



## Maritime transport of goods : A Mediterranean integration driver ?

An energy transport and containerisation hub, a zone of transit between Europe and Asia, the Mediterranean has seen, over the past 10 years, an intensified flow of goods, driven by the combined effect of demographic pressure, economic growth and trade liberation. In response to the growth of long-distance exchanges, ship-size has significantly increased, driving countries to seek to equip themselves with appropriate port infrastructures.

The prospective study conducted by Plan Bleu shows that a pursuit of the current transport policies, be they related to infrastructures or inter-connections, would establish the Mediterranean in a status of a “transit sea”.

Maritime transport cannot drive Mediterranean integration unless the race to “gigantism” is checked and unless the complementary nature of the Mediterranean production system is promoted.

### Situation of maritime transport in the Mediterranean basin

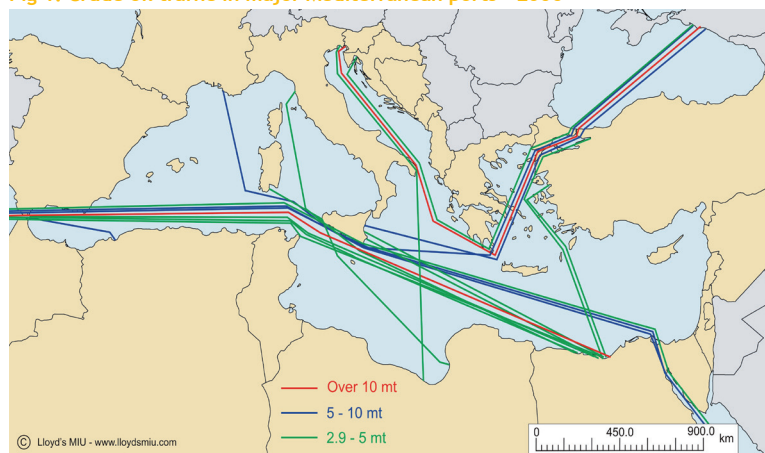
The Mediterranean offers a route for the exchange of manufactured goods between Europe and Asia, as well as for European supply in energy products from the Gulf and North African countries.

Around 25% of the trade consists of energy products, with non-bulk goods accounting for over 30% of the total.

The maritime transport payload in the Mediterranean reported a growth rate of 50%, between 1997 and 2006. Annual growth of oil transport stood at 6%; LNG transport ranged between 7 and 8%; container traffic reported a growth rate of 10%; while Ro-Ro stood at 5%.

The high rate of container traffic growth is due to the development of trade with Asia. Container port traffic increased by 71% and the average ship size reported a 55% growth rate between 1997 and 2006.

