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«The contribution of the “Sea Motorways” to the European Transport Policy»

1. Introduction

Several negative characteristics of the European Transport System such as the increasing external costs of the continuously augmenting share of road transport mainly in Freight Transport, due to the improvement of road infrastructure, facilities and integrated services provided by road hauliers, has lead the EC to take actions in order to rebalance the transport modes. It is believed that through the transport modes balance and the enhancement of Combined and Maritime Transport, the European Transport policy will efficiently tackle the severe problems encountered from the extent use of road transport, without affecting economic growth, indissolubly connected to Transport development.

The present paper deals with one these measures initiated by the EC and known as the “Sea Motorways”. This term appeared for the first time in the new White Paper of Transport “European Transport policy 2010: Time to Decide” the perspectives of their implementation generally in Europe and more specifically the opportunities and threats created for the region of the South East of Europe.

At its early stages the “Sea Motorways” concept was mentioned as a measure to revitalise Short Sea Shipping, which immense capacity is only partly exploited and all positive aspects of Maritime Transport such as, low energy consumption, safety, environmental-friendly transport mode and low infrastructure cost are not fully taken advantage. However, the issue for the EC is not just to promote Maritime Transport individually, but also to efficiently integrate seaborne connections with land modes, especially railways, and enhance Intermodality. Therefore, the Sea Motorways have become the tool for the Sea-based Intermodal Corridors of Europe, which will use Short Sea Shipping and ports as the “infrastructure” required. Theoretically, the EC anticipates the Sea Motorways to be qualitative maritime connections in terms of services and infrastructure that will allow high share of Maritime in Intermodal transport coping with the current problems

The scope of this paper is to provide a sound description of the “Sea Motorways” as an innovative measure, identify the crucial parameters and criteria for the successful implementation and finally examine the possibilities and potential positive and negative aspects from the setting of Sea Motorway schemes in the particular region of South East Europe.

It is essential to mention in this section of the paper that the subject of the Sea Motorways in Europe are still in a planning level and the implementation provisions and restrictions are still under the consideration of the EC. The final results and legislative framework of the “Sea Motorways” are to be announced during the year 2005.

2. Towards the recognition of the “Sea Motorways”

Since the first insertion of the term of “Sea Motorways” in the White paper, wide research have been made in order to allow the concept provide a real added value to the Integrated European Transport Network and not just a sterile attempt of shipping lines illustrations on the European Map considered as “European Lines”.

Until 2003, the clear definition of a Sea Motorway was still an issue under consideration. All attempts for a respective term had always gaps and unidentified aspects of a Sea Motorway. Neither the early definition in the White paper as the “shipping links that provide a way around bottlenecks around the Alps and Pyrenees, that should also be parts of the Trans-European Network of Transport (TEN-T)” nor the explanation from the High Level Group that “Genuine motorways of the sea are aimed at acting as a substitute of motorways of land, either to avoid saturated land corridors, or to give access to countries separated from the rest of the European Union by seas” provide a solid definition, but only descriptions of how the Sea Motorways would be like. After a long period of evaluation and analysis, the next step of the evolution of the Sea Motorway process was to integrate them in the revised TEN-T and been nominated as priority projects for the EC, with specific regions of implementation. The following Figure 1 depicts the priority projects of the revised TEN-T proposed in October 2003.

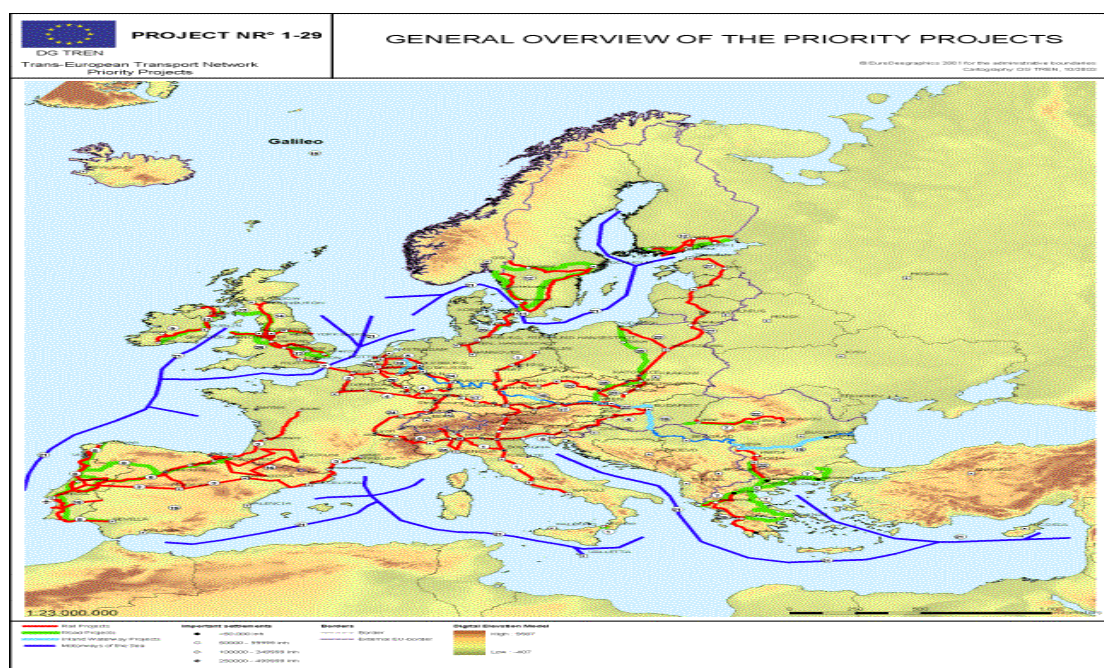


Figure 1: General Overview of the Priority projects [source: DG-TREN]

