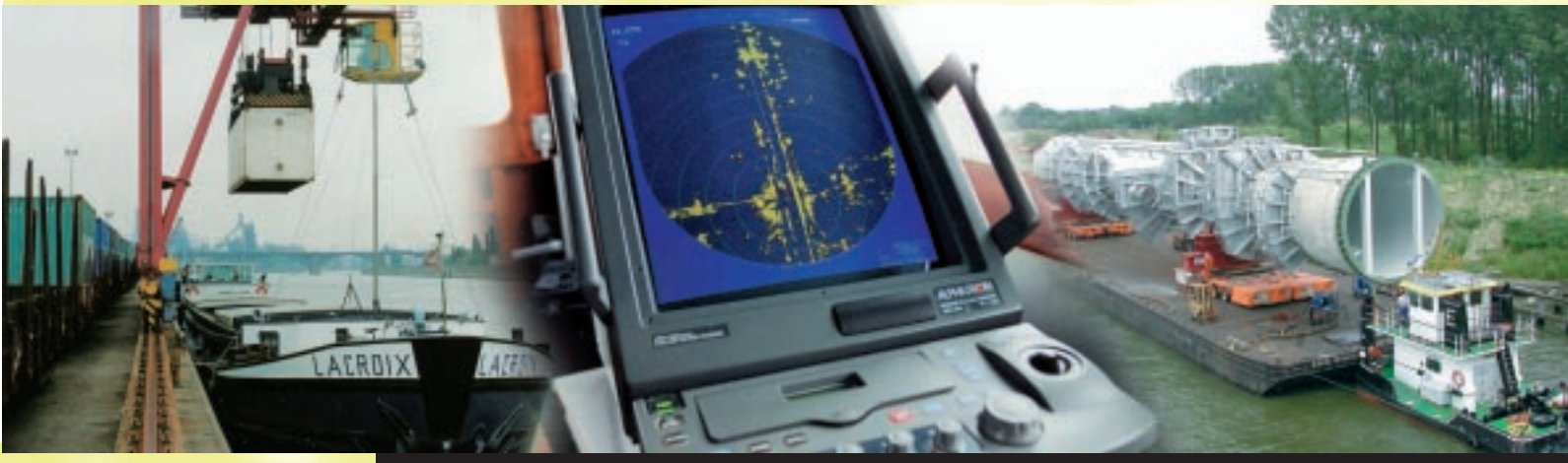
INLAND WATERWAY TRANSPORT



a transport solution that works

The European Union has for some time recognised the great potential that Europe's inland waterway network has for freight and passenger transport. Inland waterway transport is often cheaper, more economical, reliable, and better for the environment than Europe's most popular choice of transport – the road. It is also a fast-changing, modern mode, offering a range of services and facilities to potential customers.

As a result, the European Commission is keen to boost the use of waterways. At the same time, it wants to make Europe's rivers and canals a key part of the European intermodal transport system, as set out in the Commission's 2001 White Paper, ***European transport policy for 2010: time to decide***. As part of this concept, the Commission hopes to link the waterways into rail and short-sea transport systems, providing an accessible, economical, safe and environmentally friendly alternative to the unsustainable and congested road network.

Inland waterway transport

- Inland navigation carries 12 % of the freight in the EU Member States with inland waterways
- The industry is constantly growing (17 % in the last 10 years)
- Industry and network will considerably increase with the enlargement of the EU

Why it offers value

- Transport by inland waterway is reliable, 'just-in-time', and congestion free
- The use of inland waterways is cheap, economical and environmentally friendly

