
Approaches to support planning and management of the Belgian North Sea

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This is an overview of the output of the workshop as compiled by Dr. Richard Kenchington.

Overview of resource and use issues

- The Belgian sector of the North Sea is very heavily used by Belgium, its neighbours and the international community.
- Major longstanding uses are shipping, fishing and sand and gravel extraction.
- The Belgian North Sea has a major section of the northern part of the English Channel designated shipping lanes and dredged access channels for Belgian and southern Dutch ports. Disposal of dredge spoil and demands for deeper channels to service competing ports are substantial issues for the central and northern nearshore areas of the Belgian North Sea.
- The area is fished by Belgian and other fishing nations. Information on the relative importance of areas for particular fisheries is not available. The romance of fishing ports is an element of local cultural and recreational significance. The real economic significance of fisheries in the local inshore seas (within 20 km of the coast) is not known. Neither is the economic and resource demand significance of the same area for recreational fishing.
- The 68km coast is a largely developed area of substantial significance for recreation and tourism. While many of the activities are urban/resort based recreation there is continuing and probably increasing demand for recreational fishing and environment based activities including summer swimming, beach walking and natural environment appreciation.
- A new and potentially major use flowing from national energy policy is the establishment of wind farms. As a new activity, the extent of real demand and the policy framework for wind farm establishment and operation are unclear. An area has already been designated for wind farm development but there are debates about location of windmills in relation to visibility from the shore and in relation to bird migration routes.
- The Belgian North Sea is part of the much larger system of the southern North Sea/Northern English Channel. A coherent understanding of its biodiversity and of any specific ecological significance will involve working with neighbouring countries, probably in the context of the EU environmental policy framework. There is demand for the establishment Marine Protected Areas, but the extent to which these would serve functions of broad ecological system or biodiversity conservation as opposed to nature based cultural or recreational objectives needs to be evaluated.

Possible contributions of planning methods

It is always difficult to evaluate options and priorities for methods without a clear understanding of the policy framework for the planning application.

From my understanding of the papers and discussion at the workshop it appears that the current management framework is predominantly sectoral with generally minimal communication between sectors. Where they are specifically considered, environmental issues are dealt with through prediction and regulation of environmental impacts. Cross-sectoral and broader community benefit matters are dealt with on an issue-by-issue basis within the normal flow of cabinet-based government.

Against this background, it appears that there is a reasonable understanding of the physical/biological context of the Belgian North Sea. The major issues that need to be addressed in order to apply this information in planning and policy are social and economic, and these need to be understood in a cross-sectoral and broader policy context.

Planning and regulation of the public commons of marine areas and resources requires consideration of the best way that public benefit can be derived from those resources. The burden of proof is on the user of those resources to demonstrate that the use is reasonable, sustainable and that it does not bring unreasonable detriment to other current and future uses. Such considerations relate largely to social and economic values. This differs from the general context of terrestrial resource management where the majority of the resources are owned or leased and the owner or lessee is free to do what they will unless constrained by laws and regulations that protect the interests of the public or neighbouring property owners. The burden of proof for introduction of limitations is on the community. This is clearly reflected in the language of land based planning – where a plan is produced by experts and may be advertised for a period to enable the public or interested parties to make objections.

On this basis, planning for allocation and management of access to public marine resources and areas – including the licensing of uses - should be carried out in the context of a systematic and generally open process to determine the purpose and entry of uses in the area being planned. The requirements for such a process include:

- Legislative authority – that sets out as clearly as possible the objectives and scope of planning and management to implement plans
- Operating principles or decision rules that apply to the planning operation in question. These will obviously include the requirements of the legislation but, particularly in a multiple use planning context, they should identify the operational context of all allowable uses so that clashes, conflicts and synergies can be clearly addressed. Because some decision rules will clash – for example having a 5 km exclusion zone around a wind mill and not closing any areas currently used for fishing – it is generally necessary to preface the rules by “as far as practicable”. The task of the planning process is to identify possible solutions within those constraints and in doing so to clearly identify the winners and losers so that the overall balance can be reviewed. It is important in an open political process that the decision rules are developed and canvassed publicly very early in the planning process.
- Best practicable understanding of the social and economic context of uses and values of the area. Industries and government agencies often have substantial information on the relevant sectors, but there is typically a lack of information on cross-sectoral issues and community views. In particular, the values of recreational uses and cultural associations are typically very poorly understood. Local ecological and usage knowledge techniques described at the workshop have an important role in collecting such information.
- GIS technologies. Multiple use planning of marine areas involves many types of information, much of it is geographical in order to describe the distribution of uses, values and options. There are many commercially available packages. The key elements are a geographic base that can accommodate specific small site information and can aggregate information at scales from the local to the whole of the area.
- Decision support technologies. Again there are several packages available. An absolutely critical consideration is the openness and relevance of the assumptions in the algorithms and the ability for the package to run with the decision rules or operating principles for your application and to report the extent to which a rule is satisfied by any proposed solution. Ideally it should enable suggested changes to be entered in the field and stored as evaluated options for later decision-making process.