The final adoption of the Sea Motorways EC project with Article 12a of the TEN-T Guidelines (April 2004) has provided a more distinct theory for the role and objective of the concept. The four regions to be considered as potential geographical areas defined as priority project No 21 are the following:

- **Motorway of the Baltic Sea** (linking the Baltic Sea Member States with Member States in Central and Western Europe, including the route through the North Sea/Baltic Sea canal) (by 2010);

- *Motorway of the Sea of western Europe* (leading from Portugal and Spain via the Atlantic Arc to the North Sea and the Irish Sea) (by 2010);
- *Motorway of the Sea of south-east Europe* (connecting the Adriatic Sea to the Ionian Sea and the Eastern Mediterranean, including Cyprus) (by 2010);
- *Motorway of the Sea of south-west Europe* (western Mediterranean, connecting Spain, France, Italy and including Malta and linking with the Motorway of the Sea of south-east Europe and including links to the Black Sea) (by 2010).

Moreover, according to the Article, the main objectives of a Sea Motorway is no longer just a measure to revitalise Short Sea Shipping but an instrument to:

- Concentrate Freight flow on sea-based logistical routes
- Increase cohesion among the Member States
- Reduce road congestion through modal shift

Main characteristic of each of the Maritime connections should have the common characteristic of high quality of services and port infrastructure in all Maritime and Intermodal Transport processes. The target of the EC is to have a complete Network of Sea Motorways spread around Europe by the year of 2010.

Furthermore the affiliation of the Sea Motorways in the TEN-T provide the perspective of EU funding through the budget available for the priority projects, the Marco Polo programme that aims to support financially Intermodal business efforts; and start-up aids to the Member States participating to schemes. EC funding opportunities for the implementation of the Sea Motorways is a major issue for their successful operation and a parameter that has been widely discussed for the most rational funding allocation among the different players of a scheme.

3. The Top-down approach from the EC. (Consultation document for the Sea Motorways implementation)

Following the “Guidelines for the TEN-T” the European Commission moved a step forward by publishing the “Consultation Document for the Sea Motorways Implementation through Article 12a TEN-T”, where various “blind spots” of the concept such as eligibility of the costs to be covered, selection and quality criteria and relations to funding processes were enlightened along with the legal framework.

The European Commission is setting the benchmark for the submission of Sea Motorways proposals according to the guidelines provided. The proposal submission procedure and the evaluation process from the EC are described as follows:

- At least two Member States issue joint calls for tender for motorways of the sea projects between their territories, in order to ensure transparency and non-discrimination. Based on the results of this tender, they present comprehensive proposals for funding to the Commission. Executing this call is an eligibility criterion for the project.
- The Commission evaluates the projects based on the following criteria:
 1. European added value: contribution to modal shift and/or cohesion;
 2. Quality elements of the project;
 3. Viability of the project;
 4. Credibility of the project;

5. Effects on competition on the project.

- The Commission takes the funding decision, after having heard the opinion of the TEN-T Committee of Member States.
- The motorway of the sea project should be fully operational within a few years of the funding decision of the Commission. By 2010, a TEN Sea Motorways network should be implemented.

Furthermore the guidelines for the funding schemes are mentioned at a provisional level, where a first attempt to identify the relationship between the funding programs and the eligible costs is covered.

Apart from the guidelines for the proper submission of respective proposals, the consultation document provides a short description of the quality standards to be met among each different party of the logistic chain.

Proposed quality criteria set from EC

Specific quality features according to the Consultation paper should characterize every single Sea Motorway scheme, in order to be in place to provide the added value required to the Integrated Transport system of Europe. The optimum quality of service and infrastructure in ports, the service provided by shipping lines, road and rail hauliers and forwarders are prerequisites for the successful implementation of such schemes.

More specifically port services should be characterized or include the following:

- All year traffic on daily basis (24/24, 7/7, 365/365)
- Simplified administrative and custom procedures along with one-shop-stops controls (the extent use of ITC systems is considered crucial)
- Information dissemination systems, tracking and tracing applications, VTMS and other technological systems that facilitate all activities in a port, from the mooring of the ship, loading and unloading process, transshipment, etc should be provided for the faster and more reliable port procedures.
- Safety and Security aspects in port premises for cargo and personnel should be high level guaranteed (implementation of ISPS code required)
- Non-discriminatory and transparent policy for shipping lines and other relevant companies e.g. equal fare policy, priority of service etc

The sufficient port infrastructure that would support Intermodality and improve Maritime Transport is also considered the major priority for the EC. Adequate harbour infrastructure includes facilities to accommodate short-sea services such as ro-ro ramps, dedicated short-sea terminals or quays, short-sea specific handling equipment and/or marshalling yards next to short-sea services.

