

Supporting the implementation of Maritime Spatial Planning in the Atlantic

Approaching activities' interaction by building scenarios: a proposed method to strategic thinking







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Disclaimer

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Introduction

One of the main goals Maritime Spatial Planning (MSP) seeks to achieve is compatibility of activities and uses, reducing conflicts and fostering synergies in one particular area in order to achieve the most efficient use of the space by identifying the best position on the sea where a human activity can be carried out according to ecological, economic and social variables¹,².

In order to fulfill its purpose, MSP should use the "best available knowledge", however, many times the necessary information does not exist, it is not complete or it is not in the right format. We should remember that MSP is not an exact science and that it is happening along time and space, involving numerous actors, at different scales, of different kinds (private and public) and from different sectors. Consequently, there is a need for developing tools for decision making that work well in uncertain environments, as lack of data cannot be a reason for inaction!



Still, how do we work with something that we do not know? It is here that the design of exploratory (qualitative) scenarios to understand strategic issues³ plays an important role. These scenarios consider "what can happen?" given a set of plausible futures⁴. It may not be possible to predict a certain future but we could design a potential situation, analyze its implications, and thus, propose measures in the present that could prevent conflicts and maximize synergies in the future.

¹ IOC-UNESCO, 2009. Marine Spatial Planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manuals and guides, No. 53, ICAM Dossier No. 6. Paris, France.

² European Union. Directive (EU) 2014/89 / EU of the European Parliament and of the Council of July 23, 2014 establishing a framework for maritime spatial planning. Official Journal of the European Union. no. 257, of August 28, 2014, pages 135 to 145

³ Borjeson, L., Höjer, M., Dreborg, K.H., Ekvall, T. and Finnveden, G (2006) "Scenario types and techniques: Towards a user's guide" in Futures, 38(7):723-729.

⁴ McGowan, L., Jay, S.A. and Kidd, S.J. 2018. Overview Report on the Current State and Potential future Spatial Requirements of Key Maritime Activities (D3c) EU Project Grant No.: EASME/EMFF/2014/1.2.1.5/3/S12.719473 MSP Lot 3. Supporting Implementation of Maritime Spatial Planning in the Celtic Seas (SIMCelt). University of Liverpool. 130 pp.

Purpose of the guide

Imagine that you have processed an overlapping of spatial information for MSP, you have analysed it with refer to a conflict matrix and there is an overlap between two activities. Is this enough to inform the MSP process efficiently? Moreover sometimes the spatial information does not even exist. Even if it does, and it is available, the conflict matrix value may not represent the interaction in a realistic way or/and the analysis does not give the right information for the correct interpretation of the situation. In fact, there may not be a conflict between activities, but coexistence between them or synergy in some cases. The next pages describe a methodology proposed to approach activities interactions beyond the traditional spatial overlapping. You may wonder in which cases is useful this methodology.

There are mainly two situations in which this method can be applied:

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a) Did you already conduct a spatial assessment and the spatial interaction is used in this case to propose correction measures if the interaction is negative and to foster synergies if this is positive.

b) Spatial data do not exist so the overlapping analysis cannot be processed. Then, what can In this situation, the methodology could be used to assess if data should be acquired, and in any case, to design the best way to approach the interaction to propose correction measures and foster synergies.

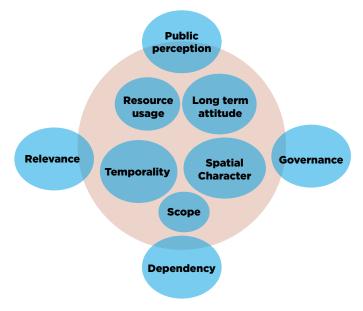
Rationale

Any use has specific characteristics that normally depend on its nature and are constant along time and space therefore they are not likely to change from one country/region to another. Furthermore, each use or activity might work in a different way depending on its context (i.e., provided by specificities of the country, region, the season, etc.).

