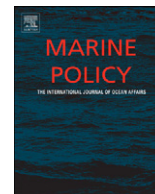


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Implementing marine spatial planning: A policy perspective

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ABSTRACT

Marine spatial planning is often confronted with different types of hurdles that make the implementation of plans and strategies more difficult than scientists and planners—who have done most of the preparatory work—have foreseen. How does this situation come about? Is it due to the lack of interest or will of politicians? Are the technical proposals and plans too complex or too far from reality? Do they cost too much without comparable benefits? What can be done to avoid this? Based on recent experience within Belgium, some suggestions for more effective implementation of marine spatial plans are presented in this paper from a policy-making perspective.

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1. Introduction

“Resource problems are not really environmental problems; they are human problems that we have created at many times and in many places, under a variety of political, social, and economic systems” [1].

Many plans, including marine spatial plans, are often never implemented. Even after considerable investment of money and time in applied research, analysis, and planning, many plans simply wind up “on the shelf”. Why does this happen, even when scientists and planners agree on the best course of action? Do scientists and policy makers (politicians and high-ranking administrative officials) really have different values? Do they have different goals and objectives? Do they use different criteria in evaluating the feasibility of plans? Do they think in different time frames? The answers to these questions are “yes”, and this paper will review some of these differences from a policy-making perspective. Recognizing the differences between scientists and policy makers is a first step toward making better use of science in policy-making and improve the chances of implementation.

2. Differences between science and policy making

Science and policy making are very different from one another, but can and should be complementary [3]. Scientists know theory, methodology, and techniques. Policy makers know constituencies, governance processes, and value orientations expressed as legal mandates. Science is concerned with inquiry, description, and explanation; policy making is concerned with the governance

of human activities. Science is supposed to be value free; policy-making is normative, reflecting, and making decisions based upon societal values. Science is held to the standards of objectivity, reliability, and validity. Policy-making reflects human values, advocacy, and leadership. In science, time tends to be drawn out into years and decades, reflecting the need for long-term data with which to develop information for scientific purposes. In policy-making, time frames are short and frequent reflecting the need for information and the results of analyses in days, weeks, and months—often driven by “crises” and political agendas. These and other differences are summarized in [Table 1](#).

Scientists can recognize problems, but can do little to remedy them through policy making and implementation. Recognizing this reality is the first step in developing a more effective relationship between scientists and policy makers.

3. A policy perspective of marine spatial planning in Belgium

This section presents a view from a policy perspective of marine spatial planning (MSP) based on recent experience within Belgium. It is an example of a success story, where a general acceptance by stakeholders and the public of the value of MSP created a way for developing a sustainable vision for Belgium’s part of the North Sea. It is a big step for a very small part of the North Sea, but a part that is very intensively used ([Fig. 1](#)) [2].²

Discussions about MSP started in Belgium out of necessity. Earlier proposals in 1999 and in 2003 for the protection of marine areas failed due to the absence of a common understanding.

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² See also: <http://ioc3.unesco.org/marinesp/>; www.maritieminstituut.be/; <http://portal.health.fgov.be/>.

Table 1
Points of view often associated with the cultures of science and policy-making^a

Factor	Science	Policy-making
Goals	Increase understanding	Deal with immediate problems
Valued action	Intellectual thinking, sound experimental design, valid statistical analysis, research, scholarship, and publication	Practical action, decision making, problem solving, legislation, regulations, decisions, and constituency satisfaction
Time frame	Whatever needed to gather evidence and which will allow reasonable confidence in interpretation; usually long-term (years–decades)	Immediate, short-term (days, weeks, months, relating to the nature of problem or crisis)
Basis for decisions	Scientific evidence	Information extracted from science, but generally reinterpreted within the political context of values, public opinion, and economics
Expectations	Understanding never complete; more science and information lead to better decisions	Clear advice expected from science and specific answers to questions; more science and information do not necessarily lead to better decisions
Values	Higher education valued and equated with status; peer opinion valued	Practical experience valued more than higher education; public and political opinion valued
Intellectual direction	<i>Natural scientists</i> —nature conservation, environmental protection and quality, ecological processes, understanding nature <i>Economists</i> —benefit–cost analysis and efficiency <i>Anthropologists and psychologists</i> —community viability, social and cultural uniqueness, social change, and adaptation <i>Sociologists and political scientists</i> —equity, social structures and justice, understanding political dynamics	Balance of resource use and development; economic efficiency Sustainable development; multiple use; jobs; pragmatism
Focus	Focus on details; contradictions—often single discipline approach	Focus on problems at hand; multi-disciplinary approach usually required
World view	Primacy of biological, physical, chemical mechanisms—rational, logical views	Primacy of political, social, interpersonal, and economic mechanisms—mixture of subjective and objective views