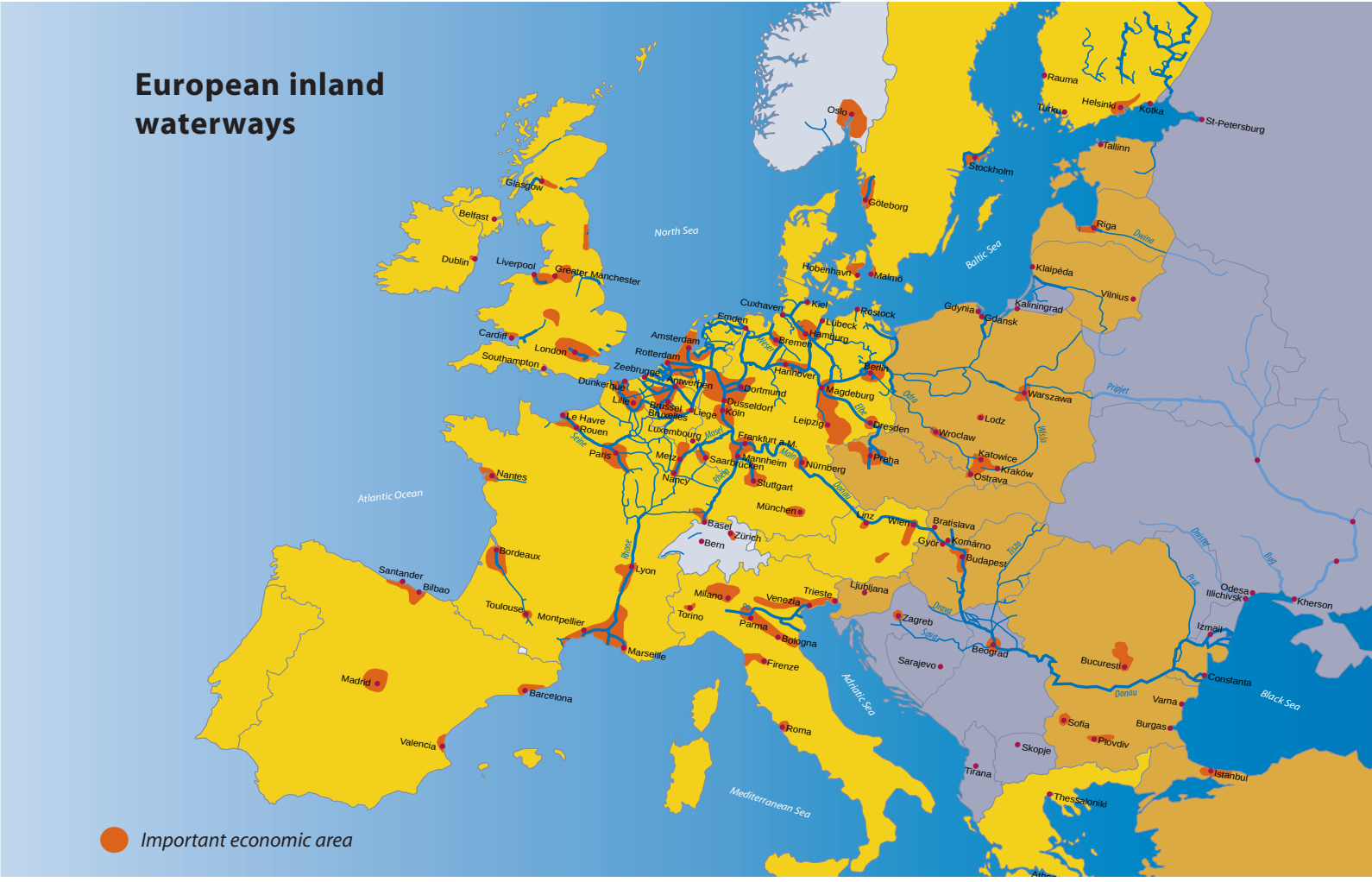
A modern mode

- Over the past 10 years, the fleet has continuously been modernised
- It offers high safety standards and up-to-date navigational equipment

EU aims

- To improve integration of inland waterways into the European transport system
- To create favourable conditions for the further development of the sector
- To encourage businesses to use the mode

EUROPEAN COMMISSION



EUROPE'S INLAND WATERWAYS

Europe has over 30 000 kilometres of canals and rivers that link together hundreds of key towns and areas of industrial concentration which are already providing safe and reliable services to freight businesses and, to a lesser extent, passengers. The core network links the Netherlands, Belgium, Luxembourg, France, Germany and Austria via a myriad of easily accessible rivers and canals, carrying cargo such as heavy materials, bulk industrial goods, building products, containers, oversized loads and waste. And although the arteries of this network include large rivers such as the Rhine and Danube, many smaller towns, villages and industrial areas are also easily accessible by numerous tributaries and canals. Smaller networks exist in other Member States.

Several hundred inland ports and landing stages along the network provide access and links with other modes of transport. The ports offer efficient and reliable services, and all the necessary logistical support that businesses need to get their goods to their final destination. Their position, at the heart of Europe's trading routes, means they are perfectly placed to offer intermodal connections to road, rail and sea lanes.

Despite the availability of this dense and flexible network, there is still a massive amount of capacity on the waterways that is not being exploited. Freight transport by inland waterways accounts for 7 % of total inland transport – 125 000 million tonne-kilometres in 2000 – whereas road and rail carry 74 % and 14 % respectively. (Bearing in mind that only half of the EU Member States have interconnected navigable inland waterways). In some regions and the hinterland of seaports, such as Benelux and northern France, 'modal share' of inland waterway transport is much higher and can reach up to 43 % (in terms of tonne-kilometres).

A thoroughly modern mode

Although investment in waterway infrastructure may have suffered over the past 20 years, shipping firms and the profession have been committed to improving the fleet that uses Europe's inland waterway system. As a result, much of the fleet is now designed to carry a variety of different cargoes. The fleet is equipped with modern navigational and safety systems and highly trained staff. This is also due to the market liberalisation and the fleet capacity policy, which the EU has successfully pursued over the last decade to promote inland waterway transport. It means that the industry has well and truly moved away from the old-fashioned 'coal barge' image. As a result, more freight is moving off the roads, resulting in recent growth for the waterways industry. New freight markets have emerged, such as the transport of dangerous, chemical, refrigerated and high-value consumer goods, as well as increased passenger services. One important recent trend has been the increase, especially since 2000, of container transport. Further growth is expected in the container sector as more and more businesses realise the value of inland waterway transport within the supply chain.

As part of the White Paper's strategy, the Commission is committed to further assisting the sector in adapting to new market needs. For example, it wants to bring more harmonisation in the technical standards of vessels throughout the Community's inland waterway network.

The Commission is also encouraging the deployment of modern information and communication technologies, especially aimed at improving traffic and transport management on the inland waterways. River information services (RIS) have been developed as part of the EU research project Indris, and are now being deployed on the inland waterway network. RIS is an information service that can be accessed via telephone or the Internet providing up-to-date information about fairway and traffic, the voyage, and port and terminal operations. This streamlined information exchange will make navigation more efficient.

New design adds value

Vessel design and technology is constantly being developed by shipping firms keen to improve travel times, or to reach less accessible canals and rivers. In 2002, the Dutch firm Riverhopper launched a new design of pallet-carrying vessel capable of transporting and sorting 680 standard pallets while at the same time small enough, at 63 m long and 7.2 m wide, to navigate even some of the smallest canals around the Dutch region. The ship is designed to be unloaded and loaded speedily and, as it is fitted with a modern engine, it is also economic and environmentally friendly.

Efficient, reliable and safe

Using the inland waterways to transfer goods offers value to customers because of its low costs and **efficient** operations. Most vessels can transport 127 tonnes of freight per litre of fuel, in comparison to 97 for rail and 50 for road. This is partly because inland waterway vessels use the natural flow of waterways, together with engine power to provide propulsion. Also, because of their sheer size they offer economies of scale that road transport cannot provide.

Inland waterway transport also provides an advantage in terms of **reliability**, because it does not suffer from the same congestion problems that currently restrict the roads or rail. On the major part of the network, navigation can take place 24 hours a day, seven days a week, offering complete flexibility of travel.

As a result, shipping firms can send out ships without having to plan in a delay factor, safe in the knowledge that goods will still reach their destinations on time. This is particularly useful considering recent trends in goods transport which have seen customers demanding that hauliers provide a 'just-in-time' service.

Safety is also a main asset of inland waterway transportation. Vessels are required to comply with the most stringent of standards and regular tests by classification societies and shipping inspectors.

Reducing road use

The reliability and flexibility of service that inland waterways offer has encouraged Dutch steel company Corus Staal to transport its products from Ijmuiden down the Rhine or the North Sea canal rather than use the roads. As a result, it now transports to the Ruhr region and France exclusively by inland waterways and has reduced its use of road haulage by 7 000 trucks per year.

Vessels equipped to carry dangerous goods or liquid chemicals are specially designed with safety as a priority and often built with a double hull. Many are fitted out with fume extraction equipment, so that any dangerous fumes emitted from the cargo tanks can be extracted before they come into contact with the air.

The number of accidents in inland waterway transportation is extremely low. In the event of an accident, damage to personnel and material is very limited. Therefore, the industry offers customer safety margins that cannot be matched by other modes. This is also good news in a commercial sense, as a good safety record merely add to the mode's overall reliability for users.

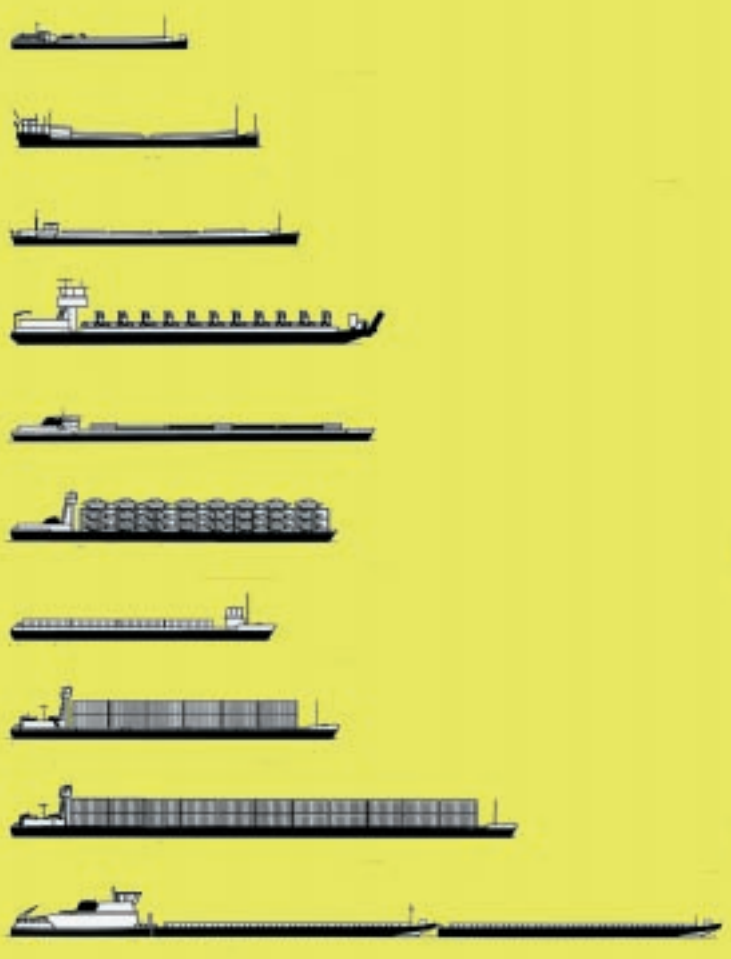
Sustainable, clean and quiet

Many of Europe's firms are now looking to boost their 'green' credentials, and moving their transport needs to inland waterways can offer positive results in terms of public and customer perception of how they conduct their activities.

A Commission study into the cash spent on the socio-economic costs of various types of transport – such as accidents, air pollution, climatic change, noise pollution, congestion, effects on the countryside and the urban environment – revealed that road transport accounted for 91.5 % of the costs, air transport for 6 %, rail transport for 2 %, but inland navigation a tiny 0.5 %.

Together with its low fuel consumption, this makes inland waterway transport one of the most sustainable forms of transport. Emissions in particular are dropping even further as newer vessels are introduced with more efficient engines. As a result, emissions caused by inland waterways have dropped by a quarter over the past 20 years. In this context, the carbon dioxide emission forecasts for the inland navigation sector could well meet, and probably even exceed, the Kyoto targets. The Commission will reinforce these developments by including emission standards for inland waterway vessels.