These factors might as well influence any interaction that this use may have with another use. This is the reason why it is important to describe the nature of each activity but also its context in order to build the specific scenario for which we will need to take decisions.

The case-by-case treatment of these problems therefore takes on its full meaning given the diversity of activities, their organization and the interweaving of management scales inherited from cultural heritages, specific characteristics, political will or other external socio-economic factors. These are some of the aspects that can be defined and tackled applying the proposed method.

Consequently this method is based on the premise that maritime uses and activities can be characterized and categorized based on external and internal variables described in next sections of this handbook.



Conceptual model for characterizing uses

How it works?

As explained in the introductory page, the methodology proposed in this handbook could be considered as a step further to the identification of spatial overlapping. This method considers that there could be a potential interaction in a specific area between a use already in place and a new one to be allocated there. From this premise, the method tries to characterize each use, thus defining the specific interaction through the identification of "building blocks" to build a specific scenario.

Building scenarios, in this case, gives the opportunity to create images of a specific situation based on the information we have, to represent the scene of a particular issue that we want to solve, providing the framework to develop targeted approaches for it.

The proposed methodology can be applied in three steps:

Characterizing uses by their external and internal characteristics:

The proposed method is based on the premise that uses and activities can be characterized and categorized based on external conditioning factors (those that refer to their context) and internal characteristics (those referring to its specific nature).



Using these aspects of both uses to characterize and define the interaction

...to analyse how the specific characteristics of both uses interact with each other and in turn, influence the interaction between them.





...identifying building blocks to define scenarios and propose targeted recommendations

Building blocks could be classified into descriptors, risks and opportunities. Targeted recommendations could imply the design of technical groups, workshops or specific studies.

Internal characteristics

This section describes characteristics of the use that are normally intrinsic to the activity. These are normally the same indistinctly on the region, as they respond to the technical and management aspects of the use. Different values for one or another characteristic might influence its performance and, thus, its interaction with another use.

Internal characteristics	Guiding questions	Possible values
Long term attitude	How is the modus operandi of the specific sector? Is this activity used to be planned for the long term considering time, space, resources etc? Is it conservative? It normally expresses its need of occupying the maximum space and time regardless the existence of another use in the present? Or it only reacts expressing its need for any kind of requirement (space, time, resources), when there is a risk of losing it.	☐ Proactive (strategic planning) ☐ Conservative (defensive) ☐ Reactive (wait-and-see)
Scope	Which is the scope of action of the specific activity? (clue: the scope of aquaculture will be local, while for maritime transport could be international)	Local Regional National International
Resource usage	Think about it, is the activity exploiting the resource? Extracting it? Or conducting a research about it?	Exploitation Extraction Research
Spatial cha- racter	When representing the activity in a map is it a fixed point or area or, on the contrary, it occupies different positions depending on the moment?	Spatially explicit Spatially diffuse /Ubiquitous nature
Temporality	In relation to the last question, time is an important variable, so again, is your activity always there or is it only sometimes?	Permanent Time bounded

External conditioning factors

This section describes variables defining the context, the external conditioning factors. These characteristics of the use are normally variable from one country to another. They do not normally depend on the activity itself but more likely on different governance, policies and cultural backgrounds. However, they might influence the development of the activity and its interaction with others.

External conditioning factors	Description	Possible values
Public perception	How is the activity seen by the local public? Is it attractive, unattractive or simply tolerable	Attractive Tolerable Unattractive
Relevance	Which is the relevance of the activity in the area? Is it part of a national or international strategy? Is it especially important regarding economic aspects?	Strategically relevant. Economically relevant. Culturally, socially and/or historically relevant.
Governance	Governance systems may work at different scales depending on the activity. Which is this case? At what scale are decisions affecting this activity taken?	Local Regional National European International Mixed
Dependency	All activities' functioning depend normally on other factors; however there are dependencies that are more relevant in one activity than the others. Which is the most relevant dependency of this particular activity?	Dependent on other uses Dependent on markets fluctuations Dependent on the environment Currently dependent on technologi cal development

Characterizing interactions

Once you characterized each use giving values to the presented variables, these values will be confronted among them in order to identify key drivers of interactions.