Information needs

The common problem at the start of a planning process is that there is a lot of information but little of it is immediately relevant to the tasks of allocating uses to areas or setting conditions on the conduct of uses. It is important to develop a database or meta-database so that the information is accessible for the planning process but it is particularly important to identify gaps in available information. This is a task for the planner as information client and should generally be done in parallel with the process of clarifying decision rules because that is the point at which specific information requirements are most obvious. It is

the nature of most planning processes that by the time there is a decision to make a plan there is a very limited time period for collection of new information. It is important to identify immediate research priorities that can contribute to the planning decisions on purposes and conditions of use entry. The process will also identify longer-term research activities that should be conducted in order to assess the effectiveness of the plan and ensure that information not available in the initial planning can be available for plan revision.

To illustrate the process I attach a list of some possible decision rules noted during the workshop and the information needs they generate. My recommendation to the University of Gent would be to conduct a research project to develop a set of suggested decision rules or operating principles in a consultative process with government, sectors and the public and to use this to identify research priorities for the eventual planning process. It is almost certain that the research derived decision rules will be revisited when the planning process starts. But it will probably be the case that the revisions will be relatively minor and any further research done to address information gaps identified by decision rules will be a major contribution to the actual planning process.

A second recommendation would be to develop research partnerships with agencies in neighbouring countries so that the ecosystem and EU usage contexts of the Belgian North Sea are clearly understood by all countries with primary responsibilities for the ecoregion.

Table of some decision rules and information needs noted during the workshop. Some of the information needs may relate to several decision rules.

Table II.1a: Some decision rules and information needs during the expert workshop (Jan 2004)

Decision rule	Information need
Provide for at-sea disposal at levels similar to current.	Social and economic costs and benefits of dredging. Likely future demands, economic justification and costs for deeper dredging.
Reduce impacts of dredge spoil disposal to minimum practicable.	Current flows, spawning areas, and linkages.
Maintain current shipping traffic management corridors.	Map shipping corridors.
Make provision for expanded level of marine gravel/aggregate extraction.	Extent of natural replenishment of gravel/aggregate and comparison to rate of extraction.
Minimise impacts of marine gravel/aggregate extraction.	Comparison of dredged and undredged areas.
Marine gravel/aggregate extraction should never expose seabed clay strata.	Map of thickness and grades of sediments overlying the clay/rock substrate of the Belgian North Sea.
Provide marine wind farm sites sufficient to provide certain % of Belgium's power needs.	Intended role of wind generation in national energy strategy.
The seabed at sites allocated for wind farm development should not consist of mud or fine sands.	Map of suitable areas.
Some areas suitable for wind farms should be set aside as control or reference areas for determining the impacts of wind farms.	Map ecological values of all potential wind farm areas to help identify reference and protection values.
Maintain local fishing communities.	Identify and evaluate social and economic characteristics and viability of local fishing

	communities.
Maintain sustainable commercial and recreational fisheries.	Identify areas of usage, catches trends and economic values of commercial and recreational fisheries.
Allocate a defined percentage of relevant fish stock/fishing areas to recreational fishing.	Cost benefit analyses of commercial and recreational use of fish stocks.
In consultation with the Government of Flanders, make reasonable provision for development of coastal marine recreation and tourism.	Map areas used currently for recreation and tourism activities, and areas with potential for recreational and tourism use. Map of Flanders coastal plan and implications for use of marine areas.
Protect representative areas of the seabed from activities such as trawling and dredging that disturb benthic communities.	Map of areas of seabed use by activities. Map relative usage importance of different parts of the area. Map relative ecological importance of components of the area.

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The North West European society has many demands competing for allocation in the North Sea: not only the more traditional uses of fishing, shipping and maritime defense, but also oil and gas drilling, sand dredging, wind energy and the allocation of marine protected areas are forms of present day use. We are even considering the construction of an artificial island off the Dutch coast to be used as an airport.

These developments are causing the North Sea to become more and more crowded. The appearance of the sea will change drastically over the next decade. Even in the seemingly endless vastness of the sea competition for space for the accommodation of the different human uses is becoming increasingly likely. We cannot foresee when this will exactly happen, but inevitably competition for space at the sea will become apparent.

We need to consider whether our present legislation is able to cope with these developments. The present day legislation for the EEZ of the Netherlands consists of a set of different sectoral laws: Mining Law, Sand and Gravel Extraction Law, and the Law for the Management of Public Works. The Environmental Impact Law and several other environmental laws also apply to activities in the EEZ. These are adequate for the time being.

So there is no general, more integrated law in force. Recently the Dutch government has decided to enforce the Nature Conservation Law and the Flora and Fauna Law in the EEZ. At the same time our government has decided that there is no need for a special North Sea Law.

At the moment some relevant policy documents are in process in my country: a.o. the "Nota Ruimte" (National Policy Document on Spatial Planning) and the Integrated North Sea Management Plan 2015; the latter is a plan of the directorate of the North Sea Public Works Authority. Furthermore in January 2004 a workshop on Spatial Planning of the North Sea was organized by the OSPAR secretariat in order to deal with section 76 – 79 of the Bergen Declaration (containing the conclusions of the Fifth International Conference on the Protection of the North Sea, March 2002, Bergen, Norway). So the national and international North Sea policy is beginning to move slowly towards a more integrated approach. In my opinion international cooperation and tuning is very important in this process.