

## **Sustainable spatial planning for European Sea Ports Natura 2000 and ports striking a new balance**

### **Introduction**

Say “European Union” and “Ports,” and many people immediately think of the European Birds and Habitats Directives, as port development and EU regulations on nature conservation are frequently opposed to one another. Port development projects are often delayed through the annihilation by Court of spatial planning decisions (e.g. Regional plan, Core Planning Decision). This paper describes the conflict resolution of the port of Antwerp. Spatial planning appears to be a crucial element in this conflict resolution.

The port of Antwerp is the second largest port of Europe with an annual throughput of about 160 million tons. It's situated in the north of Belgium 100km inland in the Scheldt estuary, north of the city of Antwerp at the right bank of the Scheldt and since the 1970s also on the left bank of the Scheldt. (Antwerp Port Authority 2006)

In the federal state of Belgium Ports, Spatial planning and most environmental competencies are delegated towards the regions, in this case Flanders. The Flemish Parliament make laws, called decrees. Next to this Belgium is a member state of the European Union, which also has legal instruments, e.g. Directives, which has to be implemented into the member state law.

### **Spatial planning in Flanders (Belgium)**

The legal framework for spatial planning in Flanders is the Decree on Spatial Planning (1999). Art.4 of this decree states:

*“The spatial planning is directed to a sustainable spatial development... .Therefore the spatial requirements of the different social activities are weighted against each other at the same time. The spatial capacity, the consequences for the environment and the cultural, economic, aesthetic and social consequences are taken into account.”* (translation by the author)

So spatial planning has the ambition to weigh different spatial needs against each other. But it's very important to know that the constraints are already made partially through sector policy, also in laws like the Nature decree. As a consequence environmental constraints are important in the spatial planning practice, to deal with them is one of the main challenges of spatial planning, certainly for Sea Ports.

The Spatial Planning Decree distinguishes two kind of plans, Spatial Structure Plans and Spatial Implementation Plans which are the implementation of the Structure plans, both on the municipal, provincial and regional level. The Spatial Planning of the Sea Ports is situated on the highest planning level, the region of Flanders. The relevant Structure plan is the Spatial Structure Plan of Flanders of 1997 (Ministerie van de Vlaamse Gemeenschap 1997).

### **European Nature Legislation**

#### ***The European Birds and Habitats Directives***

The most important base of nature policy and protection in Europe are the Birds and Habitats Directives. Logically, nature protection is the main goal of the Directives but next to this there is a secondary un-written function of the European Environmental policy, the creation of the same environmental constraints in all the member states (van Ravesteyn & Evers 2004). So the possibility of ports in different Member States competing against one another in a race to gain economic advantage by putting the greatest possible load on the environment is

excluded. This fits in with the policy of creating a common European market. This is important because port communities in Europe want to have a “common level playing field” based on generally accepted regulations capable of ensuring correct compliance and unified interpretation. (ESPO 2007)

In both nature directives area protection and species protection are distinguished. The well-known designated areas are part of the area protection. The most appropriate areas has to be designated as Special Protection Area (SPA) and/or Special Area of Conservation (SAC), together these sites form the European Natura 2000 ecological network. This SPA's and SAC's aren't nature reserves in the strict sense. Even large-scale infrastructure and other projects are possible but then art.6.3 of the Habitats Directive applies. This article states that you have to make an appropriate assessment if a plan or project could have a significant negative effect on the conservation objectives of a Natura 2000-site.

If there are significant negative effects then art.6.4 allows to continue with the project but only if there are imperative reasons of overriding public interest (IROPI), the most ecologically vulnerable alternative is chosen and nature compensations are executed.

Next to the area protection there's also species protection. This means that rare species are protected on the whole European territory. Port development can also come into conflict with these species protection.

These nature protection measures seemed necessary because of the fast decline of nature in Europe. The Directives are a kind of emergency measures to stop this decline. The importance of ecosystem protection is motivated by the ecosystem services. After all nature protection serves the production of medicines, fuel and food, is important for soil fertility and cycling of nutrients and generate several other economic, recreational, ethic and other benefits. (European Commission 2006, ESPO 2007, Van Hooydonk 2006, European Commission 2001)

It's important to keep in mind that nature regulations doesn't make port development impossible, but they impose sometimes strict constraints.