Therefore, choosing inland waterway transport will improve the sustainability of the European transportation system.



Spits - Peniche: length 38.50 m / width 5.05 m / draft 2.20 m / loading capacity 350 t

Kempenaar - campinois: length 63 m / width 6.60 m / draft 2.50 m / loading capacity 550 t

Dortmunder: length 67 m / width 8.20 m / draft 2.50 m / loading capacity 900 t

Ro-Ro ship: length 110 m / width 11.40 m / draft 2.50 m

Tank ship: length 110 m / width 11.40 m / draft 3.50 m / loading capacity 3,000 t

Car Ro-Ro vessel: length 110 m / width 11.40 m / draft 2.20 m / loading capacity 600 t

Neo Kemp: length 63 m / width 7 m / draft 2.50 m / loading capacity 32 TEU*

Container ship: length 110 m / width 11.40 m / draft 3 m / loading capacity 200 TEU*

Container ship Jowi-class: length 135 m / width 17 m / draft 3 m / loading capacity 470 TEU*

Push convoy (with 4 barges): length 193 m / width 22.80 m / draft 2.50 / 3.70 m / loading capacity 11,000 t

** TEU= Twenty-foot Equivalent Unit*
Source: INE

Intermodality – making links that work

Inland navigation has the potential to be one of the most intermodal forms of transport due to the fact that – apart from direct factory-to-factory transports – in general, one or two transshipments are necessary. The shipping industry has made a virtue of necessity and is continuously adapting its logistics. Its success can be seen in the growth in container transport over the past few years. Inland ports on the waterway network offer logistical solutions, acting as 'nodal points' for customers' supply chain needs. And the industry is well aware of the growing opportunity to attract more users. The European Federation of Inland Ports points out that: '...further growth in the container sector is likely and inland ports will continue their investment efforts in this field in order to further improve their position in the transport market.'

Improving intermodality means speeding up goods transfer at intermodal exchanges by modern and efficient transhipment facilities. The EU supports the idea of inland ports becoming real intermodal platforms providing links with rail, road and sea.

Standard loading units will ensure that the size of pallet or container that is used to transport goods on a ship can be easily transferred and carried on haulage trucks or trains.

Interchanges may also see the creation of a new workforce – the freight integrator – dedicated to providing intermodality and to organising logistic transport chains.

Enlargement

Currently, the EU is preparing for the accession of several States in central and eastern Europe (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia). Immediately after enlargement, both new and old Member States will be in a better position to trade amongst each other and many businesses will have increased opportunities. As a result, freight forwarders and shipping companies can expect increased demand for efficient and reliable transport.

Six of these central and eastern European candidate countries already have fairly extensive inland waterway networks. These will be linked to the existing core western European network, increasing it by another 9 000 km on which EU standards will apply.

With enlargement, the Danube will become the backbone of the east-west waterway connection. Together with the Rhine, it will provide a key link between the Black Sea and North Sea, offering enhanced transport opportunities for businesses seeking new markets in an enlarged Europe.

In 1992, the PACT programme (pilot actions for combined transport) was launched that offered a total of EUR 53 million to companies willing to help boost the competitiveness of combined railway, inland waterway and short-sea shipping transport as compared with door-to-door road transport. As a result, over 167 projects were launched between 1992 and 2000, such as the new barge service between Lille and Rotterdam that removes 50 lorries per day from a heavily used road corridor.

PACT has now run its course, but starting from 2003 the Commission is launching a similar but larger strategy called ***Marco Polo****, aiming to transfer a further 12 billion tonne-kilometres of freight off the existing road network by 2010, by again providing start-up aid for businesses willing to improve the intermodal chain.*

Conclusion

The waterways industry, with its spare network capacity and modern fleet, is immediately available to use and can offer cheap, reliable and sustainable transport to thousands of businesses across Europe. Inland waterway transport is ready to play a key role in shifting traffic off roads.