Since the main priority of the EC is to provide a reliable and viable Intermodal alternative for Freight Transport, efficient port hinterland connections are considered critical factor. Rail and/or inland waterways connections in addition to road, sufficient capacity (e.g. easy road access, more than a single rail line) and rail networks to/from ports having open access for railway operators as stipulated in the Trans-European Rail Freight Network Directive are significant elements to make Intermodal Transport more attractive for Freight Transport operators.

The quality aspects concerning shipping lines and other hauliers, as provided from the EC experts concern:

- Extent use of ITC systems for several applications on board for transport hauliers
- Viable, regular and sufficiently frequent maritime links between the Member States involved
- Use of environmental-friendly fuels
- Guaranteed safety during the transportation.
- Compatibility of cargo units all along the Intermodal transport chain

All these quality criteria are just the first suggestions from the EC and any elements suggested from the actors and will be assessed and integrated in the final guidelines.

Financial Framework

The Sea Motorways, under the framework of the TEN-T have the priority of funding. Still, Combined Transport and Maritime transport as multidimensional concept, which includes a lot of economic features, related to management and administrative activities during transport process, port and hinterland infrastructure, shipping operational costs, etc, require clear and transparent definition of their eligibility in order to achieve the optimum result and overcome the risk of free competition distortion. The Consultation paper has given a broader picture of the financial status to be pursued for the Sea Motorways proposals approved, but without any applicable solutions or guidelines to avoid distortion of competition on every level, such as ports, shipping companies, logistics companies and transport hauliers.

The liaisons with the Marco Polo Programme, the TEN-T budget and the start-up aids to States have been set, along with the eligible costs and percentage of the coverage. More specifically, Marco Polo, as a Programme that supports financially Intermodal transport industry covers partly costs that are related to operations that take place in the modal shift processes. The TEN-T funding addresses to infrastructure improvements, mainly to ports and their connections with land infrastructure, as for the State start-up aid there has been no clear distinction of the costs covering but only the prerequisites required, likewise it can be provided only for projects of Community policy goals that will be viable after the completion of the of the funding.

Even if the guidelines for the, as possible, more rational funding allocation, has been attempted, the issue of EC financial support is still under evaluation. The controversial policy of liberalization and privatization of Maritime and combined Transport and simultaneously State and Community funding for private investments endanger competition distortion unless tendering action are to be taken. Therefore, the strong participation of private entities and financial contribution to these schemes is highly required for the success of the project. The creation of PPP schemes, with the wide participation private parties is considered as a key point for the approval of Sea Motorways proposals and a factor that will ensure the viability and credibility of such schemes. However, the contradictory interests of the actors is a field of conflict among them and the allocation of the financial support that have been widely discussed among all different parties towards the identification of the Sea Motorways

By the Consultation Document EC makes a step ahead for the achieving of the TEN-T maritime links, approving subsidies for the successful implementation during the first years of

the scheme. It is the realisation of the top-down approach on the subject and provides a benchmark to commence a fruitful dialogue with all interested parties. The success of the EC initiative depends on the reaction of Maritime and Intermodal actors that will be the “users” of Sea Motorways. Only by the dynamic involvement of these players, can the concept be a plausible perspective for the European Transport status. Therefore the Commission have requested suggestions and remarks from Maritime and Combined Transport actors in order to adjust the concept to the needs and requirement of this sector and make the Sea Motorways a market-driven Intermodal instrument that will effectively contribute the European Transport policy objectives.

4. The Bottom-up approach (Survey among the players)

The interested parties in Sea Motorways are practically all entities getting involved with freight transport by sea, road, rail and rivers. The major players that follow and influence the evolution of the Sea Motorways concept are:

- Logistics companies
- Shipping companies
- Seaports and Inland ports
- Forwarders
- Shippers
- Road and rail hauliers
- State and Regional authorities, along with other institutions such as the SSS Promotion Centres
- The European Commission

Undoubtedly, each of these entities has its own place and role in the “history” called Sea Motorways and have different expectations from such a concept. For example industry, Shippers and Logistic organisers are seeking for alternatives, looking for new opportunities and aim to the promotion of SSS. (incl. roadhauliers). Ship owners are eager to support and participate in valuable projects and cooperate more dynamically with the trading industry. The authorities of all kind, from ports to state governance provide infrastructure and framework wherein the market can “play”. Finally, E.C. supports financially the valuable projects, which are not disturbing competition and contribute to the European Transport policy.

Despite the fact that the EC guidelines provide a threshold for “negotiations” with Member State entities and the perspective of funding, the Community optimistic sentiment for the Sea Motorways success is not fully shared from all the rest actors. The presence of undefined aspects, financial and operational from the top-down Commission approach, such as the port selection procedure, the risk of competition distortion, some quality criteria not being agreed unanimously from all different parties, arguments about the subsidy distribution, and others echoes that the implementation of successful Sea Motorways have still a long way, even if all players recognise their necessity.

As far as port entities are concerned, the danger of the ports participating to Sea Motorways schemes becoming congested, along with the whole Intermodal chain and the hinterland connection is an issue to be considered. The policy of funding existing logistical chains and ports that already comply with the quality criteria will exclude smaller ports and affect free competition without providing any new opportunities and alternative routes. The need

transparent and market driven selection of ports in Sea Motorways was also suggested. Moreover, the ports providing integrated logistic services ports, including sufficient storage and distribution of goods, is considered a factor that would upgrade the role of ports and must be recognised as quality feature.