### ***The European Environmental Assessment Directives***

Another important EU-directive is the SEA-Directive. SEA stands for Strategic Environmental Assessments which has to be made for plans and programmes that can effect the environment. It's related to the EIA-Directive (Environmental Impact Assessment) which obliges EIA's for projects that can have negative effects on the environment.

### **Spatial Planning and the Birds and Habitats Directives**

On the one hand the European Birds and Habitats Directives allocate a task to the spatial planning policy, on the other hand spatial plans has to be assessed in light of the nature directives.

Art.6.1 of the Habitats Directive states that Member States have to establish the necessary conservation measures for Special Areas of Conservation, if needed into development plans. And art.10 refers to “*land-use planning and development policies*” as instruments for nature conservation. In the Dutch translation of the Birds Directive “*ruimtelijke ordening*” (town and country planning, spatial planning) in line with ecological requirements is one of the measures for the management of important habitats (art.3 Birds Directive). In the English version this is described as “*upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones*”.

It aren't hard legal statements but it's clear that the directives see spatial planning instruments as tools which can help to implement the nature directives, next to proper instruments.

Next to the literal referring to spatial planning in the Directives it's obliged to make an appropriate assessment for spatial plans when negative effects on Natura 2000-sites can't

be excluded. This is the case for both spatial structure plans as spatial implementation plans because the European Commission states that the notion of “*plan*” has to be interpreted very broad. (European Commission 2001) These provisions aren't just important for nature policy as permitting can become impossible due to nature regulations.

### **The conflict between nature protection and port development**

Port development often came into conflict with nature protection. Examples are Port of Sheerness, with the ‘Lappel Bank’ European Court Decision as consequence, Port 2000 (Le Havre), Deurganckdok (Port of Antwerp), 2e Maasvlakte/PMR (Port of Rotterdam). It are often spatial planning instruments which are the object of the legal procedures. (Van Hooydonk 2006, ESPO 2007) But in the majority of the cases the port development can go on with extra measures for nature protection. So the conclusion is not that nature protection legislation makes port development impossible in protected nature areas.

### **Planning on three scale levels in and around the Antwerp Port Area**

With respect to nature planning, three scale levels with each a different planning process can be distinguished. The Macro-level is the level of the Scheldt estuary, on the Meso-level the port area and surroundings is the subject and the main focus on the Micro-level is on the ecological infrastructure inside the port area.

#### ***The Scheldt Estuary***

The decline of nature values in the Scheldt estuary is a long going process during recent centuries mainly caused by impoldering (building of dykes). Result of this is that the natural environment of the Scheldt estuary is not sufficiently robust to absorb the impact of human interventions like dredging activities. (ProSes 2005)

For the Second deepening of the Scheldt Estuary (start 1997) the European Commission has sent since 1998 letters of formal notice and a reasoned opinion to the government of the Netherlands, the member state where most of the Scheldt between the Port of Antwerp (Belgium) and the North Sea is located. The reason for this European infringement case is that there were questions about the compliance with art.6 of the Habitats Directive. This confrontation with European Nature regulations is important in the preparation of the next deepening of the Scheldt. (Van Hooydonk 2006 p.131-135).

A first important step towards a renewed cooperation between the Dutch and Flemish governments about the development of a vision for the sustainable development of the Scheldt estuary came in 2001. Both governments subscribed some targets for 2030 in a general way (the Long-term Vision Scheldt estuary). The objectives were preservation of the geomorphology, safety against floods, optimal accessibility of the ports, a healthy dynamic ecosystem and trans-boundary cooperation.

To make these intentions more concrete ProSes (Scheldt Estuary Development Project) was established in 2002. Main task was the working out of a development plan.

