



TOWARDS SUSTAINABLE DEVELOPMENT OF MARITIME INFRASTRUCTURE IN THE EU

1. Introduction

The European Dredging Association (EuDA) is pleased to contribute to a balanced and sustainable EU Maritime policy framework. Indeed, a comprehensive framework should establish the conditions for an optimal balance between societal, economic and environmental needs.

The dredging industry is used to working at the “crossroads”, be it of technological progress and environmental care, be it to support the shipping and offshore industry in a sensitive environment or in working at the interface between land and sea as well as marine water bodies and the seabed. The industry plays an important role in the realization of major infrastructure projects at or near the coastline.

In view of this broad-based experience with construction in a sensitive environment, EuDA offers considerations on three aspects of Maritime Policy:

- on the procedural and legislative side of marine construction and contracting;
- on the path to innovation and needs for deepening knowledge;
- on the aspect of sustainable development.

2. Procedures and legislation

Several major projects for port development and maritime access, all of them essential to support the growth of maritime shipping, have seen major delays that can in part be attributed to the regulatory framework. Such delays may cause significant cost overruns and destruction of capital. The consequence is that project developers face very uncertain constraints in decision-making and permitting.

In reviewing the root causes of this situation one may point at the following:

- Complex and sometimes inadequate regulatory procedures;
- A lack of knowledge to accurately predict environmental impacts in the marine environment, in particular for effects at long distances and over longer time periods;
- Conflicting societal interests that lead to drawn out legal combats.



While such frictions can never be totally eliminated, a constructive maritime policy can be of considerable help in bringing improvements. The dredging industry puts forward the following suggestions:

- a) A maritime policy at EU level should support clear zoning designations which allocate sea areas to the multitude of potential users and stakeholders (navigation, fisheries, biotope conservation, military uses, offshore oil and gas, gravel and sand winning, etc). Such zoning will help to eliminate uncertainty in site selection at an early project stage. It will also show that space at sea is far from unlimited and requires careful management.
- b) The experience with the application of the Birds-and Habitats Directives has been a somewhat painful experience. These directives often come into play when port development in and around estuaries is considered.

A cursory assessment of the underlying issues suggests the following :

- The Habitats directive has no provisions for dealing with pre-existing rights of stakeholders, in particular owners or users of property situated adjacent to designated Natura 2000 sites. There are quite a few examples where the owner of such a site could either not realize the designated use or had to spend unforeseen additional capital on mitigation measures. Both situations create fundamental legal uncertainty.
- In passing it is pointed out that nowhere is it foreseen who is responsible for compensating the extra cost incurred by the designation of Natura 2000 sites and leading to the erosion of pre-existing rights. This seems to us an omission.
- The provisions in Art.6.3 and 6.4 of the Habitats Directive that deal with the issue of conflicting uses, is formulated in such general terms that multiple interpretations are possible. National administrative courts have dealt with this issue and drawn different conclusions. Alternatively an opinion of the European Court of Justice had to be obtained, with all the delays resulting from it. This causes further legal uncertainty.
- Fourthly, large infrastructure projects necessitate the preparation of detailed environmental impact assessment studies. The Directive that puts down these obligations does give pitifully little guidance on the extent and detail of the impact study. This also causes uncertainty as may be illustrated by a recent Court case, which ruled that a port extension project could have some long term impact on the food balance in a designated Natura 2000 site at more than 150km distance. This is a legal opinion, but one that is far fetched and based on weak assumptions. A directive that leads to such diversity in interpretation needs to be clarified.
- The last issue, and one close to our heart, is the fact that the Habitat Directive does leave room for project mitigation measures in case of impact on a Natura 2000 site and -if

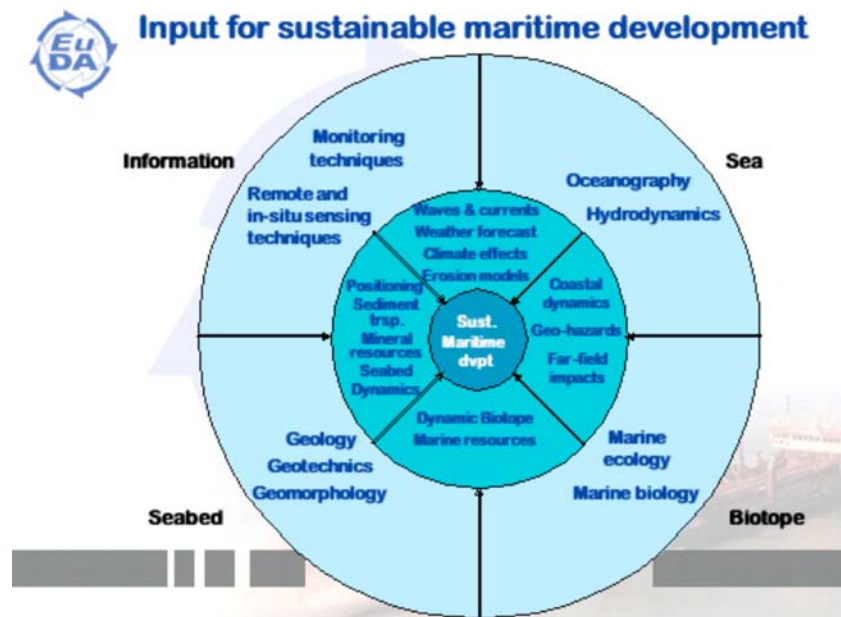
necessary – compensation measures. Unfortunately the assumption seems to be that the compensation should be provided in the form of a similar biotope. The dredging sector submits that such a constraint does not do justice to the dynamic environment in Coastal areas. It may well be much more interesting to provide a compensation project at some distance from the site, which enriches the marine biotope with a different kind of natural biodiversity. More realistic guidance is highly desirable.

