



Published on *Marine Ecosystems and Management (MEAM)* (<https://meam.openchannels.org>)

MSP Challenge: Marine spatial planning stakeholders learn by playing

Editor's note: In last month's issue, The Skimmer interviewed three practitioners about their experiences developing and using serious games to educate stakeholders, professionals, students, and the general public about aspects of the conservation and management of coastal and marine ecosystems. This month we interviewed Harald Warmelink, a senior research project leader at Breda University of Applied Sciences in the Netherlands, about his work developing the serious game MSP Challenge. Warmelink's work focuses on the design, use, and evaluation of serious games for policy analysis, decision-making, management, and organization, as well as their gamification.

The Skimmer: Can you tell us a little bit about your game and the target audience?

Warmelink: As we wrote in the article "[Communicating Maritime Spatial Planning: The MSP Challenge approach](#)": "The MSP Challenge Simulation Platform integrates real geodata (both marine and human activities) sourced from a great many proprietary institutions and data-portals (such as [IMO](#), [HELCOM](#), [EMODnet](#), and national data centers) with science-based simulation models for shipping, energy and [ecology \(Ecopath with Ecosim\)](#). The data and models have been linked together in a game engine ([Unity](#)) to create an interactive simulation platform. This simulation platform allows anyone – experts as well as non-experts – to creatively operate it for scenario development, and/or for multi-player game sessions. This can have multiple purposes such as scenario exploration, co-design, validation or policy-oriented learning. Although the simulation platform has taken a significant step towards becoming a next generation marine planning support system, it continues to use play mechanics, in the form of player roles, scenarios and challenges."



“Fast becoming the next generation planning support system.”

“The must play game for every Maritime Spatial Planner.”

“Take care of the Ocean. Keep playing.”

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More practically, in a multi-player game session, players/users can review a large number of data layers to review the current status around a specific sea basin (e.g., the North Sea). They can then draw up new spatial plans on their own or in collaboration or after negotiation with the other players/users. Once they have agreed on their plans, we can start simulations on shipping, energy, and the marine ecosystem to see the impact of the plans on those levels. Think of the impact of a new wind farm on shipping routes, or the impact of the increased noise of an oil rig on certain species, or the impact of decreased fishing in a marine protected area on certain species.

In terms of target audience, we organize sessions with mixed groups of professionals (typically around 20 people) working for national governments on marine spatial planning and companies and marine sector NGOs, particularly those focused on shipping, energy, and ecosystem protection. We also work with 'professionals to be', namely university undergraduate or graduate students in these areas.

The Skimmer: How has MSP Challenge been used to date?

Warmelink: We described some of the uses of MSP Challenge in the article [Communicating Maritime Spatial Planning: The MSP Challenge approach](#): “Since its launch in 2018, the MSP Challenge simulation platform has been used for seven transboundary stakeholder sessions in ecology, shipping and energy in the Baltic, North Sea and Clyde areas. Furthermore, it has been used in MSP courses at The Carl von Ossietzky University of Oldenburg (Germany), Novia University of Applied Sciences (Finland), the UNESCO/IOC training centre, Oostende (Belgium) and the Università IUAV di Venezia (Italy). At the time of writing, the new simulation platform edition has been used by hundreds of stakeholders, planners and students.”

We are planning to roll out the entire simulation platform for free and open source later this year through the website www.mspchallenge.info. Then everyone everywhere can use it for whatever purpose they see fit.

The Skimmer: What outcomes have you seen from that use?

Warmelink: We also described a number of outcomes in the article [Communicating Maritime Spatial Planning: The MSP Challenge approach](#): “It is apparent that the MSP Challenge’s ‘learning by doing’, or ‘learning by playing’ approach is both enjoyable and informative for many participants. Although some find the gaming approach to public policy issues such as MSP challenging, there is no doubt that it has stimulated widespread interest and has received overwhelmingly positive reviews. Participants and observers appreciate the gaming format that creates a ‘safe place’ to develop a better understanding of:

- The different roles in an MSP planning process and how they interact;
- How MSP is guided by Integrated Maritime Policy objectives, some of which will be political in nature and driven by the actions and opinions of stakeholders, resulting in a series of challenges for MSP officials
- Key mechanisms of planning, in particular the role of communication, language, negotiation, use (and mis-use) of information, and dealing with conflicting targets and interventions from stakeholders, the general public, and politicians; and
- MSP as both a technical exercise based on objective information, but also as a social endeavour requiring communication and mediation skills, social competence and empathy and at times requiring support from external experts with particular skills.

Gaming also allows people to switch into unfamiliar roles and develop a better understanding of different lines of argumentation and of the positions and underlying pressures of other participants. As one prominent player commented, ‘It is a fantastic tool to give insight to all stakes [in MSP ...] and enter into the conversation’.”

The Skimmer: Have you learned any lessons or has anything really surprised you from seeing the game in action with participants?

Warmelink: We have learned so many lessons on so many levels - about project management, serious game/play design, software development, session design and facilitation, and more... One of the more fascinating aspects is to see different people reacting in completely opposite ways. For example, some participants find the game session not realistic enough. They indicate that certain GIS data in the platform are incorrect, outdated, or incomplete. This is an understandable remark, given they are playing around a real-life sea basin (e.g., the North Sea) using real-life GIS data. That already frames the experience as one that is based around utter realism, in all aspects of which one can think. However, other participants find the game *too* realistic! They indicate that because of the realness of the GIS data and the sea basin itself, as well as the fact that we manage to get rooms full of real-life stakeholders and planners together working around that very same sea basin, the session seems like something rather official, a part of a political process. So what we learn from this is that it is paramount to carefully and clearly frame and communicate what the session is about before, during, and after the actual session.

Source URL: <https://meam.openchannels.org/news/skimmer-marine-ecosystems-and-management/msp-challenge-marine-spatial-planning-stakeholders>