The shipping companies are more sceptical about the initiative and require greater aid from the Commission. The possibility of ship operational costs eligibility that will result a more competitive low fare and therefore a cheaper alternative for shippers and forwarders to choose Intermodal transport via sea is believed to be a measure that will have positive affects, but still the problem of internal competition distortion may emerge. The request for quality services complying with those set from the EC i.e. quality of fuels, compatibility of vessels with the European Intermodal Loading Unit, etc, require major investments if Maritime Transport is to provide a real alternative to road transport. Modernised vessels that will enhance modal shift procedures, scheduled and frequent lines that will service Intermodal routes have several extra economic features that the shipping liners may not be willing to cover unless the incentive of the financial aid is guaranteed.

As for the rest entities of a Sea Motorway, the success of the concept depends on how the scheme is competitive to road haulage in time and cost. Forwarders and logistics companies and other hauliers back the Intermodal alternative only if it can provide these two elements. The Intermodal chain must provide free flow without any bottlenecks, physical or operational and be a credible choice. The concentration on cargo flow is recommended to ensure viability, but also the promotion of ports from Maritime transport servers to Intermodal Nodal points that provide fast and low cost services, and optimum connections to land high level infrastructure is a prerequisite for the success. In addition, shipping services must be reliable and be adjusted to the needs of Intermodality, concerning speed, frequency, regularity, continuity and safety and have a harmonized cooperation with port authorities to avoid delays and congestion.

Current Status of implementation

The implementation of the individual Sea Motorways and their to the integration Maritime TEN-T branches may be in a planning level, but some initiatives have appeared from different parties and Member States composing consortia and conducting feasibility studies for potential Sea Motorways schemes. The presence of strong and successful Short Sea Shipping links in certain European areas provide a significant start-up point, adequate port infrastructure and regular connections but this alone cannot be characterized as a Sea Motorway ad hoc. All other criteria have to be met as an instrument that supports Intermodality.

In Western Europe, the strong industry of trans-national logistic companies, which already implement Intermodal Transportation, envisage the perspective to ameliorate the transport environment through the implementation of a quality Maritime Network and take the leadership of consortia that include several public and private entities such as ports, shipping lines, road and rail hauliers from different Member States. This is a desirable structure with PPP schemes creation aiming to profitable and Intermodal logistic chains.

One of the most dynamic regions that eager to take full advantage of this new European concept is the Baltic Sea. The case of the Baltic Sea is unique since in an enlarged Europe the Baltic Sea in practise becomes an inland sea of the Union. This poses increased challenges to

the EU policy. Maritime transport plays a strategic role for cohesion and accessibility in this area. But this very fact also integrates - in a unique way - the maritime sector into overall perspectives of economic growth, cohesion, regional and spatial development. Furthermore, Russia as trading colossus in the area provides another potential perspective for the economic growth of the region. The Sea Motorway of the Baltic Sea would have the following structure according to the estimations and current researches.

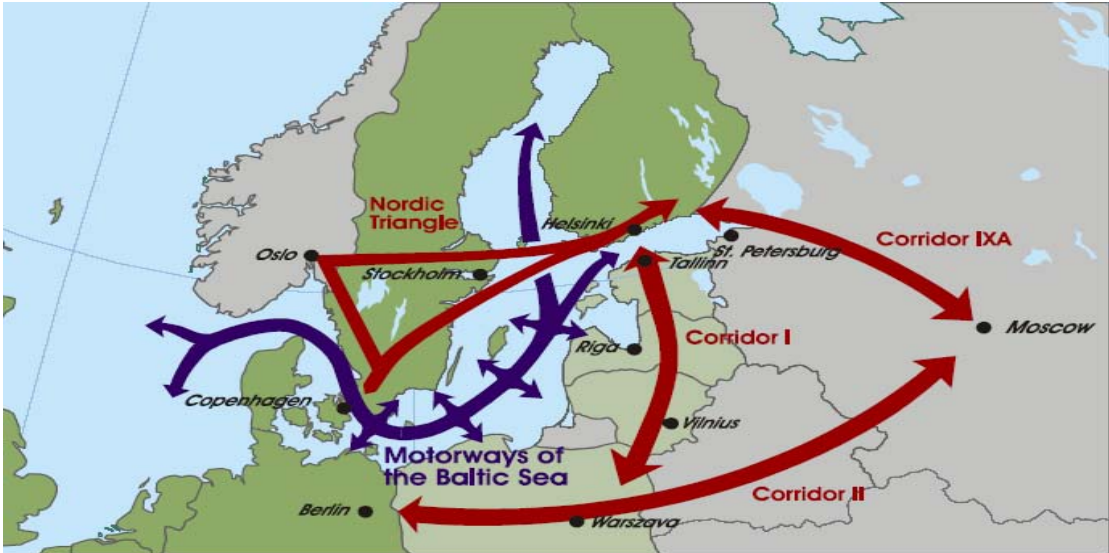


Figure 2: The Motorway of the Baltic Sea

Other initiatives currently under assessment and evaluation are potential Sea Motorways that overpass natural barriers and provide feasible Maritime alternatives to road Transport. Indicative examples of such schemes in several European regions such as the North Sea and Western Mediterranean are depicted below:



Figure 3: Dublin-Rotterdam Sea Motorway scheme – West Mediterranean Sea Motorway

5. The case South East Europe and East Mediterranean (S.W.O.T. Analysis)

The region of East Mediterranean is a located in the periphery of the EC and therefore requires measures to increase economic cohesion and overpass administrative bottlenecks caused by the numerous non-EU countries in the region. The EU enlargement, just as the case of the Baltic Sea, provides an additional perspective for the successful implementation of Sea Motorways. Moreover the ending points of Pan-European Corridors in East Mediterranean

and the Black Sea “expands” the transport infrastructure in the Sea and links South Europe with the trading Routes of Asia and Africa.