After a planning process based on both research and advisory consultation political decisions (Memorandum of Agreement March 2005, treaty December 2005) are taken on the Scheldt Estuary development plan (‘Scheldt Estuary Development Outline 2010’) by the Flemish and Dutch governments. The main goals are the improvement of the safety, accessibility and naturalness of the estuary but also financing topics were mentioned. The development plan formed the basis for further decision making about Nature development, measures against flooding and dredging activities. A strategic Environmental Assessment (SEA) is made for the Long Term Vision of the Scheldt. At the moment concrete nature, dredging and safety projects are prepared with among other things Environmental Impact Assessments (EIA) necessary to obtain permits.

The 'Technical Scheldt Commission' does the overall management. This is a board of officials from the ministries of Infrastructure, Transport, Waterways, Agriculture and Nature of both the Netherlands and Flanders but also the Dutch Province of Zeeland joint this group. The stakeholders council and the governmental board guarantee the involvement of social organisations, port authorities and local and regional authorities. The joint project organisation (ProSes2010) with own offices and staff members is still at work to coordinate the different measures and procedures and communication.

Morphology is an important research-issue, also in other estuaries. This research is a base for both the examination of the effects on nature and for the dredging works. One of the principals is to maintain and improve the dynamic characteristics of the Scheldt estuary. Safety, navigability and nature are believed to benefit all from maintaining the dynamic vitality of the system. In the new approach dredging is viewed in a broader way. This is illustrated by concepts as "flexible dumping locations", which means that dumping of dredged sediments occurs where it is the most favourable for the vitality of the estuary. (NEW! Delta 2007, Dauvin 2006, ProSes 2005)

It's clear that on this scale level, different functions (nature, shipping,...) are located in the same system (estuary).

### ***The Port Area and its environment***

#### Strategic Planning Process

The port areas are in the Spatial Structure Plan of Flanders part of the areas for economic activities and the four ports (Antwerp, Ghent, Ostend and Zeebrugge) are selected as engines for development. For this "Ports" and their surroundings a spatial vision will be developed on the level of the Flemish region on the basis of which a Spatial Implementation Plan will be made together with the relevant public authorities. (Ministerie van de Vlaamse Gemeenschap 1997 p.322 p. 459-461)

The predecessor of the Strategic Planning Processes in Flanders is the ROM-project in the Ghent Canal Area which runs since 1993. ROM stands for Ruimtelijke Ordening and Milieu (Spatial Planning and Environment) and the same kind of process runs also in foreign port-regions like Rijnmond-Rotterdam. (De Rynck & Voets 2004) For the Waasland Port (port of Antwerp on the Left Bank of the Scheldt), the development of a strategic plan with the different public actors was one of the constraints for the building of the Deurganckdock. In the Flemish government agreement of 1999 the Flemish government states that for every Port a strategic plan has to be made, which is repeated in the 2004 government agreement. The Spatial Implementation Plans are an important outcome of this planning processes. In this process different stakeholders (administrations of waterway, nature, environment,... municipalities, Nature NGO's, farmers organisation, Port Authority,...) are discussing the future and the designation of the Antwerp harbour. So the preparation for a new zoning plan (Spatial Implementation Plan) which will designate the Antwerp Port Area and which will contain provisions for the surroundings is part of the Strategic Planning Process for the Port of Antwerp. The Strategic Planning Process handles different environmental problems (noise, mobility, nature, air quality,...) which are investigated in a Strategic Environmental Assessment. Nature is an important part of it.

In the Strategic Planning Process for the port of Antwerp a vision for a robust nature development is established. In this philosophy robust nature development has to be put in place before accepting any plans or carrying out any projects with a possible negative impact. In the planning process the areas protected by the Birds and Habitats Directives are the starting-point. There is made a "spatial translation" of the conservation objectives for this areas. For the different main habitat types (saltmarshes, wet grasslands,...) is investigated how much hectares are needed to reach the objectives which are mainly set in non-spatial terms (breeding pairs of birds,...).