Fig 1: Crude oil traffic in major Mediterranean ports - 2006



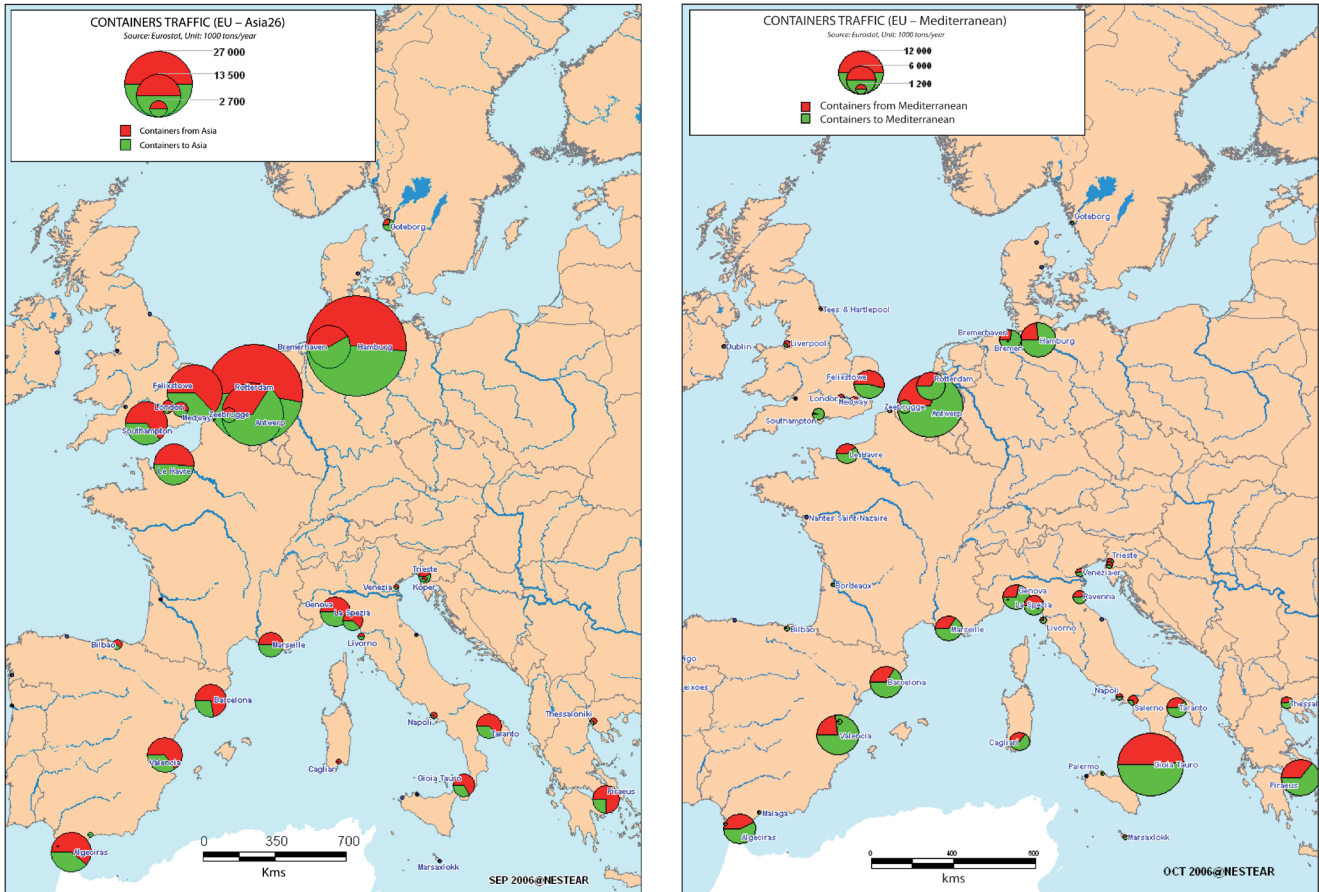
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Source: Lloyd's MIU

Europe-bound “non-bulk” goods from Asia are preferentially disembarked in the ports of the northern zone. The same applies to the Europe-bound trade from the Southern and Eastern Mediterranean Countries (SEMCs), for which Hamburg is the first exchange and trans-shipment port. Mediterranean ports are unable to compete with northern European ports.

Few Mediterranean ports can accommodate the larger container-ships, notably Port Said (Egypt), Tanger Med (Morocco), Algeiras (Spain), at both ends of the region, and Marsaxlokk (Malta) and Gioia Tauro (Italy) at the centre. These are dedicated, for the major part, to trans-shipment activities.

Fig 2: Maritime transport container ports (EU-Asia and EU-Mediterranean)



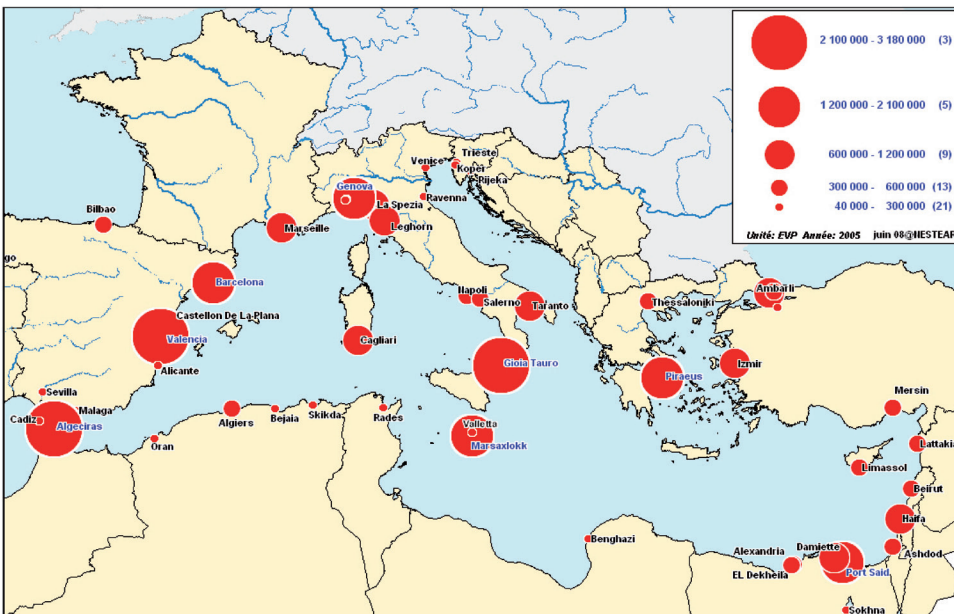
Sources: AFD, NESTAR, Plan Bleu

All goods considered, intra-Mediterranean flows account for a quarter of traffic. The volume of exchanges between the SEMCs is low, and the flows follow a North-South axis with, however, a dominant South-North direction connected with oil and gas exports.