The implementation of Sea Motorways schemes in the area may be concisely described in the following S.W.O.T. analysis.

Table 5-1: S.W.O.T Analysis for the implementation of Sea Motorways Schemes in South East Europe

Strengths	Weaknesses
<ul style="list-style-type: none"> ● EU enlargement (Malta, Cyprus, Slovenia): Strong Nodal Points in the Mediterranean, new Market potentials ● Developed Shipping industry and traditional cooperation relations between countries (Italy-Greece-Cyprus) ● Sufficient cargo flow to support financially Sea Motorways schemes ● High level of land infrastructure in Italy, Integrated in TEN-T ● Completion of the TEN-T priority projects in Greece (Via EGNATIA highway, P.ATH.E highway, Ionian-Adriatic Intermodal Corridor) ● Five Pan-European corridors ending in the area (X, XI, IV, V, VIII), providing Intermodal alternatives ● Black Sea links alternative route to Asian Market 	<ul style="list-style-type: none"> ● Inadequate port infrastructure to support Intermodality in all Members States ● Problematic port-hinterland connections, mainly with railway routes ● Insufficient railway infrastructure in all parts, delay in the realisation of the TEN railway projects of South-East Europe ● Over-aged vessel fleet shipping in the area, unable to support fast modal shift ● Lack of synergy among Member States ● Absence of large Trans-national logistic operators that could play leading role for uniting interested actors
Opportunities	Threats
<ul style="list-style-type: none"> ● Perspective of EU funding and revitalisation of Maritime and combined Transport in region ● Creation of PPP schemes, smoother cooperation between private and public sector ● Asian economy development and raise of cargo flow in the Mediterranean from/to Europe ● Improvement of Middle-East infrastructure- new potential trading routes 	<ul style="list-style-type: none"> ● Distortion of port free competition. Port selection is a key feature. ● Distortion of shipping companies free competition from the EC subsidies ● Congestion in core ports and lines. ● Weakening of Regional economies depending on road transport. ● Risk of failure of viable schemes after the ending of the funding, due to high investment and operational costs

Strengths

The area of East Mediterranean is an active sea region with traditional trading relations among the countries surrounding the area. It has been the East borders of Europe a segment with the continents of Asia and Africa. The EU enlargement and the insertion of several East European countries i.e. Cyprus, Slovenia, situated in the “corner” of the EU requires measures that will enable these countries to achieve more rapidly the maximum economic and regional cohesion with the rest of the Member States. The Sea Motorways concept is one the measures that can ensure smooth integration of these countries in the Community and provide optimum connections with Center of Europe that would diminish peripherality. In addition, the new trading perspective of the new Member States, including the candidate countries of the Black Sea by 2007, by the increase of freight flow, envisage the success of the Sea Motorways schemes in the region based on adequate cargo volume.

Furthermore, the economies of several countries in the area depend on shipping industry, such as Italy, Greece and Cyprus and have very strong relations to each other and with the rest of the countries in the region. Shipping companies as a strong private entity, eager to look for new investment opportunities, can take advantage of any project that aims to upgrade the role of Maritime transport such as the Sea Motorways and therefore be strong actors in respective consortia. The presence of these strong private entities in the wide area of East Mediterranean provides a significant benchmark for the implementation of Sea Motorways schemes.

As far as the land part of the Sea Motorways schemes is concerned, even though the missing links between sea and land transport infrastructures are easily identified, however the traditional Member states are ameliorating their land infrastructure under the TEN-T framework. Some of the TEN-T priority projects are near to be completed such as Greek projects, Via EGNATIA and P.A.T.H.E highways, which improves the general state of infrastructure in the region. Still, the programmed priority projects concerning railways and Intermodal connections between Italy, Slovenia and Central European countries along with the Greek projects (the mixed railway with Bulgaria and the Ionian/Adriatic Intermodal Corridor) are approved and will facilitate the connections to the Sea Motorways, once they are completed. Additionally, the ending points of Pan-European Corridors (X, XI, IV, V, VIII) provide an immense perspective of Intermodality that must fully taken advantage. This will increase the influence of the Sea motorways even to East European and non-EU countries and improve generally transport conditions in a developing region like East Mediterranean.