Source: National Research Council [3].

^a Expanded from [3]. The original table in the NRC report was used to point out the differences between scientists and policy makers.

Bringing this issue back on the table was politically risky, and politicians do not want to fail. On the other hand, some real conflicts were created, such as between some sand extraction companies and the new offshore wind farm sector about different zoning proposals. The sand and gravel companies wanted to enlarge their zone, because a ban was established for extraction on land. The wind farm interests found support within the government, since they had a solution to climate change, and especially for the problem of increasing sea level, a real threat to

Belgium and its low-lying coastal areas. The local authorities (including those across international borders) and the nature protection organizations were also against some specific locations for offshore wind farms. If the proposed wind farms were too close to the coast, they did not want to see them. Or if the proposal was right in the middle of the migration route of protected birds, nature protection organizations opposed them. Some interests were simply against renewable sources of energy; and then there were the fishermen, who claimed that they were the “owners” of the sea and its fish. It got worse, as those conflicting opinions were translated into different complaints and lawsuits. It was not at all an easy job to start a process of MSP. Belgium, like other coastal states, did not have any tools for sea use management that could be used. Compared to land use planning, not much experience with sea use planning nor with the legal and institutional arrangements, existed. Working on an ad hoc basis and trying to extrapolate examples from land use planning was the only solution. The successful outcome of MSP in Belgium shows us what ingredients from a policy perspective are needed for effective implementation.

4. Use all available authorities of federal, regional, provincial, and local governments

Land use planning is mainly embedded in a legal framework that has centralized the different existing rules and set a clear hierarchy among all the involved authorities, from the federal to the local level. This is not yet the case for sea use planning. One has to go through a jungle of different laws and authorities. Land use in coastal areas is regulated by a mix of regional, provincial, and local levels of authority, and the federal government is responsible for the offshore area. This is also the case in Belgium, where some procedures for obtaining a license (permit) fall under several authorities. Besides searching for a broad support, it was of first and utmost importance to get all those authorities “on the same page”.

5. Recognize the importance of leadership

During the talks on the formation of a new federal coalition in July 2003, a specific paragraph was written into the governance agreement [4]. It ensured a high priority for the development of a sustainable vision on the North Sea. The implementation of this proposal was to be done by a new Minister of the North Sea, who also had the job of chairman of the North Sea Task Force. The different federal powers were not to be changed, but the Minister of the North Sea had the responsibility to coordinate all issues. This coordination at the ministerial level was the required incentive for the institutions and administrations to begin to work together. This was of course very contagious, because the outlook was positive and politicians had placed a high priority on the new policy. This decision was much more than just another cooperative agreement; now there was a captain at the wheel. The figure of a Minister of the North Sea resulted in more visibility for marine issues. Until then they had been treated at a much lower priority. Only a major shipping accident or the stranding of a large whale was enough to gain public and political attention.

Not everyone understood this 1801 turn in priority setting, and many thought it was exaggerated. Were not there enough other priorities? Now, after many positive outcomes have been realized, the reality of what the Minister of the North Sea has accomplished has settled in. In the end; the Minister of the North Sea was not an easy post to establish. Nobody is anxious to give up power, and each thinks his domain is the most important. In this situation,

