

The Habitats Directive and port development in coastal zones: Experiences in safeguarding biodiversity

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Abstract. This paper outlines the implications of the Habitats Directive of the European Union for port extension projects. Descending from the ecosystem level to the species level it will also draw conclusions on what the successful and less successful elements in the practice of implementing the Habitats Directive requirements from a nature protection perspective are. The focus of the paper is on projects and plans for port extension in or in the proximity of designated sites and on species protection. On the basis of case studies of large ports in northwestern Europe, preliminary conclusions are formulated and recommendations for similar projects are presented.

Keywords: Bern Convention; Endangered species; Endemic species; European Union; Natura 2000; Paralia Nature Project; Ramsar convention.

Abbreviation: EIA = Environmental Impact Assessment; EU = European Union; IROPI = Imperative Reasons of Overriding Public Interest; SAC = Special Area of Conservation; SPA = Special Areas of Conservation; SCI = Site of (European) Community Importance.

Introduction

Over the past ten years, there has been an increasing interest from the Member States of the European Union to use coastal zones for port extensions or wind turbine parks in order to meet the rising demands for container traffic and green energy production, respectively.

The Directorate General for Transport of the European Commission wishes to further develop marine transport and short sea shipment as viable solutions in coping with the congestion of road infrastructure and the lack of railway infrastructure. It therefore wants to develop sea motorways within the framework of the trans-European network, which in turn will help to decrease CO₂ emissions and thus aide meeting the requirements of the Kyoto protocol (Anon. 2001a). Thanks to the Community's support program 'Marco Polo', the significant growth of intra EU sea-shipment and container handling seen over the last ten years is expected to continue (Anon. 2001b).

On the other hand there is an increased concern about the natural environment from the European institutions and the people they represent. Virtually all types of ecosystems in the EU have suffered significant losses during recent decades. More than two thirds of the existing habitats are considered endangered and a high percentage of existing species within the EU are at risk of extinction: 46 European endemic plant species have already become extinct (Anon. 2001c) and more than one-third of Europe's bird species are in decline, mainly due to damage to their habitats by land-use changes and other human activity (Tucker & Evans 1997).

The conflict between economy and the protection of Europe's natural heritage becomes especially apparent in coastal zones as these seem to accommodate both important industry and biological interesting habitats and species.

The main questions for this paper include:

1. What are the experiences in the preparatory decision-making for port extension projects and plans with the implementation of the requirements of articles 6.3. and 6.4 of the Habitats Directive?
2. How does one deal with protected species on the site?
3. Which are elements of improvement from the current experiences with the framework of the Habitats Directive?

These questions were developed in the framework of an European co-operation project, Paralia Nature.

The following European and International regulations and treaties are relevant in relation to protection of Birds and Habitats in coastal zones:

The first one was the Convention on Wetlands of International Importance Especially as Waterfowl Habitat, which was signed in 1971 in Ramsar, Iran, and is therefore referred to as the Ramsar convention. This intergovernmental treaty including over 130 contracting parties provides a framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. Its main results are the protection of a list of wetlands designated by all involved parties (Anon. 1971).

In March 1973, representatives of 80 countries agreed on a convention text on International Trade in Endangered Species of Wild Fauna and Flora, better known as its acronym CITES. This text was drafted on the basis of a resolution adopted in 1963 at a meeting of members of IUCN and regulates the trade of all the species listed in its annexes (Anon. 1973).

Another important convention is the one on the Conservation of Migratory Species of Wild Animals signed in 1979 in Bonn (Anon. 1979a) and ratified in 1982 by the European Community (82/461/EEG). It foresees measures for the protection of habitats and the halting of direct interference as well as the exploitation of migratory species. The convention prescribes strict measures to preserve the migratory species listed in Annex I, while the expected positive effects of international co-operation is the primary reason for including species in Annex II. Examples of these Bonn-agreements are the programs for seals in the Wadden Sea, the European bats and the small sea mammal program. The species concerned are mainly birds, mammals and turtles.

The most relevant for infrastructure planning is the Bern Convention on the Conservation of European Wildlife and Natural Habitats from 1979. Today, the Convention has 45 Contracting Parties, including 39 Member States of the Council of Europe, the European Community, Monaco and four African States. The aims are to conserve wild flora and fauna and their natural habitats, especially those species and habitats

whose conservation requires the co-operation of several States, and to promote such co-operation. Particular emphasis is given to endangered and vulnerable species, including the migratory ones. The convention wishes to attain this goal through the general protection of all animal and plant species and their natural habitat and, especially through the protection requirements for the species listed in its annexes (Anon. 1979b).