Weaknesses

Despite the fact that the area has a developed Short Sea Shipping Network and improving land connections (although mainly road), the port conditions are below standards in most of the countries. Infrastructure for freight management and equipment that supports efficiently, rapidly and in low cost modal shifting procedures are underdeveloped and under this frame, major investments have to be made for the Sea Motorways of the East Mediterranean. In addition to this aspect, the hinterland connections with other transport modes infrastructures are considered inadequate to serve efficiently the requirements of a true competitive Intermodal alternative like the Sea Motorways. According to this fact emphasis must be placed also on the connection between port infrastructures and land infrastructure, with main priority the link railway and ports, considered the missing link of the Intermodal supply chain not only of the South Europe but also on Community level. The efforts put from the EC experts to integrate numerous railway projects in the TEN, gives a broad picture of the existing trend to reinforce railways throughout Europe. Even so the progress of the railway projects are delayed in the region of East Europe and this causes a boundary for successful Intermodal operations through Sea Motorways.

Apart from the infrastructure discrepancies identified for the successful set up of Sea Motorways, there are also other features hindering Intermodality. The current fleet operating in the Seas of East Mediterranean is aging without been renovated to modernized vessels that can perform quality Intermodal applications e.g. rapid and efficient loading/unloading and transshipment procedures. Additionally, old vessel fleet results more environmental consequences and higher accidents risks, which are issues that Sea Motorways proposals must take seriously under consideration as these are features evaluated from EC for the final approval. A contradictory point is that even if every scheme require new technology vessels, however EC do not refer to any funding for new ships investments, just operational costs that

include Intermodal procedures under Marco Polo funds and this is an issue take under account.

Finally, some last weak points recognized in the region is the lack of cooperation among the countries and the absence of powerful private multinational companies that can bring different Member state actors on the same board and submit concrete proposals. In Western and North Europe, there have been identified many cases of Sea Motorways potentials based on Intermodal Logistics Networks of strong companies involved in trading and logistics. These companies unite ports, municipal authorities and shipping lines in order to assert subsidies from the EC to improve their infrastructure and services. In the region of South East Europe there are no such initiatives from strong actors, since shipping lines alone are not interested primarily for the improvement of Intermodality but for Maritime alone and therefore, not seeking to play leading role. State entities may be put at the front of such initiatives in the area, but the reluctance of governmental authorities to cooperate due to different interests and aims of each country may hinder these efforts.

Opportunities

The Sea Motorways implementation in the region of South East Europe provides new opportunities for regional development. The underdeveloped infrastructure and inefficient Intermodal facilities and services may be improved and become as equal as these of the developed European countries. Mainly administrative and natural barriers that deter free cargo flow; such as the Balkan borderlines and the low quality of infrastructure will be eliminated in favor of trading and economic growth. Moreover, the perspectives from the creation of Public Private Partnerships will increase not only the interrelation of public and private on a State level but also on a European basis and will increase cohesion among participating Member States.

Furthermore the developing Asian economies and improvement of infrastructures are opportunities for future cooperation among these countries. More specifically, currently the trading linkages of Europe and Chinese, Indian, South East Asian countries and Japan is steadily increasing and a European gateway to these markets is the route through East Mediterranean. Additionally, the envisaged and expected economic progress of the Asian and African countries in the Mediterranean, combined with the improvement of infrastructure (mainly in Middle East) creates new opportunities for viable Sea Motorways schemes, by attracting more cargo volume from road to sea.

Threats

The concept of the Sea Motorways is still on a planning level and the anticipated problems to be encountered according to the actors' estimation have to be tackled before within the legislative framework. The risk of free competition distortion is the more severe issue that EC experts conducting the final implementation guidelines have to cope with. The Community subsidies, which may be considered as public financial aid and create unbalanced conditions in free competition, must be provided to Sea Motorways schemes after a thorough assessment and evaluation on the competition impact.

The risk is mainly to ports and shipping lines, which may benefit from these external economic supports and be more competitive, concerning cost, equipment and services, than others that doesn't participate in such schemes. The port competition distortion is even more

complicated, since the issue of port selection in Sea Motorways is still undefined and there are arguments about the number of ports participating and selection processes in these schemes. The exclusion of several small and medium ports that cannot assist the Intermodal Transport requirements and do not comply with the EC quality standards will lose significant freight flow and run under deficit. On the other hand the clustering, cargo bundling and piling of freight volumes in specific ports will result in port congestion and in the end a Sea Motorway could just transfer the road transport externalities to ports. This is another controversial aspect that the EC experts have to deal with. The issue is approached differently even among the players interested in Sea Motorways, with some suggesting that the selection must be market driven according to the regional conditions and other that the selection of ports should be an internal matter from the respective consortia, according to the special requirements of each scheme.

As far as other threats are concerned, several entities have raised doubts about the efficiency of the Sea Motorways, suggesting that some economies depending on road transport and specific trading routes will lose significant profit from the shifting from road to sea, creating correlated problems against sustainable growth. Finally, there is always the risk of several schemes not being viable after the funding aid, mainly due to high operational costs or wrong estimation of cargo flow in the business plan of the scheme and consequently the Sea Motorways may be abandoned as regular service. This will result in the collapsing of a true Sea Motorway Network in the TEN.

As a concluding statement of this S.W.O.T. analysis concerning the implementation of Sea Motorways not just for the South East Europe but also on a European level, one could say that the ambitious project of the Sea Motorways Network has great perspective and could become indeed the new Community tool for sustainable development through Intermodal Transport, if the economy and competition/distractive aspects are dealt within a specific and transparent legislative framework. Southeast Europe must take full advantage of the funding opportunities and the chance to upgrade totally its transport system, and achieve high development rates to close the gap with North and West Europe.