This asymmetry between North and South is to be found in foreign trade: the EU accounts, according to the countries, for 20 to 70% of the trade with the SEMCs, while the SEMCs account for a modest 8% of the EU foreign trade.

Trade with the EU are chiefly conducted by sea (75%) and via fixed connections (20%), consisting mainly of gas-pipelines. The remaining 5% are conducted via land and air routes.

Fig 3: Mediterranean maritime container port volume



Sources: AFD, NESTAR, Plan Bleu

It appears that the Mediterranean is characterised by an intensive transit transport and a low level of integration, especially with regard to South-South trade.

**Plan Bleu outlook for the time frame 2025**

The outlook relates to the non-bulk transport of goods which has reported the highest growth over the past ten years. This study takes into account economic growth, price of energy and CO<sub>2</sub>, and sets out the various transport

policies integrating infrastructures, use of equipments, commercialisation and regulation.

The prospective exercise conducted by Plan Bleu consists in the analysis of three scenarios and their comparison against the situation 2005:

➤ Scenario (S1) corresponds to a low economic growth situation (1.5% in the North and 3% in the South) with a oil barrel at \$50 and a transport policy limited to a few public investments in roads and a private sector-driven port modernisation. The road transport sector remains poorly organised, little concentrated and marked by intense competition.

➤ Scenario (S2) corresponds to a trend situation of the pre-2008/2009 crisis, with a more steady economic growth (1.8% in the North and 4% in the South) and a oil barrel at \$100 (value of 2005). Transport-related measures help achieve economies of scale thanks to a massification of the handling of goods. Investments relate to improvement of road connections with ports and logistic platforms. The logistic chain takes on a professional character with the coming on board of leading international players.

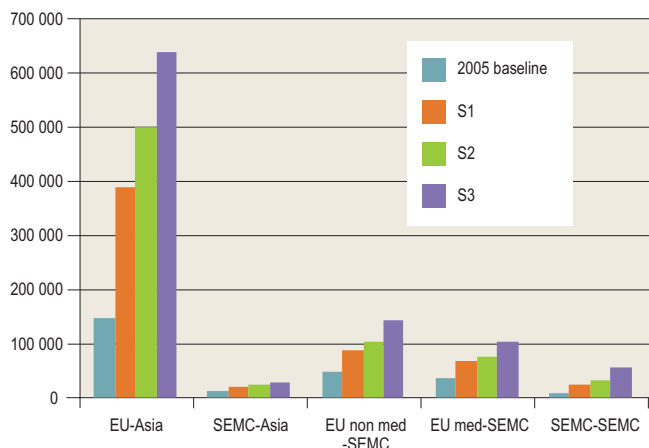
➤ Scenario (S3) rests on a more dynamic growth (2.1% in the North and 5% in the South) granting the actors room for engaging significant port investments. Public players may take proactive actions, in terms of development of railway transport (connection to ports, logistic platform, institutional reform). Leading groups hold control over logistic chains. Several “motorways of the sea” begin to emerge. The oil barrel stands at 150 \$ and the price of a ton of CO<sub>2</sub> is 100 €.

## Results

Whatever the scenario considered, Asia remains by far the major trade partner and, hence, the main source of non-bulk transport.

Even in the case of scenario three (S3), founded on significant port investments, intra-Mediterranean exchanges remain quite low with respect to exchanges with Asia and do not alter the status of the Mediterranean as a “transit sea”.

Fig 4: Results of “non-bulk” maritime transport scenarios (in thousand tons/year)



Source: Plan Bleu

Fig 5: Intra-Med vs. Asia maritime traffic distribution (non-bulk), as per scenario

Traffic shares (2025)	Intra-Med	Asia
baseline	25%	28%
S1	20%	35%
S2	19%	28%
S3	19%	40%

Source : Plan Bleu

The share of intra-Mediterranean traffic would thus decrease from 25% in 2005 to 19%, according to the scenario S3, while that of traffic with Asia would rise from 28% to 40%

This scenario (S3) reveals, however, that a good connection of the ports with the railway network helps multiply railway traffic by 5.5 and road traffic by 2.1. This capture of road traffic—made possible by proactive policies, and facilitated by high oil and CO<sub>2</sub> prices—mitigates the saturation of port cities and smoothes the transport of goods.

Fig 6: Comparison of growth drivers of exchanges of goods in the Mediterranean

Growth driver	Baseline 2005	S1	S2	S3
Maritime traffic	1.0	1.9	2.2	2.9
Road traffic	1.0	2.1	2.3	2.1
Railway traffic	1.0	1.0	1.0	5.5

Source: Plan Bleu

On the other hand, maritime transport is hardly impacted by fuel or carbon prices since it is possible to keep control over operation costs thanks to ship size, speed reduction and the professionalisation of logistic chains which facilitates access to the Asian production system.

## The issue of over-capacity

The increase in trade and, especially, the increase in the size of ships, lead governments to envision scale-ups and construction of deep water ports. The projects identified before the 2008/2009 crisis represent an increase by a factor of 2.2 over ten years in container handling capacity.

The trend scenario (S2)—founded on comparable underlying hypotheses—predicts the same increase by a factor of 2.2, but over a twenty-year time period. The supply dynamics seems, therefore, to be twice as rapid as that of demand.

Besides, the size of the infrastructures envisioned impedes—by reinforcing gigantism—intra-Mediterranean connections and excludes local operators from port management.

Therefore, there is a great risk that the region will witness port over-capacity. What is more, this over-capacity may give rise to transport dumping, by pushing down prices for infrastructures and equipment user fees, compromising amortisation of investments and making the internalisation of transport external costs illusory.

## Lessons learnt

Three major conclusions may be derived from this prospective exercise:

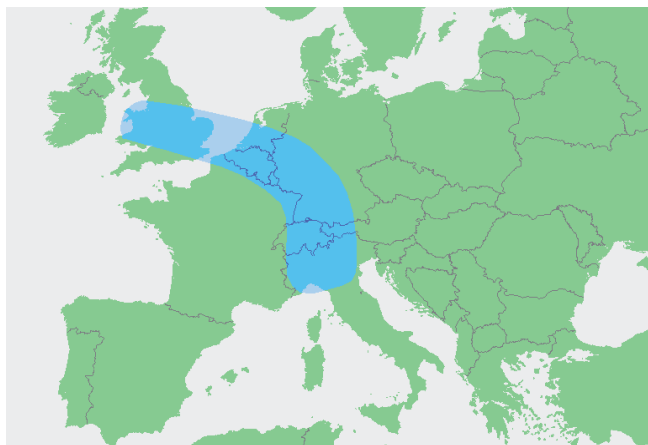
- The predominance of maritime traffic with Asia will not change significantly, unless the policy of large-scale port infrastructures is reviewed;
- Transport-related policies promoting the railway mode will help ease road congestion in the event of an economic recovery, assisted by the high costs of energy and CO<sub>2</sub>;
- The rise in energy and CO<sub>2</sub> costs would check the increase in energy consumption without affecting, however, maritime traffic.

The conditions of a contribution by transport to Mediterranean integration are to be sought in strengthening localised trade.

In terms of transport policy, the course of action would be:

- to sustain the development of North-South relations under the form of regular and rapid connections. A densification of the network of ports should allow for a better distribution of intra-Mediterranean flows, made more competitive and safer than those with Asia;
- to seek efficiency of Mediterranean ports, rather than “gigantism”. The development of logistic platforms connected to the railway would reduce the pressure on coastal land and ease road congestion;

Fig 7: Map of the “blue banana” zone of demographic and economic concentration



Source: techno-science.net

➤ to choose one or two entry ports in southern Europe among the existing ports. The Mediterranean does not really offer a southern entry to the densely populated and economic heartland represented by the “blue banana”;

➤ to consolidate land transport environmental standards at national level, in order to reduce local pollution and energy consumptions. An improvement of vehicle consumptions would be possible, providing that fuel subsidies may be removed and a carbon tax introduced;

➤ to devise financial tools likely to enhance services (waste management ...) and controls. A “transit fee” could be applied within the framework of Exclusive Economy Zones currently emerging in certain countries.

All the measures outlined above may fit within the framework of a Mediterranean transport plan. Current discussion on the integrated maritime policy in the Mediterranean by the European Commission could build on such recommendations. The Union for the Mediterranean (UfM) could serve as a driver of the support mechanisms necessary for their implementation.

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## Blue Plan Notes



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