In Annex I, more than 600 strictly protected plant species are listed, most of them being endemic species occurring in the south of Europe.

The appropriate measures, which should be taken to ensure the conservation of the habitats of the wild flora and fauna species (Article 5), especially apply to this appendix as well as to appendix II (Article 4.1). In addition, these plants are protected by Article 5, which forbids the destruction of their habitats, the deliberate picking, collecting, cutting or uprooting of these species.

Animal species that need strict protection are listed in Annex II. Originally this list only contained mammals, birds, reptiles and amphibians but in 1987 invertebrates and saltwater fishes were added (Niessen 1993). By 1996 this appendix had grown to over 470 species, which are protected for their habitat (Article 4.1) and also through Article 6. This article prescribes that appropriate measures should be taken to forbid catching, keeping, trading, killing, disturbing, deliberate damage or destruction of their breeding or resting sites and deliberate destruction or taking of eggs from the wild.

Annex III contains more than 550 animal species not yet protected through Annex II. This Annex is a sort of 'catch all' list. However, it is evident that the species listed here enjoy a much lower protection level. Nevertheless the general protection of habitats should still be taken into account and the appropriate measures should be undertaken in order to secure the viability of the populations.

The European Community and the implementation of the Treaties

Pursuant to Article 300(7) of the EC Treaty all these conventions are part of the Community legislation. This involves that they have to be implemented by the Member States as well as by the institutions of the Community. The Ramsar and Bern Conventions were however transposed into Community law through the adoption of the Birds and Habitats Directives, which means that the conventions no longer have practical relevance in the Member States European Union.

The Birds Directive (79/409/EEG) was the first product of the European Community in the field of

nature protection. It came in place because of the massive public concern about the continuous mass killing amongst the migrating birds in the Mediterranean.

The directive relates to the conservation of all naturally occurring Bird species living in the wild in the territory of the Member States. It covers the protection, management and control of these species and lays down rules for their exploitation. It aims to maintain the populations at a level, which corresponds to the ecological, scientific and cultural requirements while taking into account also the economic and recreational ones.

In short, it sets up a protection framework in which a number of measures should be taken for all birds living in the wild, such as the creation of protected areas, the upkeep and management in accordance with the ecological needs of the habitats, the re-establishment of destroyed biotopes and the creation of biotopes.

In order to conserve the Annex I-species, Special Protected Areas (SPAs) are designated. This should be done taking into account the most suitable territories in number and size. The Ramsar convention can be retraced in Article 4(2) of this Directive, saying that similar measures as for Annex I birds should be taken to protect migratory birds and wetland areas, especially those of international importance.

The Bern Convention was transposed into EU law through the adaptation of the Habitats Directive (92/43/EEG). There is however some discussion to whether the Bern Convention may be completely disregarded. This involves that shall focus here on the implications of the Habitats Directive and discuss the specific differences for species protection later. The objective of the Habitats Directive is to contribute towards ensuring biodiversity through the conservation of natural habitats and the protection of wild fauna and flora in the territory of the Member States. It aims to achieve this through the strict protection of a number of areas and the protection of specific species.

The areas are chosen by the Member States according to the location of these habitat types, and animal and plant species listed in the Directive. On the basis of the areas suggested by the Member States the European Commission prepares a list of areas of common importance, which, once accepted, become Special Areas of Conservation (SACs).

Together with the Special Protected Areas, they make up a coherent European ecological network called Natura 2000. The Natura 2000 habitats and its species should be maintained or, where appropriate, restored at favourable conservation status. Additionally, this conservation status has to be reported on, particularly regarding to priority habitats and priority species, which

need special protection. Besides the area-linked requirements, the Directive foresees the protection of animal and plant species listed in an Annex IV.

The legal protection of the areas can be traced back to Article 6 of the Habitats Directive. First of all, it sets out provisions for the establishment of conservation measures and, if required, for management plans. Furthermore, there is the obligation to avoid deterioration and disturbance of natural habitats and species. But it is the third and the fourth paragraphs of Article 6 that have enjoyed the biggest attention so far.

Plans or projects that have a potential impact on Natura 2000 areas should meet a number of requirements in order to get the green light from Europe.

The different steps included in Articles 6.3 and 6.4

As set out in Article 6, third and fourth paragraph, the development of a project or plan has to pass different steps (Fig. 1).

1. The first step is an analysis of effects of planned activities; this can be combined with Environmental Impact Assessment (EIA).

However, there are differences, because in the scope of an EIA there is often not adequate attention given to natural aspects and protected species.

2. If the analysis demonstrates significant or potentially significant effects on Natura 2000, one should look for mitigating measures in order to reduce or eliminate the effect.

3. If that effect cannot be reduced to non-significant proportions a study should be carried out in order to find a viable alternative that has less or no impact. In selecting alternatives one should not restrict oneself to geographical solutions as alternative solutions, for the original problem should also be considered (e.g. create employment, meeting housing needs). If the chosen alternative still has a significant impact, the project can only continue if Imperative Reasons of Overriding Public Interest (IROPI) have been proven. This means that the project has to be to the benefit of many instead of to the profit of the developer and few others.

4. If IROPI can be proven, the effects have to be compensated so that the continuity of Natura 2000 is guaranteed.

5. The European Commission should be informed about these compensation works. If there are negative effects on priority habitats or species (listed with an asterisk in Annex I and IV of the Habitats Directive), the Member State has to ask for advice from the Commission before the works may begin.

Because of Article 7 of the Habitats Directive these requirements are not only relevant for SACs, they also apply to SPAs designated under the Birds Directive. Issues related to the protection of animal and plant

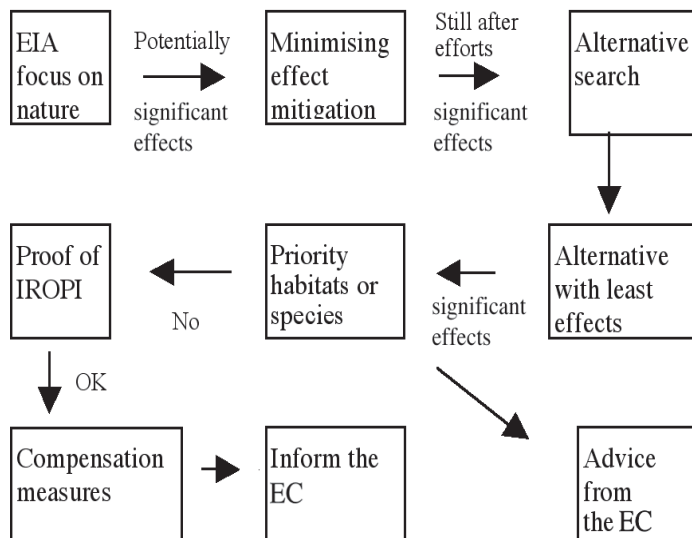


Fig. 1. Sequence and coherence of steps to be taken to apply Article 6.4 of the Habitats Directive. EIA = Environmental Impact Analysis; EC = European Commission.

species outside Natura 2000 areas is regulated in Articles 12 and 13.

Problems with the Habitats Directive

The implementation of both directives has experienced considerable delay, which has resulted in many uncertainties, questions and court cases.

In one of these cases the European Court had decided that the third and fourth member of Article 6 also applies to plans and projects in Member States which have not correctly implemented the Habitats Directive or for areas which wrongfully have not been designated as Special Areas for Conservation. Moreover, the Court has decided that for areas which have wrongfully not been designated as Special Protection Areas under the Birds Directive the stricter Article 4 of the Birds Directive applies instead of Article 6 of the Habitats Directive. (Anon. 2000b).

These directives have provoked many parliamentary questions and court cases and the Habitats Directive is the only Directive wherefore two interpretation manuals were written. With the publication of the interpretation manual for Articles 6.3 and 6.4 there is even a step-by-step approach for project developers (Anon. 2000a, 2001d).

The Paralia project

The requirements of both Directives have not always been clear as in many countries they have not properly been implemented into the legislation of the Members States. The putting into operation of both Directives has had great impact on big infrastructure

projects in general and port infrastructure works in particular and problems with permits caused many works to be stopped. In a pre-assessment study for a European project it was seen that nine out of ten large infrastructure projects investigated in northwestern Europe were delayed for more than a whole year due to misinformation or misunderstanding of the Habitats Directive. Moreover compensation costs for seven of the projects escalated, due to non-compliant measures for nature compensation. The assessment showed that on half of these projects questions were put forward by the European Commission.

It was apparent that many large infrastructure – particularly port projects – had problems with the implementation of the Habitats Directive. A number of authorities in different countries have decided to join forces in an informal co-operation platform, the Paralia Nature Project. The project focuses on the implications of Article 6 of the Habitats Directive for Port expansion projects in estuaries. Bringing together different players with different interests such as NGOs, academic institutions, environmental ministries it aims to have a neutral approach in resolving formerly mentioned obstacles.

Some of these obstacles will be discussed more in detail within the outline of this paper but as its scope does not give a detailed overview, the focus will be on some general approaches on how to deal with the Directive and especially on Species Protection. This issue has not yet played a mayor role for many project developers but it promises to be a key factor between infrastructure development and nature. Many protected species are found outside of designated areas making area protection not sufficient.

Protection requirements in the case of projects and plans that have significant effects

Species protection

Now that the European Commission is progressing in making the list of Special Protection Areas (SPAs) definite and it also has adopted a first list of sites of Community importance (SCIs) under the Habitats Directive, its further focus is expected to shift more towards species protection.

This subject has, however, not been given adequate attention and the true implications of Articles 12 (animal species) and 13 (plant species) of the Habitats Directive and Article 5 (general protection of bird species) of the Birds Directive for the originators and regulators of port expansion projects, as well as their advisors, remain relatively unknown besides anecdotal evidence.

There are, however, a number of infrastructure works that were halted because protected species were found. Examples are the construction of the A73 motor road in The Netherlands where the snail *Vertigo moulinsiana*, an animal of only 2.5 mm big, caused huge delays and discussions. Another Dutch example is the Sand lizard (*Lacerta agilis*) which prevented the development of a bungalow park in Noordwijkerhout.

The effect of these articles should thus not be underestimated, but what do the articles exactly imply? A fictive example may illustrate the requirements most clearly. Given an old wood processing factory that went bankrupt in the mid 1980s and has been deserted since. The local government wants to revitalize the area and create new jobs by restoring the building, making it a brand new leisure centre.

However, the building hosts a couple of the Grey long-eared bat (*Plecotus austriacus*), a very rare species of the *Microchiroptera* in the area. The species is listed in Annex IV of the Habitats Directive. Because of Article 12, the couple may not be disturbed, let alone its habitat destroyed. The mayor is very disappointed that the project may not succeed, but then he is told that an exception can be made if the project meets a number of requirements which are set in Article 16. At a first glimpse these requirements look rather like the ones from Article 6.4, but there are some important differences. One of the requirements is that in order for the works to take place, the local government has to investigate alternatives: it should not only consider different locations, but it should also assess whether the creation of new jobs and the renewal of the area could be achieved in other ways. If the ecologically best alternative still has an impact on the protected species, the project can

only proceed to the next step if the derogation from Article 12 will not damage the viability of the population of the species concerned and they are thus maintained at a favourable conservation status. The final step before the project gets the green light is then to proof IROPI.

In our example it is very plausible that a satisfactory alternative is found, moreover the population of the bat species would be affected by the works. It is estimated that the total Dutch population of Grey long-eared bat is between 25 and 100 animals (Anon. 2001f). This renders the project one of potential impact, so in this case IROPI can be proven. However, if we would replace the factory in the example with an old barn and the local government with a farmer that desperately needs to rebuild it, none of the requirements would be met.

From the example it is apparent that the requirements of the previously mentioned articles are far reaching and especially in the case of some littoral habitats with a fast succession, i.e. a rapid natural progression from the pioneer situation. Questions are raised here relating to their feasibility. There is even a chance that these hard requirements may lead to unwanted measures, such as the prevention of nature development in areas designated for industry projects.

There remain many questions and uncertainties, such as whether the Bern Convention can be completely disregarded. It is stated that the protection regime of the Habitats Directive is in some aspects less strict than the Bern Convention, especially when the protection of habitat of species is concerned. Article 4(1) of the Bern Convention clearly states that the Parties are obliged to take measures to protect the habitats of the species mentioned in its annexes. Moreover, it is stated in the Convention that the protection of their habitats is essential for the protection of the species.

There is not such a clear provision in the Habitats Directive. In addition, not all species mentioned in the Convention are mentioned in the Directive, what the real implications of this difference are, remain unclear. Existing jurisprudence from The Netherlands indicate that the Habitats Directive must be interpreted in the light of the Bern Convention and must be implemented as far as the Directive is in conformity with the Convention (Anon. 2000a).

There is seldom ground for the direct application of the Bern Convention by the competent authorities. Some uncertainties remain which could well be addressed by forwarding a question to the European Commission. Species protection is a sensitive issue and several nature protection NGOs have not yet started to deal publicly with the issue. English Nature and the Flemish NGO Natuurpunt say that their priority is the protection of sites and action was taken only for few species, this

however without mentioning the exact requirements of the relevant articles.

This cautiousness is meant to safeguard the societal support for nature protection organisations, as the general opinion may oppose to the idea of having infrastructure projects stopped because of a single protected species. Examples in The Netherlands are the interruption of a housing development project because of the Great crested newt (*Triturus cristatus*) and of the Betuwe railway because of the Spined loach (*Cobitis taenia*). These and many other examples caused quite some commotion in the media.

