Guidance document on
The Birds and Habitats Directives in estuaries and coastal zones
A summary
All over the European Union there are hundreds of Europe Direct information centres. You can find the address of the centre nearest you at: https://europa.eu/european-union/contact_en

Freephone: 00 800 67 89 10 11 (certain operators may charge for these calls).

Email via: https://europa.eu/european-union/contact_en

Information about the European Union in all the official languages of the EU is available on the Europa website at: https://europa.eu/european-union/index_en

You can download or order free and priced EU publications from: https://publications.europa.eu/en/publications

Multiple copies of free publications may be obtained by contacting Europe Direct or your local information centre (see https://europa.eu/european-union/contact_en).

The EU Open Data Portal (http://data.europa.eu/euodp/en) provides access to datasets from the EU. Data can be downloaded and reused for free, for both commercial and non-commercial purposes.

Luxembourg: Publications Office of the European Union, 2019

© European Union, 2019

Reuse is authorised provided the source is acknowledged. The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39). For any use or reproduction of photos or other material that is not under the EU copyright, permission must be sought directly from the copyright holders.

doi:10.2779/266973
KH-02-19-071-EN-N

About this leaflet

Estuaries and coastal zones are among the most dynamic and productive ecosystems in the world, with both high economic and ecological values. They hold port and navigation channels, which are of vital interest to handle Europe’s international trade, but estuaries and coastal zones are also of prime importance for wildlife, especially for migrating and breeding birds and of major value in terms of their rich natural resources.

The guidelines summarized here aim to help in reconciling nature protection in estuaries and coastal zones and the need to increase the carrying capacity of ports in order to meet the European transport. They deal with the implementation of the Birds and the Habitats Directives in estuaries and coastal zones, with particular attention to dredging activities and ports development. The target audiences and users of these guidelines are local, regional and national or federal competent authorities, port and waterway authorities, operators, industries, dredging companies and associations, maritime service industry, environmental NGOs, conservation agencies and Natura 2000 site managers.

PHOTO CREDITS
cover: Deva River / M. Perris
page 3: North sea, seagulls / Pxhere
page 4: Wetlands / Pxhere
page 5: Coasts of Great Britain / Pxhere
page 6: Old City Harbour / Port of Tallinn
Policy background

The Birds and the Habitats Directives, the cornerstones of EU biodiversity policy, enable EU Member States to work together within the same strong legislative framework to protect Europe’s most valuable species and habitats across their entire natural range with the EU. Both directives require Member States to designate specific terrestrial and marine sites, which together constitute the Natura 2000 network. The aim of the Natura 2000 network is to assure the long-term survival of Europe’s most threatened species and habitats. Other provisions of the directives include a strict system of species protection as well as monitoring and reporting schemes.

Estuaries and coastal zones are made up of a wide range of different habitat types, most of which are protected under the Birds and the Habitats Directives. The EU nature legislation does not preclude development activities in and around Natura 2000 sites. Article 6 of the Habitats Directive plays a crucial role in the management and sustainable use of the sites that make up the Natura 2000 network. It provides a series of procedural safeguards to ensure that economic development goes hand in hand with nature conservation. It requires that any plan or project that is likely to have a significant negative effect on one or more Natura 2000 sites undergoes an Appropriate Assessment (AA) in accordance with Article 6(3) in order to assess the implications of that plan or project on the site(s).

The following EU environmental directives are also relevant to the development of plans and projects in estuaries and coastal zones:

- The Strategic Environmental Assessment Directive (SEA) - 2001/42/EC - on the evaluation of the effects of certain plans and programs on the environment.
- The Environmental Impact Assessment Directive (EIA) - 2014/52/EU - on the assessment of the effects of certain public and private projects on the environment.
- The Water Framework Directive (WFD) - 2000/60/EC - which establishes a framework for the protection of all surface waters (rivers, lakes, transitional and coastal) and groundwater at EU level.
Issues of concern

Pressures on estuaries and coastal zones
Human activities in coastal and estuarine areas may be very diverse, ranging from urbanization, navigation, or dredging to aquaculture, industry or water extraction. These activities, taken individually or in combination, can potentially generate significant effects on the nature conservation objectives of the areas. Examples of impacts related to waterways and port activities are illustrated below.

