Guidance document on Inland waterways transport and Natura 2000
A summary
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Luxembourg: Publications Office of the European Union, 2018

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ISBN: 978-92-79-93564-0
doi:10.2779/784164
KH-03-18-289-EN-N

About this leaflet

Inland waterway transport (IWT) is considered to be a safe, energy efficient and relatively environmentally friendly mode of transport. The EU has recognised the great potential of IWT already for some time and acknowledges its important role in the whole transport system.

Like all other river users, inland waterway development and management operates within the framework of EU environmental laws, which include the Birds and Habitats Directives (so called “Nature Directives”) as well as the Water Framework Directive (WFD). This leaflet represents a summary of a guidance on inland waterways transport and the implementation of the two Nature Directives which was developed jointly by the European Commission services on environment and transport in 2012.

The guidelines have been elaborated to provide guidance on how best to ensure that activities related to the development and management of inland waterways are compatible with EU environmental policy in general and nature legislation in particular. It can be useful for competent authorities and developers as well as impact assessment consultants and Natura 2000 site managers. The full text of the guidance document is available on the website of the European Commission Directorate General Environment.

PHOTO CREDITS
cover: Rhine-Herne Canal / Pxhere
page 4: Danube, DOE water corridor / Jaroslav Kubec
page 6: Ruhr area, waterway/ Pexels
page 7: Boat cargo / Pexels
The EU policy framework

Inland waterways play an important role in the transportation of goods across many parts of Europe. Each year, over 500 million tons of commercial goods are transported in this way. Through a navigable network of over 40,000 km of waterways, inland waterways connect industrial hubs and commercial centres to one another and provide vital access to the sea.

A central pillar of the EU’s transport policy is the Trans-European Transport Network (TEN-T) established to provide a single, multimodal network that integrates land (including inland waterways), maritime and air transport networks throughout the Community. The Connecting Europe Facility (CEF) is the funding counterpart of the TEN-T regulation, providing a budget of 32 billion EUR for transport.

Article 8 of the TEN-T guidelines stipulates that when projects are developed and carried out, their environmental impact must be assessed through environmental assessments, or appropriate assessments under the Birds and Habitats Directives.

The overall objective of the two EU Nature Directives is to conserve Europe’s most valuable and endangered habitats and wildlife, including those that are dependent on rivers. Central to the two Nature Directives is the Natura 2000 network, which protects core sites for the species and habitat types listed in the Annexes. The WFD, on the other hand, aims at reaching a good ecological status for EU waters, in terms of quality of the biological community, hydrological and chemical characteristics. This legislation is not aimed at preventing new plans or projects but it requires that any new developments are undertaken in a way that safeguards EU biodiversity and water resources.

Europe’s rivers: an important resource

In the EU there are around 50 main rivers, 20 of which have catchment areas larger than 50,000 km². Each one also supports an important network of tributaries. Rivers are an important multi-functional resource for Europe’s economy and social well-being, servicing a large number of different sectors.

Healthy river ecosystems deliver many important goods and services. They provide important source of freshwater and act as purification centres, removing excess nutrients and pollutants from the water course and the surrounding catchment area. They prevent erosion and retain soils, nutrients and sediments and are a vital natural buffer against floods. Healthy natural rivers and their associated floodplains host a remarkably rich biodiversity, providing important habitats for a significant number of Europe’s wild fauna and flora species, including highly endangered species listed in the Birds and Habitats Directives.

Altogether, lake and river ecosystems cover around 4% of the surface of the Natura 2000 network (EEA, 2010). They have been designated as Natura 2000 sites for a range of freshwater habitat types and species listed in the two Nature Directives. These include high profile species such as the Atlantic salmon (Salmo salar), otter (Lutra lutra) or kingfisher (Alcedo atthis) as well as lesser known species such as the white-clawed crayfish (Austropotamobius pallipes), the thick-shelled river mussel (Unio crassus) or the European pond turtle (Emys orbicularis). It also includes a number of threatened types of water courses and associated habitats such as riparian and alluvial forests, wet meadows, humid grasslands and fens.

The multiple usages of many of Europe’s rivers have put immense pressure on this valuable resource over the last 150 years, with the result that only very few stretches of these lowland rivers are now in a natural or close to natural state. Urban development, flood defence, power generation including hydropower, inland water navigation, straightening and land drainage for agriculture affect the hydro-morphological status of water bodies to the highest degree. The most recent assessment of the state of
Europe’s rivers concluded that around 40% of all EU water bodies were in an impoverished state.