By removing key physical, technological or bureaucratic bottlenecks, inland waterway transport will become even more effective, offering a quality service to freight forwarders – in terms of price and reliability – against which other land modes cannot easily compete. In addition, the use of inland waterways will actually contribute to the improvement of the environment due to its cleanliness and efficiency.

The forthcoming enlargement of the EU will lead to an expansion of the inland waterway network providing industries and freight forwarders with increased opportunities.

The capacity and opportunities are there for the shipping industry and freight forwarders to realise. Taking steps towards them are all that is required to win new business for inland waterway transport.

Easing integration

The EU is supporting a research and development programme called Also Danube that aims to increase use of the Danube axis as an intermodal transport route and ease integration of new Members States into the EU. The programme will do this by linking regional inland waterway traffic management and logistical management networks via a central, easily accessible database. This will create a one-stop-shop offering real-time traffic information, improved communication and logistical services that can be tailored to the cargo transported. It also aims to improve transshipment facilities at certain ports.

Facts and figures on inland waterway transport in the European Union

- navigable network: 30 000 km;
- Community fleet: around 11 500 vessels (mainly self-propelled goods vessels);
- total loading capacity fleet: 11 million tonnes;
- total performance Community fleet in 2000: 125 000 million tonne-kilometres;
- modal share in 2000: 7 % (with only six Member States having an interlinked waterway network);
- number of enterprises: 7 000 (in the six Member States);
- the sector directly employs around 23 000 people.

Source: 'EU Energy and Transport in Figures'.

Community action in the field of inland waterway transport

The main achievement of Community action in the field of inland waterway transport over the last few years has been the complete liberalisation of the market (as from 1 January 2000). Open market access is now ensured, prices are freely negotiated and increased competition is accelerating innovation.

Overcapacity in the sector has been reduced substantially by a Community capacity policy scheme. The overall size of the fleet has decreased by 15 %, while the fleet as such has been modernised. In the first quarter of 2003, the last Community measure on fleet capacity, the so-called 'old for new-rule', will come to an end. However, if there is a serious disturbance in the market, renewed Community intervention can be considered.

Community initiatives have been undertaken to harmonise regulations. Conditions for obtaining boatmaster certificates and technical prescriptions for vessels have, to a large extent, been harmonised at Community level. Further updating and harmonisation will be carried out, also in view of enlargement.

More information on inland waterway transport in the European Union and Community legislation in this field can be found on the website "The Inland Waterways Observatory": http://europa.eu.int/comm/transport/iw/en/site_map_en.htm

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Useful contacts and further information

- **Directorate-General for Energy and Transport** – The Inland Waterway Observatory
  http://europa.eu.int/comm/transport/iw/en/site_map_en.htm

For more information on inland waterway transport and inland ports:

Trade organisations representing the European inland waterway carriers:

- **European Barge Union (EBU/UENF)**
  Postbox 23210,
  NL-3001 KE Rotterdam
  Tel. (31-10) 411 60 70, Fax (31-10) 412 90 91
  www.ebu-uenf.org
- **European Skippers' Organisation (ESO/OEB)**
  Av. Bischoffsheimlaan 36,
  B-1000 Brussels
  Tel. (32-2) 217 22 08; Fax (32-2) 219 54 86

Other European federations

- **Inland Navigation Europe (INE)**
  Av. Roi Albert II/Koning Albert II-laan 20,
  B-1000 Brussels
  Tel. (32-2) 553 62 70; Fax (32-2) 553 62 72
  www.inlandnavigation.org
- **European Federation of Inland Ports**
  Place des Armateurs/Redersplein 6,
  B-1000 Brussels
  Tel. (32-2) 420 70 37; Fax (32-2) 420 03 71
  www.inlandports.org

The European Commission's Directorate-General for Energy and Transport develops and carries out EU policy in these closely linked areas. The 2001 White Paper, ***European transport policy for 2010: time to decide***, sets out 60 practical measures designed to bring about significant improvements in the quality and efficiency of transport in Europe by 2010, and to achieve a rebalancing between the modes of transport. Improving the viability of inland waterway transport is a vital component of this overall strategy.

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