Council of Ministers

INLAND WATERWAYS AND ENVIRONMENTAL PROTECTION

Summary

This document relates to item 5 “Points for Formal Decision” of the Agenda for the Dublin Council of Ministers. Ministers took note of the report and the actions recommended.

The Council endorsed submission of the report to the Pan-European Conference on Inland Waterway Transport to be held in Bucharest on 13-14 September 2006.
INLAND WATERWAYS AND ENVIRONMENTAL PROTECTION

SUMMARY

The environmental impacts of inland waterway development

Inland navigation can contribute to making transport more sustainable, particularly where it substitutes for road transport, but inland shipping and especially the development of waterways for navigation can have considerable environmental impacts. Waterway development works for inland navigation can have significant impacts on the ecological value and water quality of water bodies. The nature and extent of the impacts depend on the kind of works concerned and, to a large degree, on the characteristics of the water body itself. The kinds of mitigation techniques that can be employed can also differ markedly, for example between sections of river with rocky bed and banks, and reaches with sandy or muddy bottoms situated in flood plains. In some cases new works for navigation can be designed to improve water quality or biodiversity and create valuable habitats.

Hydromorphological pressures

Foremost among the potential impacts are hydromorphological pressures. Altering the shape of river courses to improve navigation affects bottom and bank characteristics and the dynamics of sediment transportation. Effects can spread up- and downstream over many years. Without careful attention, alterations can interfere with communication between the main channel, side branches and backwaters. Permanent changes to water levels and flows affect the whole river valley bottom and notably the ecology of floodplains. Although it is often difficult to separate works strictly necessary for navigation from those designed for flood protection, navigation works tend to be designed to stabilise channels in both space and time. This constrains the natural dynamics of the river that create and renew transitory habitats that can be of intrinsic ecological value. Thus impacts on biodiversity can be substantial.

EIA must cover all impacts

Dredging sometimes has severe impacts, especially when sediments are contaminated with industrial discharges. Bank reconstruction can completely transform or remove habitats. It is essential for environmental impact assessment (EIA) to cover all of these pressures.

Avoiding damage

In many cases civil engineering works can be designed to minimise impacts, but hydromorphological pressures are sometimes unavoidable. Their ecological impacts are often site-specific and not always well understood. In some cases impacts may be negligible but often significant ecological damage can result. Hence there is a need to identify risk areas at a strategic planning level, and employ a detailed EIA at the project level when works are planned in these areas. Governments need to be ready to support research in cases where little or no information on hydromorphology and ecosystems is available.
Reconciling the promotion of navigation and environmental protection

**Early consultation**

Careful design can often mitigate impacts, and in several case studies it allayed concern over the environmental impacts of investments in infrastructure for inland navigation. Early consultation with environmental stakeholders, and indeed all stakeholders, is important in ensuring that such solutions are found. It is equally important to reach a common understanding of the issues and foster a co-operative search for solutions if the environmental impacts of a project prove not to be amenable to conventional mitigation approaches. In the case studies examined, all conflicts identified stemmed from failure to involve environmental stakeholders early enough in project planning. Expensive procedures were then required to seek compromises after lengthy and costly delays.

**Strategic planning at river basin level**

Strategic plans for the development of river basins that integrate economic, social and environmental imperatives could facilitate consensus building on individual development projects. The Water Framework Directive (WFD) provides a strategic planning basis for this in terms of water quality objectives, and has created a valuable tool through the establishment of river basin management plans. The Birds and Habitats Directives and Natura 2000 sites operationalise the strategic imperative to preserve sites of international importance to wildlife. There are no equivalent legal instruments to direct the development of inland navigation. Preparation of inland navigation development strategies in parallel with the river basin management plans of the WFD might provide the missing strategic basis for addressing conflicts between the interests of navigation and the environment. The report submitted to Ministers, CEMT/CM(2006)17, recommends that shipping and environmental protection authorities work together to produce strategies for the environmental protection and development of inland waterways at the river basin level.

**Pan-European considerations**

Pressure to increase profitability together with safety concerns lead industry to argue for large, deep channel dimensions to be provided wherever possible. At the same time industry generally recognises the need to protect the environment and the constraints this may impose on the development of navigation channels. Governments seek to promote the development of more pan-European inland shipping. This might be pursued through establishing a large standard channel specification for all international waterways but an alternative approach built up from river basin development strategies appears more likely to succeed than imposing uniform standards. Basin-wide strategies would need to take inter-basin traffic into account where river basins are interconnected but have the potential to make the different local, regional and pan-European dimensions more transparent.