Rivers are also facing new challenges such as climate change and invasive alien species. There is increasing evidence that climate-induced changes in ice cover periods, river discharge regimes, thermal stratification, nutrient availability and the duration of growing seasons will affect species composition and food web structures in rivers ecosystems. It also could lead to major changes in water flow regimes in rivers.

According to the 2015 “State of Nature in the EU” report freshwater fish and habitats are of particular concern, with around 75% of freshwater habitats at an unfavourable-inadequate conservation status and many species associated with freshwater habitats, such as migratory fish, declining to a worrying extent. Significant pressures from changes in agriculture and continuing changes in hydrological conditions, need to be tackled to reverse these trends.

The types of possible negative effects an inland waterway development project may have on habitats and species protected under the EU nature directives include:
- **Habitat loss, degradation and fragmentation:** e.g. direct physical destruction of habitats, disruption of natural hydromorphological processes, sediment balances and nutrient cycles, preventing waterlevel fluctuations, seasonal flooding, and straightening of river courses.
- **Species disturbance and displacement:** noise, water turbidity, pollution, human presence, sedimentation or regular movements (e.g. wave action and propeller suction)
- **Barriers to migration and dispersal:** e.g. dams and impounded areas which present physical barriers to fish migration, or artificial canals which can act as barriers to species movement by fragmenting terrestrial habitats.
- **Pollution:** e.g. from ship waste, bilge water or, very rarely, accidental spills.

Experience has shown, however, that modern inland waterway development methods can play an important role not only in mitigating the potential negative effects of new developments but also in helping to actively improve the ecology and natural functioning of such regulated rivers in a way that benefits both the river and the river users, including inland waterway transport. Within the context of these new methods, new projects can be designed to take account of the main natural functions of river systems and wherever possible aim to maintain or restore these key functions.
The importance of integrated planning

Recognising the need for a more holistic and integrated approach to project planning that reconciles sometimes conflicting interests, more and more infrastructure planners are now adopting a new approach to project planning and design. It is one that considers both the infrastructure and the ecological needs together with other land uses of the river at the outset and factors these into the initial project design. It also promotes a more interactive and transparent planning process and encourages the active assistance and input from ecologists and other stakeholders right from the outset.

Whilst it is true that preparing and executing such an integrated planning process may require a more substantial initial investment, there is increasing evidence to show that this type of approach almost invariably delivers substantial benefits that far exceed the initial extra investment required.

Integrated planning can be more cost effective in the long run, lead to more holistic solutions that can serve various sectoral interests and needs at the same time, as well as improve cross-sector communication and promote the development of new, creative and innovative solutions, which are unlikely to have been explored under the more classic sectoral approach to project planning, and contribute to an improved public image of the project and the institutions responsible.

It is for these reasons that the European Commission strongly recommends the use of the integrated approach for planning inland waterway projects, especially when applying for (co) financing under EU programmes such as the TEN-T, structural or cohesion funds, and, as of 2014, the Connecting Europe Facility.

Good practice example: Living Rhine

The Rhine is both the largest inland waterway in Europe and an outstanding river habitat connecting rivers and wetlands between the Alps and the North Sea. There are approximately 200 Natura 2000 sites along the river. The large-scale loss of natural hydromorphological structures and dynamics triggered two consecutive NGO led projects (2003-2010) to revitalise degraded river sites along the Rhine waterway. These were initiated under the name ‘Living Rhine – River of Thousand Islands’ led by the German NGO NABU (BirdLife) and developed step-by-step through trust-building and intense cooperation between environment and transport interest groups (including the establishment of joint advisory boards made up of NGOs, waterway and government experts).

Over the entire project period, 15 local projects were planned and 7 have been implemented so far. Funding came from various public and private foundations, businesses as well as the EU LIFE and Interreg IIIb funds. They were financed and executed by federal and local administrations as well as NGOs. The projects include, for instance, the removal of various bank protections, the reconstruction of groynes and restoration of side-channels. A monitoring programme to verify the impact of the restoration measures and a communication strategy helped also secure wide public awareness and political support for this initiative.

