



Study on EU Inland Waterways Transport Capacity

How to support military mobility under *dual-use* conditions? Recent European strategies aim to improve the readiness and resilience of the EU's civilian transport infrastructure for civilian and defence needs. *Inland waterways* are vital for civilian logistics and can play a key role in military mobility alongside road and rail.

Background

Inland waterways offer high payload capacity and resilience alongside road and rail. They play a prominent role in recent European strategies:

- Joint White Paper on European Defence Readiness
- EU Military Mobility Package and Action Plan(s)

Purpose

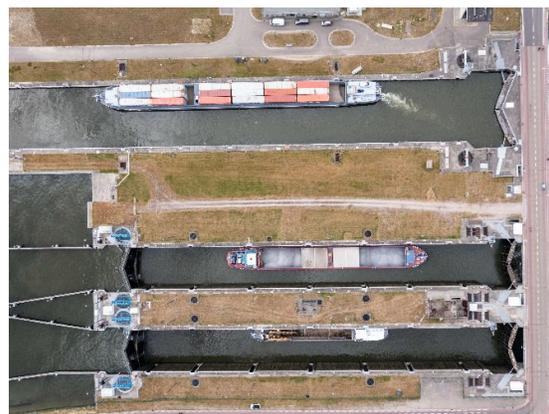
This study examines how the EU's inland waterway transport system can support military mobility under dual-use conditions. It reviews technical capacity, legal and regulatory frameworks and institutional arrangements. It aims to identify bottlenecks and opportunities to strengthen civil-military coordination and improve the operational usability.

Geographical scope

The assessment focuses on EU Member States where inland waterways constitute a significant component of the transport system: the Netherlands, Belgium, France, Germany, Austria, Czech Republic, Slovakia, Hungary, Croatia, Bulgaria and Romania. Other Member States may rely on these waterways indirectly.

Outlook

The study confirms that Europe's inland waterway system already provides a strong physical and operational backbone for scalable transport. While the infrastructure itself is largely in place, further progress depends on improved legal harmonisation, digital integration and targeted dual-use investments. When these elements are developed in a coordinated manner, inland waterways can evolve from an underused backup option into an operationally ready component of European military mobility. This will complement rail, road and air transport, relieve pressure on congested corridors and enhance the overall resilience of Europe's transport system.





Infrastructure and technical readiness

Europe's inland waterway system already provides a strong physical basis for dual-use operations:

- The network consists of 41,000 km of navigable waterways and 400 inland ports offering high payload capacity and resilience
- Key corridors include the Rhine, Main-Danube axis, Danube, Meuse-Scheldt-Albert Canal, Seine-Rhône axis and the Mittelland Canal
- Identified bottlenecks largely overlap with existing TEN-T priorities and align with ongoing infrastructure programmes
- Resilience measures include low-water control, mobile handling capacity and the availability of suitable vessels

Key recommendations

- Selective infrastructure upgrades, including lock dimensions, bridge clearance and reinforced quays
- Deployment of Ro-Ro ramps, secure transshipment and storage areas
- Integration of defence users into River Information Services (RIS)
- Development of targeted dual-use investment packages



Legal and regulatory framework

Europe's inland waterway transport sector operates under a comprehensive civilian legal framework, yet gaps persist regarding military mobility:

- No EU-wide legal mechanism defines priority rights, simplified customs procedures or standardised authorisation for military movements
- International conventions such as Mannheim and Belgrade ensure freedom of navigation but contain no defence or crisis-use provisions
- National readiness levels vary: several Western Member States show more mature governance and digitalisation, while Central and Eastern corridors rely largely on case-by-case coordination
- ADN regulations ensure a high level of safety for hazardous cargo but may cause constraints

Key recommendations

- Develop an EU guidance framework and harmonised cross-border authorisation templates for military movements
- Establish an intermediate "alert" regime enabling simplified customs and port procedures during crises or exercises
- Designate national civil-military liaison points and embed inland waterways in emergency and defence legislation



Stakeholders and market actors

Effective use of inland waterways for military mobility depends on coordination between public authorities and commercial actors, each with a defined role:

- EU level – EDA and European Commission (DG MOVE) set the framework under the Military Mobility Action Plan
- Public authorities – Ministries of transport and defence, customs and waterway administrations apply this framework and maintain infrastructure
- Regional and local authorities – regional administrations and inland port authorities manage day-to-day operations and implement dual-use measures at corridor and port level.
- River commissions – CCNR and Danube Commission coordinate standards and cross-border data exchange.
- Private operators – control most fleet and port capacity; cooperation through framework contracts enables rapid, low-cost mobilisation.

Key recommendations

- Establish (inter)national liaison structures with public authorities and commercial actors.
- Conclude framework contracts with operators defining availability and security conditions.
- Integrate dual-use criteria in port and waterway planning.
- Test procedures and coordination through small-scale joint exercises