- **Dredging operations**: capital dredging, to create, deepen or extend harbours, basins, canals and marinas in order to serve larger ships, maintenance dredging, to maintain existing waterways, harbours and channels; and the relocation of dredged material affect the hydrodynamic regime and geomorphology of the estuary. This may modify the balance and flux of sediments and the localization of habitats composing estuarine and coastal ecosystems (e.g. mudflats or sandbanks). Capital dredging may reverse the trend of estuarine infilling and affect the equilibrium state of the estuary, because deepening an estuary may permit a salt wedge intrusion to travel further upstream, increase shoreline wave action, change tidal range and tidal currents, and suspended sediment load and sedimentation. There are also circumstances where dredged materials can be put to beneficial uses such as increasing sediment supplies to beaches, although care needs to be taken to avoid smothering of important sub-tidal communities. This illustrates the need for careful assessment of hydrodynamic effects in estuaries and coastal waters. Careful design of dredging and relocation of dredged material is an integral part of sediment management schemes.

- **Maintenance activities**: replacement or installation of navigation marks, piles, lights, vessel traffic schemes and moorings, the extension of slipways and jetties, or the maintenance of soft sea walls, flood defences and wave screens may have adverse effects on the conservation objectives in protected estuaries and coastal zones.

- **Port reclamation and land use**: building of new infrastructures (terminals, rail, pipeline, roads, news industries etc) to serve the port may also affect nearby Natura 2000 sites. In certain areas, due to lack of available space, ports may need to reclaim land, which in turn will require nature compensation schemes.
• **Commercial shipping operations:** within ports these include vessel operations and movements, and cargo operations. The movement of ships through estuarine and coastal waters may potentially affect the characteristics of a habitat both through the generation of waves and propeller-induced turbidity in the water column. The effects of vessel movement can either be harmful, e.g. intertidal erosion of estuaries and/or putting sediments back into suspension, or beneficial, e.g. aeration of the water column. Noise (above and under water) associated with shipping can disturb protected marine animals. Cargo handling of dry bulk cargos may cause dust emissions and air pollution, and ballast water may lead to the introduction of alien species. Handling of liquid bulks may require discharge through pipelines, which provides a potential risk for leaks, emissions and spillages. And, last but not least, vessel movement poses a risk of disasters.

• **Industrial complexes:** industrial complexes in port areas may comprise refineries, energy plants, dry and wet bulk hubs and container terminals, and industrial operations, shipping and traffic, each one with its specific impact the environment. Their cumulative effects can lead to adverse ecological effects on nearby Natura 2000 sites.

**Climate change**

Coastal zones are among the most vulnerable areas to climate change as they are vulnerable to sea level rise combined with increased risks of storms, intense rainfall and flash floods leading to widespread damage to built-up areas and infrastructure. Flood protection measures such as dyke construction, land reclamation and other types of sea defences may lead to the “coastal squeeze” phenomenon whereby less and less space is available for natural coastal processes to accommodate eroding forces or adjust to changes such as sea-level rise. “Coastal squeeze” occurs especially in low-lying and intertidal areas, which would naturally adjust to the changes in sea level, storms and tides, but cannot do so due to the human constructions. Innovative measures to prevent coastal squeeze should be taken in estuaries and coastal zones.

Climate change will heavily affect Europe’s natural environment and nearly all sections of society and the economy. Sea-level rise will reduce the sheltering effect of breakwaters and quay walls, but also periods of decreased precipitation in the river catchment areas can lead to lower rates of freshwater run-off and higher sedimentation rates within the estuary.
Key recommendations

The guidelines provide a number of recommendations and elements of good practice covering the following aspects:

Conservation objectives in dynamic environments
The development of conservation objectives for estuaries and coastal areas, protected under the Natura 2000 network, is a real challenge as these areas are very complex and dynamic ecosystems. Before setting conservation objectives, it is important to understand how such complex ecosystems function, how they evolve “morphologically” and how they may be influenced by anthropological pressures and climate change. The physical processes and morphological evolution of the specific estuaries and coastal zones should be investigated in detail. A best available and sound scientific knowledge should be established by competent authorities as a basis for the establishment of nature conservation objectives for such ecosystems.