This vision avoids that for every single port project an exemption procedure (art.6.4 Habitats Directive) must be followed. This serves both the port development as the nature policy because a fragmented approach with different isolated nature compensations is worse also from an ecological point of view. The cornerstone of such a policy is that the expected impact of any project, as assessed by a proper study, must not be significant in terms of a robust, developed natural environment, i.e. it must not compromise the ecological integrity of the area.

On this scale level a separation model is preferable with large robust nature areas next to a port area.

At the moment the Strategic Environmental Assessment-procedure is running. When this is finished a new Spatial Implementation Plan will be drawn up.

### ***Micro-level: ecological infrastructure within the port area***

“Ecological Infrastructure” is a concept of the Flemish spatial planning, not of the Nature policy. It originated in the Spatial Structure Plan for Flanders. Ecological infrastructure is described as nature, small landscape elements which is not part of the larger nature entities like the Flemish Ecological Network. The Spatial Structure Plan for Flanders proposes a maximum of 5% of ecological infrastructure in the port areas whereby the localisation of ecological infrastructure may not hinder the port activities. (Ministerie van de Vlaamse Gemeenschap 1997 p.546)

The only detailing of the general outlines about ecological infrastructure in the Structure Plan is an internal instructive document of the Flemish administration (Ministerie van de Vlaamse Gemeenschap 2002). This ‘order’ proposes to make a pragmatic framework for ecological infrastructure in the Strategic Planning Process. This framework has to indicate how temporary ecological infrastructure can disappear in function with the development of port activities. Instruments can be the concession-policy of the port authority, agreements,... It’s also necessary to weigh of the consequences towards other policy domains and regulations.

Since 2001-2002 there is an agreement between the Antwerp Port Authority and Natuurpunt (the largest Nature NGO in Flanders) to work out a framework for ecological infrastructure. A steering Group with representatives from private sector organisations, municipalities, administrations (Waterways, Nature,...) is established. In this steering Group it’s agreed that Legal certainty is a priority. It’s the ambition to establish a framework to handle the diverse and scattered nature obligations in the port area. Also the ecological infrastructure supports the larger nature entities around the port and give place to protected port-species.

The majority of the nature obligations will be fulfilled by creating and managing larger resilient nature entities outside the port areas (meso-level). The rest “port specific nature” will be maintained in the port area. Pipelines zones e.g. form a specific habitat through the regular mowing and digging in this zones. It’s the most cost-effective way to maintain such kind of habitats for protected species as Natterjack Toad. (Ottburg et al. 2007)

By delegating the responsibilities and obligations to the network level in the whole port area ecological infrastructure can stay more or less voluntary for the individual companies located in the port, unless the strict legal obligations of species protection. This means that not every single animal is strictly protected. If the goals in the whole ecological infrastructure network are reached, a singular spot can disappear.

Temporary Nature is an important concept for nature management in dynamic areas like harbours. With the flexible management of often temporary habitats there can be reached more ‘nature’ then with a rigid un-flexible approach. A Dutch report calls this “temporary Nature, permanent profit” (Reker 2006).

On this level it’s possible to have certain protected nature values inside a port area.

## **Some reflection about the processes on the three levels**

### ***Governance and Scale***

“Governance” is a container concept, used in several meanings. In most of them it has something to do with state structure, with the organisation of the government. Different authors see or propose a shift from government to governance (Loorbach 2004, Brenner 2003,...). With ‘government’ they mean the old-fashioned bureaucratic, vertical hierarchically organized state structure, typical for the Fordist-Keynesian mode of regulation of the 1960s-1970s. Governance on the other hand is working in a more horizontal, cross-sectoral and network-structured way. In the current wave of governance also planning processes, regionwide spatial planning and all kinds of less hierarchical cooperation between different authorities and institutions are understood under ‘governance’.

An important fact is that new scale-levels appear, including the EU and metropolitan governance structures. Concepts as “rescaling” and “scale-jumping” are used to indicate that the government didn’t work anymore only with the ‘traditional’ Municipality-Province-National State-levels of government, but that there are produced new institutions on different scale levels (supranational, regional, subnational,...) (Mamadouh et al. 2004).