6. Theoretical Proposals of Sea Motorways schemes

The feasibility study of a Sea Motorway scheme is a complicated process that needs special data requirements, in order to elaborate and estimate all those crucial parameters that have to be taken under consideration along with the added value provided to the European Transport System. However, an attempt to identify potential shipping links that according to the special characteristics and compliance with the community major goals are provided below, based mainly on existing Short Sea Shipping Networks.

a. "Sea Motorway of the Ionian-Adriatic Sea".

The following example is based on the Euro-Med Short Sea Shipping Network of the Grimaldi Group, which is one of the more active shipping companies not only in the Mediterranean but also on an International level. Figure 4 depicts the current operating Network of the group.

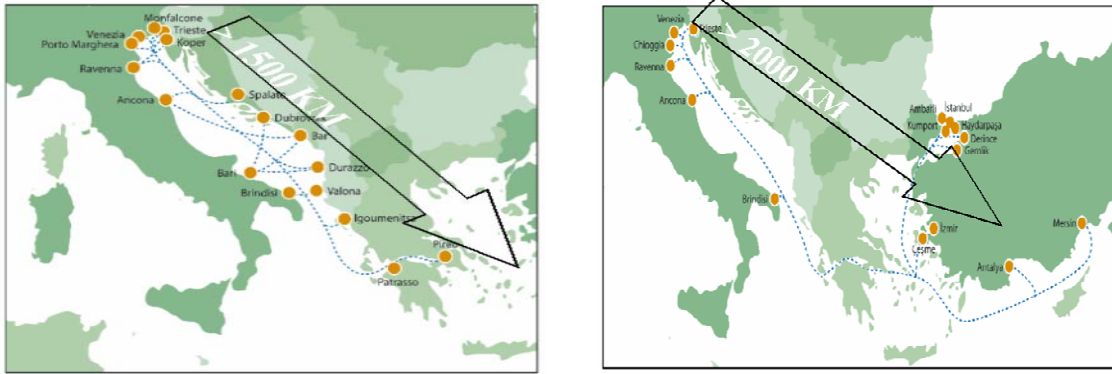


Figure 4: The Grimaldi Group Euro-Med Network [Grimaldi Group website]

This Network could be transformed to a core connection “The Sea Motorway of the Ionian-Adriatic Corridor” connecting Cyprus to Northern Italy and have feeding lines with secondary ports, as shown in Figure 5, for two main reasons:

- Avoid exclusion of smaller port and port competition distortion
- Provide sufficient cargo volume from/to several regional areas to/from the core ports and ensure viability

The potential structure of this Sea Motorway is the following:

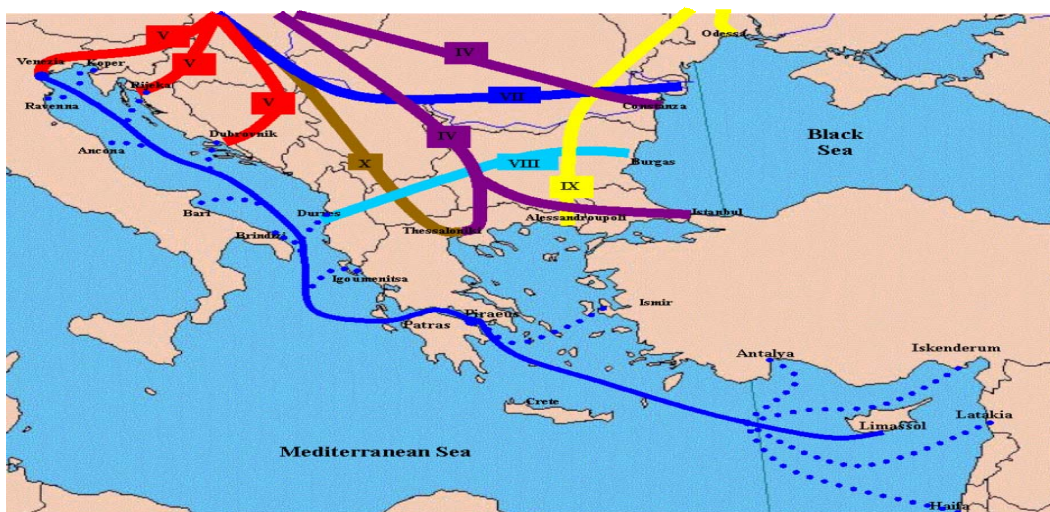


Figure 5: Potential Sea Motorway of the Adriatic-Ionian Sea

b. “The Sea Motorway of the Aegean-Black Sea”

The forthcoming insertion of new Member States from the Balkans by 2007 (Romania-Bulgaria) and the perspective of EU borders in the Black Sea, enact the alternative of Sea Motorways links, not only in the area of the Black Sea also to region of Southern Balkans. Another positive aspect is the creation of new sea links with Russia e that will contribute also to the freight volume required for the success of the Scheme. The potential form of this Sea Motorway may be according to the following Figure 6