Conservation objectives and measures should be based on the assessment of the local conservation status of protected habitats and species, the relative importance of the site for the coherence of Natura 2000 and for the maintenance or restoration, at a favourable conservation status of such habitats and species. Port and waterway authorities should be consulted in the early processes of the development and implementation of conservation measures for those Natura 2000 sites situated near ports or connected with navigational access. Conservation objectives should not be static; on the contrary, they need to be adapted to the actual evolution of the conservation status of species and habitats and to the evolution of other ecological factors in a complex and dynamic environment.

Integrated planning
Management plans are recommended for Natura 2000 sites but not mandatory under the Habitats Directive. However, they create opportunities to reconcile sustainable economic development, safety issues and accessibility with the nature conservation objectives.

Spatial planning and integrated management can help achieve implementation of conservation measures on the sites and greater legal certainty for port development projects. Integrated planning is a way to look for synergies and complementarity; it provides a tool to promote social responsibility and sustainable development. It should help to avoid paradoxes, conflicts, and ultimately competition for space. Integrated spatial planning, submitted to strategic environmental assessment should be applied whenever possible as a way for anticipating difficulties and adverse environmental impacts and avoiding potential conflicts and delays in project development. Spatial planning should make a clear distinction between the strategic level and the project level. Assessments at the strategic level can be simplified when the consideration of mere project-related details is avoided.
The national, regional and local competent authorities responsible for the Natura 2000 site management should work in close cooperation with the authorities in charge of spatial planning. All relevant stakeholders including port and waterway authorities, terminal operators, environmental NGOs and other public stakeholders should be involved from an early planning phase, with the objective of reconciling social and economic interests with nature conservation objectives in or nearby Natura 2000 sites. Cumulative effects of projects should be identified and assessed already in the elaboration of spatial plans.

**Project development and maintenance activities**

The design of plans or projects should always be based on mutually beneficial strategies with a view to achieving dual goals of both Natura 2000 conservation objectives and socio-economic objectives, according to the ‘working with nature’ concept.

- **Damage prevention or avoidance measures** should always be preferred to compensation measures.
- **Pre-assessments** to evaluate the potential for impact of a plan or project on Natura 2000 sites should always be foreseen. This is necessary in order to decide whether a plan or project is likely to have significant effects on a Natura 2000 site and whether an ‘appropriate assessment’ in the sense of Article 6(3) of the Habitats Directive is required.
- **Thorough and timely stakeholder consultation** is always recommended in order to prevent the raising of objections during the project permitting process.
- **Specific guidelines** on the provisions of Art.6.3. are available online, together with those relative to the provisions of art.6.4 of the Habitats Directive, which should be applied where damaging developments are, in the absence of alternative solutions, to be allowed to proceed and when there will be a need for **compensation measures** to fully offset any loss or damage to the site.
- Maintenance of ports and navigational access should be dealt with in the context of **integrated management plans** for the entire waterway or the affected Natura 2000 site. Capital dredging operations should be designed as a part of sustainable dredging and sediment management schemes.
- Maintenance operations in or near a Natura 2000 site should be specifically designed for each estuary or coastal zone and underpinned by a **monitoring scheme** that enables the detection and timely correction of unforeseen adverse effects on conservation objectives.

- In order to deal with any unexpected effects of a plan or project or lack of effectiveness of the related mitigation or compensatory measures, a validated framework has to be put in place in order to monitor the actual impacts and adapt the mitigation and compensation measures as appropriate.

**Guidelines for Natura2000 management plans**

Integrated management plans should be established for Natura 2000 sites, in particular for sites that are adjacent to port operations or other industrial activities.

Port and waterway authorities should be actively involved in the setting up of management plans for Natura 2000 sites near ports and related waterways.

Strategic port plans, WFD river basin management plans and Natura 2000 management plans should be coordinated and where possible integrated, so as to fully benefit of potential win-win situations.

Recurring maintenance activities necessary to facilitate port operations and navigational access should be integrated into the management plans and designed in a way that they are not detrimental to the conservation objectives of the site.
For further reading

EC Guidance Document on “The implementation of the Birds and Habitats Directives in estuaries and coastal zones”

Guidance documents on the Appropriate Assessment procedure and the provisions of Article 6(3) and (4) of the Habitats Directive are available at the Commission’s Natura 2000 website:

Frequently asked questions on Natura 2000:

Working towards creating synergies between the WFD, MSFD and the Habitats and Birds directives:
