and countries sharing marine basins. It is important to identify the roles that MSP can have and in which it is effective and what other policies can deliver towards the common goal of sustainable seas.

- An ecosystem (based) approach to MSP to support management of human activities, including cultural heritage and more of a non-economic values perspective.
- MSP as part of a holistic *integrative coastal and ocean governance*: with oceans as linked ecosystems and human societies steered by multiple policies and instruments, it is necessary to think more broadly in relation to ocean governance both in terms of extending towards marine areas beyond national jurisdiction (the EEZ and territorial waters) but also widening thinking beyond planning as a spatial management tool and connecting MSP and ICM to what is happening on land and affecting the sea (understanding and managing land-sea interactions).
- MSP (including its legislation and institutionalisation) as a forum for power struggles between interests of nations, authorities and users, rather than being an objective instrument and a neutral process.

Lessons in relation to knowledge:

- Interpretation of data is now key, which implies negotiations rather than “hard” facts.
- There are remaining knowledge gaps and uncertainties and a lot to do to ensure availability of data in formats suitable for MSP. Several options and new methods were presented.
- When cultural heritage comes into play, qualitative statements and knowledge are added to the process, which is different to the “precise delineations” e.g. of marine protected areas (MPAs) or other zones.
- Knowledge is needed with respect to risks, such as a cumulative risk profile based on the distribution of natural values and cumulative human pressure. Risk is understood as a likelihood.
- Vulnerability is related to scale, and the question of what is at stake and where.
- An important question in the context of power relations is how power could be measured and expressed – in terms of the resources available? In terms of transparency?

Lessons in relation to evaluation, indicators and development of MSP practice:

- There is an urge to become concrete and provide tools and indicators for MSP, at the same time as there are considerable differences in terminology used both in research and practice. This is normal for a field in development, but needs attention and harmonisation.
- To promote coherence and cross-border learning, monitoring and evaluation needs to occur both internally within a country and externally across borders. This requires further method development and harmonisation.

- Indicators are needed that allow different parameters to be weighted, ideally together with stakeholders to determine the suitability of marine areas for certain activities or combinations.
- In terms of serious gaming, a key question is how “real” the games need to be, e.g. with respect to assessing cumulative impacts of sea use. Here, the main issue is whether such games are understood as educational in purpose, or as actual decision-making tools.
- There are two broad “branches” of evaluation of MSP. One is to evaluate or compare national approaches of MSP against a general indicators. The other is to focus on one (often national) MSP process and evaluate how the objectives specific to that process are met.
- There are numerous principles at various institutional levels that could be used for setting up goals and design evaluation systems. But these need to be concretised in relation to a specific context (several promising methods and approaches were presented).
- Internationally, there is an increasing amount of practical experience and guidelines are available for MSP (e.g. see MSP platform and the IOC website for a repository of relevant information).

Results relevant to Term of Reference ToR a) of the ICES Working Group Marine Planning and Coastal Zone Management (WGMPCZM):

Natural and social scientists play a role in MSP as knowledge brokers and advisors, but can also take other roles (critical observers, lifting certain sector and stakeholders’ views: e.g. fisheries, conservation, recreation, cultural heritage). In some areas (e.g. Mediterranean, Black Sea), science is a main driver of MSP/ICM in collaboration with marine sectors (see e.g. AdriPlan, parts of MUSES) and authorities are less committed and active, while in other marine basins MSP is driven by authority collaboration and science plays more an exploring, supporting and accompanying role (e.g. in the Baltic and the North Sea: Baltic SCOPE, Baltic LINES, North SEE) or observes MSP development (BaltSpace and many more).

Scientific work on various aspects of MSP/ICM is under way:

- Development of basic knowledge/data (issues: availability, quality, and harmonisation). For examples, see the posters in this session on fisheries data, aquaculture allocation, habitat modelling)
- Development and testing of tools, methodology (posters and presentations on methods for project planning and management, evaluation and indicators of various kinds, input to the European MSP platform as open library)
- Accompanying, facilitating research on process and evaluation thereof (Baltic SCOPE)

- Institutional and policy analysis and evaluation (presentations comparing MSP in Germany, Australia, Power in Denmark)
- Development of curricula for education and training (mentioned, but less discussed)
- Meta reflection on MSP work and research and the further development of the field (the final discussion in groups)

Ways forward – A research and action agenda for MSP research and ICES work

- Researchers should think more broadly in terms of ocean governance, as many of the instruments and approaches are complementary and both ecosystems and resources and marine uses should not be seen and managed in isolation. This also applies to monitoring and evaluation (of plans, their implementation and the effects on users and environment), which needs to be both place specific but possible to connect to the surroundings. WGMPCZM has already proposed 2 sessions for ASC 2019 in this spirit.
- MSP and ICM need to be country and context specific but able to communicate across borders within a marine basin. Advice in relation to this needs to be so too. Here, there is still need for further comparative research (across borders and marine basins and institutional and cultural contexts).
- MSP could learn from insights of land-based planning and ICZM and from other thematic fields of management and evaluation research (in order to neither re-invent the wheel nor make similar mistakes). Various concrete suggestions were collected.
- There is a need to develop the *critical perspective* in MSP research, but also use it to promote *self-reflection in action* among planning practitioners. For this purpose, science-policy interaction need to be developed further, including interaction with training and education. This is presently difficult, as research is transdisciplinary, international and also geographically relatively dispersed and financing not continuous.
- Linking science and policy making within ICES and beyond:
There is a need to work further with developing a transdisciplinary dialogue on integrative and sustainable ocean governance
 - a) within sciences (e.g. across ICES working groups – among and beyond social sciences groups)
 - b) between activities and actors within SCICOM and ACOM and
 - c) across the science-policy interface (towards advice, but also by making ICES and its working groups and more known internationally in the different countries)

For a more complete summary and overview over the input from the group discussions, please contact the session leaders (andrea.morf@havsmiljoinstitutet.se, kira.gee@hzg.de, riku.varjopuro@ymparisto.fi). We will also feed this information into the MSP research network and are looking forward to collaborate with others on session proposals for upcoming conferences (e.g. MARE, NESS 2019, ICES ASC 2019 etc.) to provide forums for a continued development of the scientific discussion and sharing of practical insights and experiences across marine basins.