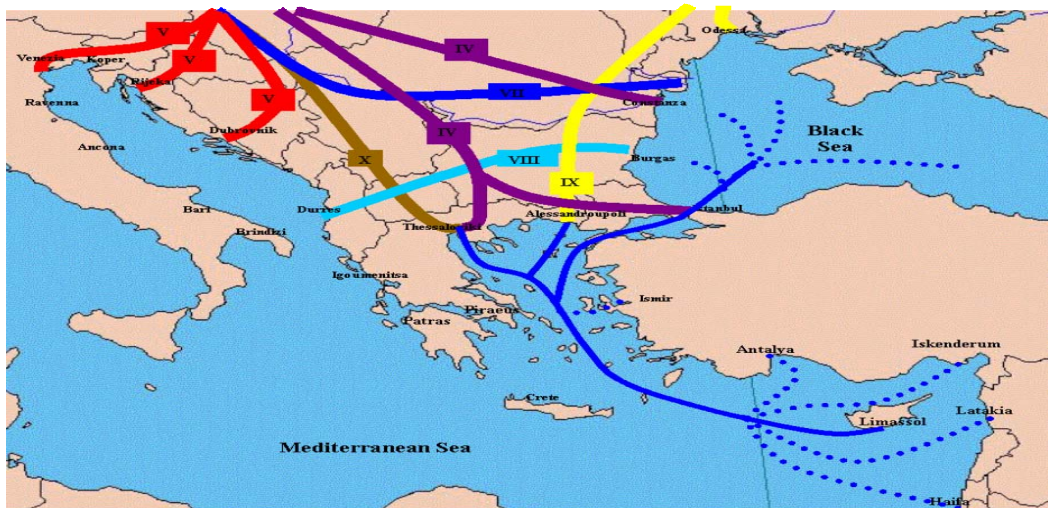


Figure 6: The Sea Motorway of the Aegean-Black Sea

The previous examples are based on current Short Sea Shipping connections, but are evaluated from a viewpoint according to the EC requirements. They both comply with the three main objectives of a Sea Motorways, which are:

- Concentrate Freight flow on sea-based logistical routes
- Increase cohesion among the Member States
- Reduce road congestion through modal shift

Moreover the proposed schemes provide alternatives for Intermodal connections between rail and sea, since they are connected with ending points of Pan-European Corridors in the area. The port selection is made according to the existing status of the SSS connections and the perspective of optimum connections with land infrastructure. However the port infrastructure and equipment are not taken under consideration since this is an issue that will be included in Sea Motorway proposals in order to identify the port investments required. Furthermore, a thorough feasibility study taking all cost aspects under consideration should be made for all proposals to identify the most suitable connections and feeding lines that will allow sustainable regional development.

7. Conclusions

The Sea Motorways is an attempt from the Community to improve Transport environment, reduce external costs from the extent use of road transport and enhance Intermodal transport to achieve economic growth by rebalancing the share of each transport mode. The new tool of the Commission is integrated in the TEN-T and the expansion of the Transport Networks in the Sea is an action believed to provide new opportunities for Maritime and Intermodal transport.

The Top-down approach from the Commission has been made according to the needs of the European Transport policy and objectives. The crucial parameters have been identified and the envisagement of European funding is the incentive to attract all interested to Maritime and Intermodal Transport entities to participate in PPP schemes, improve services and infrastructure, and set viable and credible Sea Motorways schemes. Most of the quality standards and evaluating factors of submitted Sea Motorway proposals have been mentioned in the “Guidelines for Implementation” but still there are issues that haven’t been clarified and conceal risks that would endanger the perspective of an integrated Sea Motorway Network, fully operational by 2010. These aspects have been notified by all interested actors and

associations and anticipate the reaction and the final configuration of the Commission integrating features that would tackle the negative aspects occurring.

On the other hand, the bottom-up approach from the market of Intermodal and Maritime transport, requires from the Commission to adjust the new concept more in the needs of free competition and make it market-driven in order to achieve the more active participation of private sector, where the success of the each scheme is depending. Any competition distorting features must be excluded from the implementation of the Sea Motorways along with any collateral negative consequences occurring. However, no clear or unanimous solutions are provided since the objectives and aims of each actor participating may be contradictory. Nevertheless, several attempts and initiatives of Sea Motorways proposals are implemented throughout Europe according to the provisional guidelines and general features a scheme should have. These proposals are based mainly to existing Intermodal connections and corridors that are already operational and all participating parties compose consortia to assert Community funds and improve their services.

The situation in South-East Europe and East Mediterranean is not as developed as in other regions, since there few powerful players that would compose complete Sea Motorways proposals for the profit of the entire area, despite the perspectives of the strategic location. The EU enlargement, the gate to the Asian market and the Pan-European corridors may provide a good starting point for the development of sustainable logistic chains including long qualitative maritime branches. A golden opportunity for the improvement of transport conditions, revitalisation of railways, inland transport and Short Sea Shipping and construction of high quality infrastructure is created that must not be neglected. The potential routes in the East Mediterranean have been identified theoretically but the SSS connections upgraded to Sea Motorways is a multidimensional subject in need of tendering and transparent procedures.

Finally, the sustainable Intermodal transport chains, based on Maritime, railway and inland transport that will be more sustainable, and should be commercially more efficient, than road-only transport, improving the access to all markets throughout Europe is the added value of the Sea Motorways to the European transport community. However, the reaction of the trading market to the new concept and its acceptability from the actors to be involved is the critical factor that will determine its evolution. Only with the activation of the private sector and operational PPP schemes will the Sea Motorways realise the European vision of the Integrated Transport System of the TEN-T.

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