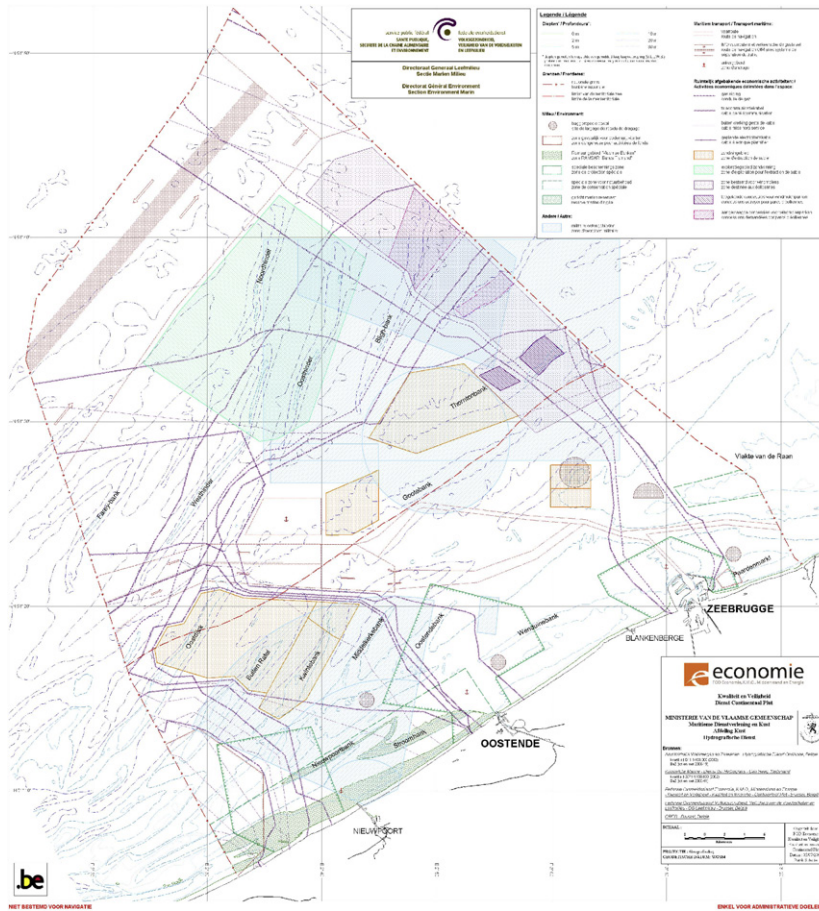


Fig. 1. Implementation of marine spatial planning in Belgium. Source: Belgian Federal Government, Directorate General for Environment.

there is not a lot of “give-and-take” possible. Self-preservation and the status quo are too often the main concerns of institutions and administrations.

6. Use all the cards in your hand

An extra card in your hand, such as abiding with international agreements, can be a valuable commodity. When sanctions can be used for not complying with international agreements, then the speed of the process can be affected. In Belgium, we have seen this happened with the European Birds and Habitats Directive [5]. These directives force the Belgian government to designate certain marine protected areas, and to implement protective measures. This implementation was done well within the time frame. The implementation of another directive, namely the Environmental Impact Assessment (EIA) Directive [6], was also put into place in licensing procedures. The Strategic Environmental Assessment (SEA) Directive [7], under which spatial planning falls, will have an impact on every future change. The SEA Directive was not yet implemented for sea use activities; so we introduced it together with the regulations following the Bird and Habitat Directives.

Next to the practical realization of this legislation, which started for projects on land, and was extended to the sea, we can now see that MSP is more and more an item on international agendas. In OSPAR, the Commission for the Protection of the Marine Environment of the North-East Atlantic, a new working group has been formed to tackle this specific item. In Europe it is a topic in talks on maritime and marine strategies, and at the international level UNESCO and UNEP are spending substantial

resources on this subject. In the long term this means that MSP will be guided more by these international efforts, of course with a large amount of subsidiarity. The advantage of this evolution is the interaction between the national level and the international regulated sectors, such as shipping and fisheries, which for Belgium are situated at the European level. National spatial planning becomes linked to that of the open sea. For the latter, proposals such as the designation of ocean reserves are now being discussed, as well as certain bans on fisheries. When more actors are involved at the local level, more knowledge and experience can be given to the higher, international level. Local experience with even a very small protected area is helping many local actors understand its need, once they are confronted with proposals coming from the international level as ocean reserves. This process will help the national government to adopt an international idea.