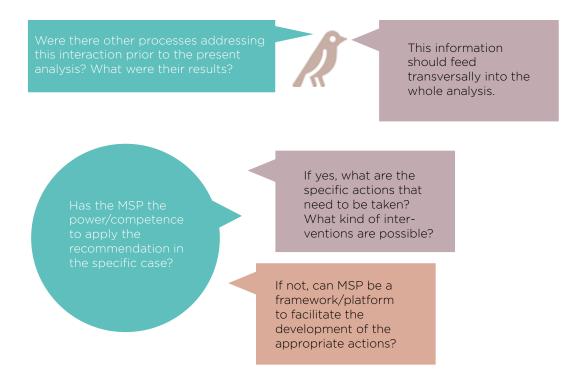
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Building blocks

The conclusions you obtained from addressing the values of the variables by pairs will work as "building blocks" to construct scenarios. You will realise that these building blocks can be also classified, but the way of doing it is up to you, regarding to what are your needs and objectives. For instance, a good way to facilitate the understanding of the scenario could be referring to the different building blocks as "descriptors", "risks" and "opportunities".

External conditioning factors	Description	Possible values
Descriptors	They are characteristics of the scenario determined by the interaction of particular characteristics of both uses. They are used to describe the interaction scenario defining the type of conflict, main impacts (positive or negative) and who "suffer" them.	The targeted approach will be built upon specific recommendations designed according to the descriptors, to tackled risks and to capitalize in opportunities. It might include measures like: Design of workshops or specific mechanisms for collaboration (i.e. working groups).
Risks	They refer to the aspects of the interaction that are more difficult to manage if the interaction is positive, or, if the interaction is negative, these will be the hot spots that need to be addressed more carefully in order to conduct the interaction to a good end.	 Conduct consultations (to stakeholders and/or experts). Design and conduct specific studies.
Opportunities	They are aspects specific to the interaction or the framework (MSP) that can be used as facilitators for the integration.	

Finally, while analysing building blocks and developing specific recommendations, you should make a reflection on the following questions:



Now that you have described micro-scenarios in a strategic way, it should be easier for you to propose specific measures to address the main "hot spots" of the interaction. It is suggested that these recommendations are concrete enough to be implemented. For instance, if your recommendation is to create a multidisciplinary working group, you should set the objectives of this working group and who should be in it, who is going to moderate it, etc.

The outcome of the methodology will be a report containing these detailed recommendations and should be accompanied of a "summary sheet" that could be a very useful tool to engage decision makers on complex issues in a digestible and user-friendly way while it can act as an evidence trail of how this thinking and information was used to come to a decision and the weighting that was used to arrive at that point.



Summary

Hi! This hand book is targeting MSP practitioners and professionals dealing with interactions between activities in the maritime area.

We are proposing here a methodology that provides a systematic approach to define and characterize uses in specific time and space, identifying where the conflict lies and allowing considering the weight attached to the various considerations of the final decision. It helps identifying the kind of action needed (resource mobilization, policy driven interventions, specific measures) and who and/or at what level of governance should be conducted.

On the other hand, the process may be useful in highlighting where gaps in knowledge exist and assist in identifying areas of additional focus for the user in (or prior to) decision making judgement.

Of course, this method does not pretend to be the panacea, it needs to be highlighted that it is based on qualitative judgement; the viability of results will depend quite highly on who conducted the analysis, what information opted to use and the importance each one attaches to the various variables analysed in the process.

It definitely will not give you a straight answer to follow, however, it is a good way to organize your thinking towards a specific issue, and given the complexity of marine matters in general, this is not something trivial.

If you want to access the complete deliverable "Current and Future Uses and Needs of the Atlantic region" please visit: https://www.simatlantic.eu/wp-content/uploads/2021/08/D1.2-Current-and-future-uses-and-needs-in-the-European-Atlantic-region.pdf