This commotion is particularly obvious for some species whose protection status is not corresponding to their abundance and distribution in certain areas. An example is the Great crested newt, an abundant species in some parts of Flanders, that as a matter of speaking can be found in all freshly dug holes. Many NIMBY ('Not In MY Back Yard') organizations are taking advantage of this situation and are conducting thorough searches in order to find protected species that could prevent unwanted plans or projects to take place. It is apparent that this is not to the benefit of the species nor to the project developers, while these conflicts lead to costly delays, endless procedures and increased societal contrasts.

In spite of the good protection status in international and national legislation there is still a significant decrease seen in the numbers of the protected plant and animal species populations. All this led to the situation now existing in The Netherlands, where the platform of species protecting organisations (PSO) along with the organisation of Dutch project developing companies and the organisation of building companies made a statement to their Minister of State.

In this statement they ask for the urgent designation of key habitat areas, wherefore special planning protection measures are applicable and are set up as a sort of No Go Zone. These areas need to guarantee the survival of the concerned protected species in a sustainable way. With this measure, the protected plants and animals outside these areas are no longer a decisive factor for the viable existence of the species and should thus no longer be used to stop building plans. Specimens found outside of these No Go Zones should however be spared and be compensated for as much as possible (Anon. 2002a).

Notwithstanding the cautiousness NGOs use in applying Articles 12 and 13 of the Habitats Directive, they do feel backed up by them and say that there is not the intention of watering down their requirements. That is why the option of covenants is not appealing to all NGOs. There are other ways which allow all stakeholders to reach a good co-habitation through a pro-active approach.

Examples of this kind are rather exceptional, but one was currently applied in Switzerland.

Blue List

Another would be the establishment of a code of good practice, a sort of technical manual which could guide developers through the different steps which are to be taken in order to properly deal with the issues concerned and which could at the same time give some tips how to help species take advantage of the temporary artificially created habitat.

A good example of the latter comes from the Port of Antwerp where thanks to an agreement between the constructing firm and the local representation of an NGO, a large colony of the Sand martin (*Riparia riparia*) breeds on the rim of a newly created dock. An arrangement was made so that the flanks of the excavation site would be made vertically and that the works would be arranged in such a way that the breeding spots remain untouched during the vulnerable period.

In The Netherlands progress was made with helping developers to deal with species protection. An example of the efforts made is the 'Natuurloket' (Nature ticket window) website, which contains information for constructors and plan developers stating which protected species can be expected on which sites and how their protection status is indicated (Anon. 2002b).

This pro-active approach towards species protection, be it with a manual, with blue lists or even arrangements, all these efforts will not guarantee legal security for the developer. Nonetheless they can be a solid argument in favour once the issue becomes a court case. The challenge lies in finding the balance between meeting the requirements of the Directive, the social support for its consequences and the feasibility of these requirements in an economic environment. In the path of finding this consensus there are many questions left unsolved. To name but one, how will the Commission interpret this? In its follow-up phase the Paralia Nature Project wishes to contribute in this task.

Conclusions

Conclusions species protection

It is expected that species protection issues will develop to be key players in the decision making process of infrastructure projects as the strict requirements of Articles 12 and 13 of the Habitats Directive will increasingly stop infrastructure works. The rigid requirements and the unfamiliarity with them cause great

insecurity among developers as feasibility especially in littoral zones is questioned. This insecurity may lead to unwanted measures such as the asphaltting of industry terrains in order to prevent nature from developing.

It seems that the general public opposes to this as it becomes more aware of the need for, and the legislation of species protection issues. This awareness has also caused that occasionally NIMBY organisations are now exploiting the strict protection status of species in order to prevent building sites to develop in their proximity. However if infrastructure projects with an important public character get stopped because of a single specimen of a protected species the societal support drops steep.

It is apparent from the above that many of these measures are not in the interest of project developers nor in the interest of nature. Solutions in which societal support meets the interests of nature and industry and integrates the requirements of the Directive are thus highly required. Current solutions are pro-active approaches such as the drafting of covenants between industry and nature protection organisations as is seen in The Netherlands, or the principle of Blue Lists, or the prescription of a code of good practise. Although there is no absolute legal certainty about the justness of the application of such instruments in the EU, they are in accordance with the more recent approach of the EUC to develop and implement policies in discussion and interaction with relevant stakeholders. Also it is in line with outcomes from informal workshops at European level on the Bird directive that underline that the protection of individual species in relation to public infrastructure projects should be based on a proportional interpretation of the directives. (Note: P Dapadopoulou, F. Neumann Paralia Workshop on species protection, Brussels 2003/IMI site web www.imiparalianature.org)

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