Brenner (2003) gives an overview of the different waves and types of governance in Western-Europe. Besides the real institutional, administrative changes and reformations he speaks about other initiatives on a regional level that are a cooperation between different government institutions and stakeholders (NGOs,...) in spatial-planning-related fields. The described processes can be seen as examples of governance in this sense. An estuary or a port area coincides not with an existing administrative boundary. And different environmental and other problems are related to the port area. A sector-based approach limited to certain administrative boundaries can’t be successful to handle these situations. As a consequence the choice is made towards a cross-sectoral, horizontal governance-approach. But the planning processes are depended on the existing government structures, so speaking of real shift from government towards governance is somewhat misleading.

Next to the three described scales, the Antwerp Port Authority also is active on nature policy on the European level through projects like NEW! Delta, Paralia Nature and as a member of the European Sea Ports Organisation.

Next to this it can be mentioned that concepts can differ from scale to scale. The separation model used on the meso-scale suits with the more mix-oriented approaches on the macro and micro-level.

### ***New Concepts***

In the three described processes the old-fashioned modernistic approach with a strict division between ‘nature’ and ‘culture’ is leaved for a more integrated one. Different authors (Swyngedouw 2004, Swyngedouw 2006, Bauriedl & Höhler 2003,...) describe the traditional distinction between nature and society, between nature and culture as problematic.

For the Scheldt estuary morphological research creates a common language for both dredging engineers as for nature specialists. The result is that the new concepts of dynamic estuary management, flexible dumping locations, dredging with nature,... leads towards solutions who mean an improvement for accessibility of the ports, flood safety and nature protection. There can be concluded that an estuary is not just a natural system nor is it just a transport system, it’s a produced social-economic system.

On the level of the Strategic Planning for the port area and its surroundings the vision on robust nature development with the creation of resilient nature areas avoids a case-by-case approach with for different projects long procedures with an uncertain result and a

fragmented nature policy. The spatial translation of nature objectives was a key step in the process.

On the micro-level the concept of temporary nature and an ecological network approach creates a way out of a rigid policy in a highly dynamic area.

### ***Implementation***

Formal procedures of Spatial Implementation Plans, Strategic Environmental and Environmental Impact Assessments, nature management plans,... give structure to and sometimes initiate non-obligated processes and structures. The contact with the 'traditional' government layers is important because formal decisions need to be taken there to guarantee the realisation of projects which are the outcome of the less-formal processes.

There exist numerous plans which influence European estuaries and port-regions. In the planning processes the content of these plans is discussed by giving a platform for the different stakeholders. The planning process itself however may not become a strictly regulated structure with detailed procedures itself. The more informal open structure guarantees the 'creativity' to find solutions for the complex problems with a lot of actors. Good spatial planning needs processes that lead to solutions that were unthinkable before the process started. This means not that there can't be a need for institutionalised structures outside the traditional government layers.

To have a successful cross-sectoral process contact between different sectors isn't sufficient. A translation of the requirements of different sectors is needed. The importance of the spatial translation of the nature objectives for the Antwerp Port Area and its surroundings was such a translation. One of the advantages of a highly dynamic area like a harbour is that there is a pressure against immobility. As a consequence there is the risk that new developments thwart the vision.

### **Conclusions**

In and around the Antwerp Port Area three scale levels can be distinguished as far as planning processes with a link to nature policy are concerned. These processes have a strong link with spatial planning policy because this is by its cross-sectoral nature the best vehicle for conflict resolution between port development and nature protection.

These processes cross the traditional government structures but are dependent on these for among other things the formal decisions. These processes are examples of a governance-approach and they work in a more horizontal, cross-sectoral and network-structured way. New concepts illustrate these cross-sectoral approaches which leave the old-fashioned division between nature and culture, between economy and ecology.

On the level of the Scheldt estuary morphological dredging and dynamic estuary management are the concepts which serve accessibility of the port, flood safety as well as nature protection. On the meso-scale, the port area and its surroundings, robust nature development based on a spatial translation of nature objectives is the way that the new policy follows. The concept of temporary nature and the development of an ecological infrastructure network forms the framework for nature policy inside the port area.

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