7. Use science and scientists effectively

Scientists have a substantial role to play in this process. They are after all the precursors to the whole process, at the national level as well as at the international level. It is on the basis of their proposals that MSP was formed as an approach. On the other hand, the lack of interdisciplinary cooperation among scientists still forms a huge gap that leads towards misunderstandings, misinterpretations, and inefficient use of means.

An example of this can be found in two policy-supporting studies on the Belgian North Sea, made independently of each other: one for sand and gravel extraction and the other for the

construction of offshore wind farms. The results for the best exploitation zones were identical in both studies. But neither took into account the impact on the local fishery, for which the same space was one of the best fishing areas. A simple check with a fishing expert, or even with a local fisher, would have pointed out that this substantial base of support for the proposal was missing. There is, of course, a difference between fundamental oceanographic research, and specific policy-supporting analyses. The latter must contain at least a test of reality, and this remains a large gap. It is a fact that there are a lot of different conclusions about the best use of marine spaces, and this often results in incompatible spatial management proposals when developed on a sector-by-sector basis.

8. Put the pieces together

In this context the real challenge for successful policy on spatial planning lies in fitting all the pieces of the puzzle together, and bringing reconciliation between scientific research and practical solutions. The three-dimensional character of the sea makes this puzzle even more difficult. It is possible to have in the same zone different activities happening at the same time at different depths. Offshore wind projects and aquaculture can be combined with each other at the same place. Sand extraction, fishing, and military exercises can also be combined in the same space, but not at the same time. The solution is a delicate balance, and missing one piece can block the whole process. This, however, can lead to very creative solutions. A concrete example in the Belgian part of the North Sea are the clam farms located in the offshore wind farm, conceived as an alternative for local fishermen who sought financial compensation for the loss of their fishing grounds.

9. Recognize the importance of short-term accomplishments

Although politicians use different decision criteria than scientists, often they both have in fact the same objectives. One of the biggest frustrations for scientists is the focus of politicians on short-term policy. Of course, many politicians have a long-term vision, but it is a fact that a politician is judged by his or her accomplishments. At the end of the road, the voter has the last say. This means that time is essential, and a shortage of time is a reality that each politician faces. For example, feasibility of a plan or a program is weighed by politicians within the time frame of one legislature, while problems are often manifold. First, this kind of process needs the support of the voters to succeed, a condition that holds all the concerned stakeholders. Second, the process needs the guarantee that legal issues, such as complaints that can lead to delays, are avoided. Third, all of these need to be completed in the framework of international agreements and legislation. In other words, time is essential, and time controls the implementation of the policy. Thus, the main question that needs to be answered first is: Is there a way that time can be gained through existing scientific studies or legislation, or by consensus through an existing ongoing debate? Or, is it necessary to start the process from scratch, and consequently through a long legislative process?

In addition to time, the other key factors in the implementation of policy are money and available budget. This brings us to another main question that needs an answer. What resources are reserved for the implementation of the policy in all its facets, from practical work and personnel to monitoring and research? The answer often depends on the importance of the issue. The availability of resources often goes up when the priority goes

up. Scientists know this, and will always demand more research funding, because this is an important source of income for them. On the other hand, these same scientists often tend to forget that politicians approve the overall federal budget, and thus always have the possibility of knowing how much of the budget goes to scientific research in general. More concretely, when there is a specific policy supporting marine science research programmes, and this policy has been in place for years, the politicians will demand directly usable results from the scientists.

10. Communicate issues and accomplishments transparently

The politician is the one that needs to translate the scientific results for the public and the end-users. This is a point frequently neglected, and happily left to the politician. Few questions are raised by policy makers, as scientific proposals are often presented as ultimate and undisputable in outcome. This attitude makes it hard to find a solid public support basis. It is after all up to the politicians to explain why, through scientific findings and criteria, certain spatial measures for conservation are needed. This is not an easy task, even if there is no direct opposition to begin with. Good politicians always look for potential disputes to stay one step ahead of possible opposition, and to have a quick solution ready when it is necessary.