- c) In today’s society most project development plans meet with stiff resistance from interest groups, be it environmentalists, future neighbors or competing economic actors. This is certainly true for projects in the maritime sphere (wind farming, sand mining, offshore oil and gas etc.) We believe that there is ample room to improve on the decision-making procedures and the organization of effective public participation that does not lead to obstruction and costly delays of several years. (see also pt.4)

3. Innovation

The design and implementation of marine and maritime infrastructure requires many engineering skills and extensive scientific knowledge in order to understand the impact of human intervention. As the dredging industry works at the transition between sea and land and of sea and seabed, it needs an understanding of a wide range of disciplines involving sea, soil and sediment. The figure below illustrates this diversity. The listed disciplines are amongst those that need a deepened knowledge and improved understanding in order to support impact studies and project design.

Fig 1.:





Euda suggests that the 7th Framework for Community research should contain a chapter similar to the previous MAST programmed (Marine Science and Technology) under which the long term effects on the marine environment can be studied. This should come separately from the section that covers maritime construction and shipping.

The recently published Marine Strategy (COM/2005/504) contains a similar proposal. A more far-reaching initiative could be to establish a European Centre of Excellence for the knowledge of the sea and the oceans with as focal themes marine resources, climate change effects, dynamics of coastal zones, impact of infrastructure development, the relationship between development and ecology over longer periods. The coordination between existing knowledge centers should be further improved so that available expertise is more readily accessible.

4. Sustainable development

- a) EU Maritime policy must seek to harmonise and reconcile the various components of sustainable development (at least the societal, economic and environmental dimension).

In the context of the competences of which the EU disposes this could lead to a better balance between transport policy, energy policy, coastal zone management and environmental protection.

Two instruments that can play a significant role in this respect are the Environmental Impact Assessment (EIA) and the Cost-Benefit analysis; both these instruments should be refined and methodological issues be dealt with, preferably at European level. EIA often suffers from a lack of homogeneity; there are no consistent guidelines, and where these exist they often mix impacts at mini- meso- and macro scale.

The result is that sizable volumes of interesting data are presented, but it is far from clear how they should be used and interpreted. Especially the treatment of impacts at the different environmental scales raises confusion. And their weakness is that current assessments do not help in weighing environmental factors against the economic or societal significance. While a proper method of cost-benefit assessment could improve the situation, it requires that environmental values are expressed in shadow prices. Again a subject for much discussion, but essential to improve on if we want to use cost impact assessment as an instrument that can underpin maritime policy.

- b) A related subject is the role of formal decision-making in the preparation of major infrastructure projects. A cursory analysis by EuDA showed that



decision-making procedures in the field of transport infrastructure are fundamentally flawed for at least three reasons:

- The underlying cost-benefit methods are different for road, rail and waterborne infrastructure and not well comparable. This will easily lead to poor decisions in allocating capital for investment and does not help to stimulate a shift in transport modes from road to rail and water.
- The cost-benefit methods typically do not give sufficient weight to the external costs and the indirect environmental impact of transport modes. Specifically for the waterborne sector we found that not all functions that waterways fulfill are accounted for.
- Decision-making methods are different in each member state with the result that the benefits of transboundary projects are hard to assess.

These findings contribute to delays in the necessary development of seaports and maritime infrastructure. Our recommendation is therefore to include in the Maritime policy guidance for the proper assessment of needs, benefits and impacts. An in-depth consideration of environmental costs and values of the marine environment will certainly bring further improvement.

5. Conclusion

The European Dredging Association promotes the role of dredging and marine contracting in the construction, upgrading and maintenance of the European maritime infrastructure and inland waterways.

EuDA is concerned about the long lead times experienced by seaport development and large maritime projects. This causes unnecessary cost increases that will ultimately lead to competitive disadvantages. Such a handicap is difficult to accept in view of the speed with which developments in Asia take place (China, Singapore, Malaysia...).

- EuDA recognizes a shortage of knowledge and understanding of the ecological effects of hydraulic works on the marine environment; the same is true for the economical and social dimensions of marine development.
- EuDA pleads for an in-depth review of the impact of current environmental legislation on the development of marine- and maritime infrastructure. The review should result in improvements, such as the consideration of owners- and users' rights, the legal terms for proper compensation and clearer stipulations on the balance between ecology and economy.



- EuDA believes that many models currently used to make decisions on infrastructure development are incomplete, insufficient and sometimes inconsistent. Harmonization at EU level and improvements in cost-benefit assessments are highly desirable. There is a need for a more considered approach towards balancing environmental, economic and societal aspects.
- EuDA proposes an international, European research initiative into the environmental effects caused by marine works. The knowledge obtained shall be made available and be used for planning and management of EU maritime infrastructure.
- A comprehensive knowledge base covering the marine environment shall be developed. It must take into consideration the expertise currently dispersed in many smaller research facilities and institutes. The creation of a European Centre of Excellence is proposed.

In conclusion, sustainable development of coastal zones and of maritime transport infrastructure requires a better understanding of - and further research into - the long term, far field effects of man-made works in the marine environment. This understanding should lead to improved models that may be used in the assessment of long term trends, including the effects of climate.

EuDA welcomes the initiative to develop a framework for European Maritime Policy and desires to actively contribute to it in the domain of maritime infrastructure development.