



DIRECTORATE-GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT B: STRUCTURAL AND COHESION POLICIES

TRANSPORT AND TOURISM

**MODAL SHARE OF FREIGHT TRANSPORT
TO AND FROM EU PORTS**

EXECUTIVE SUMMARY

Abstract

This study sheds light on the modal share of port traffic in the EU. It brings together data on port traffic and its characteristics and analyses the various modes used to connect ports with final destinations of goods, including transshipment, short sea operations and inland ports.

It supports the assessment of progress made towards reaching policy objectives on the modal shift from road to alternative modes.

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EXECUTIVE SUMMARY

The overview specifically addresses the specific issues of the mode used: rail, road, inland waterways and short sea shipping (SSS) to and from EU ports. The study includes an analysis of the traffic in seaports, inland ports and road-rail terminals and outlines some differences between Member States / regions. Finally, it provides useful information on the challenges that EU ports are currently facing as regards traffic growth, congestion and accessibility.

The characteristics of ports and of infrastructures linking ports to the hinterland, the type of goods handled and the dimension of port catchment areas are all features that significantly influence the choice of mode and the potential for modal shift.

The EU is highly dependent on seaports for trade with the rest of the world and within its Internal Market: 74% of goods exchanged (imported and exported) with the rest of the world and about 37% of exchanges among EU Member States transit through seaports. Ports guarantee territorial continuity of the EU by servicing regional and local maritime traffic to link peripheral and island areas. They are the nodes from where the multimodal logistic flows of the trans-European network can be organised, using SSS, rail and inland waterways links to minimise road congestion and energy consumption.

Seaborne traffic of EU ports accounts for over 3 billion tonnes per year.

The 2011 White Paper on Transport states that more and efficient entry points into European markets are needed, avoiding unnecessary traffic crossing Europe. Seaports play a major role as logistics centres and require efficient hinterland connections. Their development is vital to handle increased volumes of freight both by SSS within the EU and with the rest of the world. Inland waterways, where unused potential exists, have to play an increasing role in particular in moving goods to the hinterland and in linking the European seas. In terms of cargo flows in the European seaport system, five main markets can be distinguished: the container market, the ro-ro market, the market for conventional general cargo, the liquid bulk market and the dry bulk market. Each market has its own dynamic: the routing of different types of maritime freight through European ports to the hinterland is guided by complex interactions between a large set of factors and actors. However, all ports and types of trade have two underlying common factors that influence the routing to the hinterland: the connectivity of the port to the hinterland and the level of performance of the port itself.

The readability of port traffic data is complicated by two aspects intrinsically interlinked: transshipment and SSS.

"Short sea shipping" means the movement of cargo and passengers by sea between ports situated in geographical Europe or between those ports and ports situated in non-European countries having a coastline on the enclosed seas bordering Europe. The concept of short sea shipping also extends to maritime transport between the Member States of the Union and Norway and Iceland and other States on the Baltic Sea, the Black Sea and the Mediterranean. (EC, 1999)

In the case of containers, the share of SSS is important because:

- short sea transport (which represents around 60% of the traffic of EU ports) is destined for (or generated from) the direct hinterland of a port; therefore ports must be equipped to handle the corresponding throughput and forward containers to their final destinations. This quota includes flows exchanged with nearby

destinations as per the EU definition of SSS and flows deriving from transshipment operations;

- the deep sea quota must be further analysed since it can be split between (i) traffic calling at the port in order to be transhipped and (ii) traffic calling at the port for inland routing to its final destination. For this reason taking into account the share of transshipment is key.

Conversely, ro-ro transport is essentially a co-modal transport involving an inland stretch by road and a maritime transport which, with some exceptions, is run over short distance ranges (and is therefore attributed to short sea).

The extent to which different countries in the EU use rail and water to transport freight is very mixed. The reasons for this are, among other things:

(i) geographical (island countries generally use rail to a lesser extent; landlocked regions in the centre of Europe, which are used as transit countries to the major ports, use rail to a greater extent);

(ii) economical/political (countries whose development has included heavy industries generally use rail to a greater extent; Baltic and Scandinavian countries have a higher share of rail transport);

(iii) environmental (countries with a long-term environmental policy generally use rail to a greater extent). While for sustainability reasons a modal switch to rail is viewed as beneficial, it is possibly for economical and political reasons (ii above) that some countries have actually witnessed considerable switches of freight away from rail and towards road. Thus, over the period 2000 to 2010, in 8 EU Member States rail has increased its modal share. However, in many other Member States there has been a considerable modal switch to road.

Performances of single ports highlight that:

- road is the most widely used mode of transport to connect EU ports with inland destinations. The high share of short sea traffic, which generally has a smaller hinterland, may partially explain this, but the road is mainly chosen due to better flexibility and reliability together with an easier access to all inland destinations;
- Inland waterways (IWW) are extensively used by ports wherever the availability and the standard of infrastructure is suitable for carrying large volumes of goods. This is the case in relation to the ports located on the Rhine-Scheldt delta (Antwerp, Rotterdam and Amsterdam) for which the modal share of IWW is steadily above 30%. Other examples include the Romanian port of Constanta, the French ports of Le Havre and Marseille, and to a lesser extent the German ports of Bremen and Hamburg;
- Many ports already exhibit high shares of rail transport. Particularly high modal shares are found in the Baltic ports of Tallin and Riga (though with low absolute throughput), characterised by a majority of bulk transit flows. Looking at ports managing larger absolute flows, best cases are found in Germany (Bremen and Hamburg which accommodate up to 250 trains per day), in the Rhine-Scheldt delta (Rotterdam, Antwerp and Zeebrugge), and in other ports that manage a considerably lower number of trains overall (Koper in Slovenia, Gdansk and Gdynia in Poland, Trieste and La Spezia in Italy, Felixstowe and Southampton in the UK).

In sum, ports considered within this study in many cases show satisfactory levels of modal share for rail and IWW.