In the case of the MSP in Belgium, the proposals of experts for a complete closure of certain areas were seen as indispensable. However, after a great deal of discussion, it appeared that a temporary closure, for example, during the winter migration of protected seabirds, was as efficient as a complete closure. Transparency is important. To bring forward a proposition that only discusses a zoning option, and says that measures in these zones will be decided and implemented at a later stage, even through an expert commission, is just asking for too much trust.

In Belgium, this specific kind of proposition once was rejected on the basis of a draft that refused access to a yachting harbor. In no time the whole coastal population was enflamed. The footnote is that the targeted area was not even necessary to protect, and as happens in these cases, all built up trust was gone. The best and most efficient way is thus by not relying on a "black box" system, but to clearly specify the objectives from the start. In our case the message from the beginning was that nature had to be preserved in the coastal zone, and economic activities were to be located further into sea. The latter was not what the economic interests wanted, out of fear that relocating all economic activities further from the coast would add to their operational the costs, such as transportation costs for gravel and sand extraction. Arguing for coastal nature preservation is even more difficult if you do not have highly valued natural resources such as the Great Barrier Reef. Nevertheless, a win-win situation was found due to the legal and economic stability that was offered for the years to come. By developing an MSP, they got more assurance that the zones and rules defined in the MSP would, at least for some years, remain unchanged. On the other hand, a lack of an MSP suggests that everything can change at any time.

The bottom-up approach, with lots of direct contact among actors and a great deal of transparency, brought the MSP process in Belgium to a successful end. If there was polarization in points of view, then a solution was found in debate. A specific example can be found in the way that violations by recreational tourists are enforced, for instance trespassing in a certain area, which is difficult to monitor by any means. Economic penalties were replaced as much as possible by agreements between the user and the government. This can be seen as a weakening in enforcement, but it is, after all, impossible to put a policeman on each sandbank in sea. It is even impossible in some cases to have a specific

standard in place that fits perfectly into a management measure. For example, it was better for a bird preservation zone that no more than one boat at a time was allowed in the area, due to the impact of the waves that boats create. These waves become destructive if more than one boat at a time is in the area at the same time. For this kind of necessary measure it is more efficient to have good agreements between the government and the users, than to police the users. This way it is even possible for the recreationists to create a greater sense of their own responsibility, and to build up a form of social control within this group of users, that in the long term potentially will act as enforcers of the standards of behavior in the area.

We also worked closely with the non-governmental organizations. They worked out an information campaign for the general public and tourists visiting our coast. An interactive website was set up and a simple brochure was distributed during all the summer activities organized by coastal communities. Their members were available to give people the necessary explanation at the coast.

11. Build trust and public support

Finally, trust and a large base of public support are of the utmost importance to the politician if he or she ever wants to see their proposal transformed into policy by the executive branch. Discussions on modalities are nevertheless always possible, even with an executive agreement in place, and even after the process of agreement through legislative and executive powers is finished. Here the composition of the government and the political “weight” of the politician are factors to put into the equation of whether or not a proposition holds its ground.

The spatial planning map of the Belgian part of the North Sea illustrates this ongoing process. Identifying smaller areas as ecologically and archeologically important preservation zones, such as shipwrecks, are now in a final phase. As this first phase had mostly focussed on the Belgian part of the North Sea, the time has now come to start cross-border talks with neighboring countries, and because nature and the economy are in a constant state of flux, in time there will be need for evaluation and

adaptation (see also Day article in this issue). An intensive monitoring program is foreseen, as well as a continuing focus on transparency and stakeholder participation. Through this way of working everybody, especially the users of the sea, has the chance to participate in a transparent way in the debate and the MSP process.

12. Conclusion

Improving the interactions between scientists and policy makers needs to receive continued attention. Dogmas and misunderstandings between these two need to be sorted out. Scientific proposals do not need to be out of touch with the world to be accurate, and vice versa; political consensus does not have to be volatile to receive public support. The threshold must not be insurmountable if one wants to bring scientific results closer to the public. Popularization of results does not always equal support. It is a waste of resources when studies disappear into the archives, never to be found again. On the other hand, the exercise in Belgium with MSP has proven that public support is very important to translate and implement scientific results into a coherent policy.

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