More information on: www.lebendiger-rhein.de
Carrying out an appropriate assessment

Strategic planning and integrated management approaches based on the concept of ‘working with nature’ can do a lot to help find win-win solutions for reconciling different societal needs. They should also facilitate the environmental approval procedure of the plan or project of IWT developments likely to have a significant (negative) effect on a Natura 2000 site.

EU nature legislation 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) of the Habitats Directive to assess the implications of that plan or project on the site(s).

The procedure laid out in Articles 6(3) and 6(4) must be carried out in sequential order. Every step determines whether a further step in the process is required. For instance, if after the screening it is concluded that there will be no negative effects on the Natura 2000 site, then the plan or project can be approved without the need for further assessment.

The steps are as follows:

- **Step one: screening** – this initial step is to determine whether a plan or project has to undergo an appropriate assessment or not. If it is likely to have a significant negative effect on a Natura 2000 site, then an appropriate assessment is required.
- **Step two: appropriate assessment** – once it has been decided that an appropriate assessment is required under Article 6(3), a detailed analysis must be undertaken of the effects of the plan or project, alone or in combination with other plans or projects, on the integrity of Natura 2000 site(s) in view of its conservation objectives. If the appropriate assessment concludes that there is an adverse effect on the integrity of the site (despite the introduction of mitigation measures) then the competent authorities must refuse the plan or project or apply the derogation procedure under Article 6(4).
- **Step three: exceptional cases** – Article 6(4) provides for derogations to Article 6(3). Thus, if it is concluded that the plan or project would have an adverse effect on a Natura 2000 site, it can still be approved in exceptional circumstances provided the conditions of Article 6(4) are met.

Article 6(4) requires that the competent authorities ensure the following conditions are respected before granting derogation for a plan or project:

- The alternative put forward for approval is the least damaging for habitats, for species and for the integrity of a Natura 2000 site, and no other feasible alternative exists that would not affect the integrity of the site.
- There are imperative reasons of overriding public interest that justify the authorisation of the plan or project, including those of a social or economic nature.
- All compensatory measures required to ensure the protection of the overall coherence of the Natura 2000 network have been taken.
Two other key pieces of EU environmental legislation are directly relevant to IWT developments:
• Directive 2001/42/EC on the evaluation of the effects of certain plans and programmes on the environment (commonly referred to as “SEA Directive”);

Whilst these assessments are very often carried out together as part of an integrated procedure, each assessment has a different purpose and assesses impacts on different aspects of the environment. A SEA or an EIA cannot therefore replace, or be a substitute for, an appropriate assessment.

The relationship among relevant directives

There are a number of other EU environmental laws, in addition to the Birds and Habitats Directives, which are relevant to inland waterway transport. They concern in particular the Water Framework Directive (WFD), the Strategic Environmental Assessment Directive (SEA), the Environmental Impact Assessment Directive (EIA) and the Flood Risk Directive.

WFD: it is clear that there are strong links between the WFD and the Birds and Habitats Directives. They both operate at least in part on the same environment – that of aquatic ecosystems and terrestrial ecosystems and wetlands directly dependent on them – and they have broadly similar ambitions in terms of aiming to ensure the non-deterioration of the rivers and to enhance the ecological condition of these aquatic ecosystems.

There are clear references in the WFD to the Birds and Habitats Directives which ensure full cross compliance between them (Articles 4(1)(c), 4(2), 4(8), 4(9), Article 6 and Annex IV, Article 8 and Annex V (1.3.5), Article 11(3)(a), and Annexes VI and VII of the WFD).

Article 6 calls on Member States to establish a register of all areas lying in each river basin district which have been designated as requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water. This includes areas designated as Natura 2000.

Article 8 requires that programmes for the monitoring of water status are developed in order to establish a coherent and comprehensive overview of water status within each river basin district. Thus, there is considerable opportunity to coordinate with the Natura 2000 monitoring programmes focusing on status of species and habitat types.

Article 11, which outlines the contents of the programme of measures, also requires that measures are included for the implementation of the Birds and Habitats Directives, in so far as these measures are needed for those protected species and habitats, covered by the two directives, which are directly dependent on water.
For further reading


White Paper on Transport:

TEN-T Regulation (EU) No 1315/2013

Environmental Impact Assessment Directive (EIA)