**SEA and multi-modal corridor assessment**

The ideal strategic planning framework would include strategic environmental assessment (SEA) covering transport on the basis of multi-modal transport corridor analysis, along with non-transport demands.
on the waterway (for hydropower production, flood protection, irrigation, industrial use, drinking water abstraction and waste discharge). The relatively recent discipline of incorporating multi-modal corridor analysis in transport SEA is examined in detail in the report *Assessment and Decision Making for Sustainable Transport* published by ECMT in 2004. Transport ministers adopted a resolution and guidelines on good assessment in 2003, which were endorsed by environment ministers by an Act of the OECD Council. In the short term, however, a narrower focus on just navigation and environmental protection might be appropriate, as explained below in the next paragraph.

**Conclusions**

**Priority action**

*Strategic framework for the Danube River*

The report submitted to Ministers concludes that a strategic vision for protection and development of the Danube River is urgently required. Most of the waterway development projects entailing unresolved environmental issues are located in the Danube basin. Moreover, the planning and consultation procedures and the capacity for public administration and governance tend to become weaker as one travels down the Danube. Some of these weaknesses could be addressed by a structured dialogue between government, environment and industry stakeholders that aims to produce a consensus statement on inland waterway transport in the Danube basin. The focus of this work would be narrower than the ideal planning framework discussed above and concentrate solely on inland navigation (and not cover other uses of the river or other modes of transport). This would facilitate completion in good time to influence the River Basin Management Plan for the Danube, which has to be completed in 2009 to satisfy the requirements of the Water Framework Directive.

*Bucharest 2006*

The International Commission for Protection of the Danube River and the Danube Commission are in a good position to take a joint lead in the preparation of the consensus statement, under the guidance of a steering group consisting of high level representatives of the relevant stakeholders. The aim will be to complete the consensus statement by the end of 2007. Ministerial endorsement for this proposal will be sought at the Bucharest Pan European Inland Waterway Transport Conference in September 2006.

**Other conclusions**

*Involvement of NGOs and the public*

The fundamental conclusion of the report submitted to Ministers is that prompt and successful decision making depends critically on the way the involvement of the public, environmental and industry stakeholders is organised, and especially on engaging with stakeholders early. This applies not only to the preparation of specific projects but also to the process of strategic planning.
Existing SEA and EIA procedures, at both EU and national level, require public consultation, but not necessarily public participation. The UN Aarhus Convention and associated EU directives deal with the right of the public to be informed, to have the opportunity to make comments and to have access to justice, rather than with public participation in the process of defining objectives, alternative solutions, boundary conditions and priorities. Moreover, SEA and EIA procedures generally require formal public consultation only after preparation of a project proposal or development plan. Experience and practice in several of the projects examined show that assessment procedures, as well as the probability of arriving at a workable solution within a reasonable time, greatly benefit from early involvement of project beneficiaries and environmental stakeholders, who thus take on “ownership” of the problems involved and feel accountable for and committed to finding integrated solutions. This requires a highly participative and integrated approach: an open planning process where all stakeholders (government agencies, private sector, NGOs, public, etc.), from the early stages of preparation onwards, play an active role and jointly develop commitment to the project.

Finally, the report singles out dredging operations for particular attention. Often waterway and port authorities inherit problems associated with polluted sediments when they were not responsible for the pollution that caused the contamination. A legal and procedural framework must be developed for ensuring that channel excavation for waterway development and maintenance dredging can be planned and executed while a) respecting the strict national and European regulations on polluted sediments and b) applying the polluter pays principle. This will take time. In the meantime it is essential that inland navigation is not burdened with the excess costs of handing polluted sediments, compared to the cost of dredging uncontaminated sediments. The International Commission for the Protection of the Rhine began work in 2005 on a strategy to manage sediments for the Rhine and its tributaries. The results should serve as a basis for developing a Europe-wide strategy on managing polluted sediments.

NOTES

1. By-passing meanders, straightening of main channels, raising or lowering of water levels etc..
2. Resolution 2003/1 on Assessment and Decision Making for Sustainable Transport.