Black Sea maritime transport corridors in relation with EU projects

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Abstract

Because of its strategic location, the Black Sea constitutes a unique link between Europe and Asia with a very important role in world trade. Also through Istanbul and Çanakkale Straits (Bosphorus and Dardanelles) transportation between the Black Sea and the Mediterranean is provided. These straits are one of the busiest maritime routes in the world with an annual average of 40,000 transit vessel passages.

On the other hand, there are some projects being carried out by the European Union which might affect the maritime transportation in the Black Sea Region. Some of them are related to the Pan-European Transport Corridors and the other is for renovating the ancient Silk Way, which is called Traceca. The related transport corridors are:

- Corridor IV, which can be seen as the backbone of the future Trans-European Transport network,
- The Corridor VII, the Danube, passes through 11 countries,
- Corridor VIII, is a link between the Black Sea and the Adriatic,
- Corridor IX, from Finland (Helsinki) to Bulgaria and Greece, with a branch to Odessa,
- Traceca (Transport Corridor Europe-Caucasus-Asia).

In this paper, the maritime transportation through the Istanbul Strait (Bosphorus) and the Pan European Transport Corridors related with maritime transportation will be discussed with special reference to the Traceca project.

Keywords: maritime transport, Black Sea, pan-European corridors, Istanbul Strait, Traceca.

1 Introduction

The region of the Black Sea offers the best possibility for efficient southeast and east-west transport. The Black Sea area has been the cradle of different



civilisations, and crossroads between Asia and Europe where people of different nationalities, trades, cultures and religions live. In ancient times a "Black Sea culture" centring on sea faring and trade flourished which later was influenced also by the Silk Road. Maritime transportation has always been the main mode of transportation for all the societies that surrounded the Black Sea. The countries of the Black Sea came together for the cooperation of economies, common history, cultural bonds and the interdependence of their national economies. In this context some regional initiatives were developed in order to achieve the goal. One of the most important among them, is the Black Sea Economic Cooperation (BSEC), which has a positive contribution to make in the development of the region in several areas, including transport, power, telecommunications, and the environment [1]. The Black Sea itself is becoming increasingly important as a means of transportation and communication and in the near future this trend will definitely increase. Because of its strategic location it constitutes a unique link between Europe and Asia with a very important role to world trade. As a result of rapidly increasing maritime traffic, the Black Sea environment is under great pressure. The Turkish Straits and the Black Sea have become all the more important for the maritime transportation and trade following the emergence of new independent states in the Black Sea Region, the Caucasus and Central Asia.

The newly discovered oil reserves in the Caspian Basin and the need to transport this oil to western markets have placed the Black Sea and the Turkish Straits under the spotlight, since this route presented by some circles as a commercially viable option as opposed to pipelines for the transportation of Caspian oil.

2 Istanbul Strait: a natural corridor between north and south

The Strait of Istanbul is approximately 31 km long with a width varying from 700 meters to 1500 meters and is characterised by several sharp turns. The ships are bound to alter course in this Strait at least 12 times up to 80 degrees. The dangers of navigation for a large tanker around these sharp turns are very well known by the whole maritime community. Even medium size ships encounter difficulties while navigating in the dangerous sections of the Strait of Istanbul [2].

The Strait of Istanbul runs right across the city of Istanbul, declared as a "World Heritage City" by UNESCO, with more than 10 million inhabitants.

The stakes are high for the Turkish people living on the sides of Istanbul Strait. Istanbul, a metropolis of ten million people, is only meters away from a possible disaster spawned by errant navigation through the strait. Each week a large oil tanker passes by Istanbul through the Istanbul Strait. If one were to be punctured, either by crashing into another ship or running aground, the resulting explosion could release the destructive power of a small nuclear bomb, destroying an area within a thirty-kilometre radius. The newly discovered oil reserves in the Caspian Basin and the need to transport this oil to western markets have placed the Black Sea and the Turkish Straits under the spotlight,



since this route presented by some circles as a commercially viable option as opposed to pipelines for the transportation of Caspian oil.

Daily internal vessel movement alone in the Strait of Istanbul is more than 2500. This figure does not include the movement of transiting ships, leisure crafts and fishing vessels. More than 2.5 million people are daily on the move at sea by intra-city ferries and other shuttle boats, crossing from one side to the other in Istanbul.

Currently, more than 5500 large tankers transporting oil, LPG or other dangerous material pass through the Turkish Straits out of 50.000 vessels per year [3]. Over 100 million tons material is transported through the Straits. More than 150 vessels navigate through the Strait of Istanbul daily, 14 of which are oil tankers. This means a vessel passing at every 10 minutes. The nature, volume and frequency of vessel traffic, the increase in the size and tonnage of the vessels and the nature of cargoes have sharply increased the risk of maritime accidents in the Straits which could have consequences in terms of ecological, environmental and physical disasters. Having faced with this gloomy reality, Turkey had to take some safety measures in the Straits in 1994. The measures, which were contained in the Turkish Straits Regulations, were revised in 1998 taking into account 4 years of practice and experience.

On the other hand, the Turkish Government has installed a modern vessel traffic services (VTS) system in the Turkish Straits. The System has been operational since 30 December 2003. This system is aimed at increasing the level of safety of passage, rather than making it possible for a greater number of vessels to pass through the Straits. It is an undertaking of extreme expense, which Turkey has had to bear. Despite the safety measures that have been taken, the Turkish Straits are still threatened by the ever-growing number of oil tankers and other dangerous cargo vessels.

Year	No. of	Hazardous cargo (million
	tankers	tons)
1996	4248	60.118.953
1997	4303	63.017.194
1998	5142	68.573.523
1999	5504	81.505.453
2000	6093	91.045.040
2001	6516	101.000.000
2002	7427	122.953.338
2003	8097	134.603.741

Table 1:No. of tankers that pass through Istanbul Strait Between the years
1996-2003.

Source: Turkish Maritime Pilot's Association, Undersecretariat of Maritime Affairs, (website).

The BTC (Baku-Tblisi-Ceyhan) pipeline, by-passing the Black Sea and the Turkish Straits, will help to limit the environmental damage related both to the



Black Sea and the Turkish Straits, will contribute to the physical security of Istanbul with its 15 million population and world cultural heritage [4].

The annual figures of tankers carrying hazardous cargo can be seen in table 1 for the last seven years.

3 Pan European Transport Corridors related with the Black Sea

EU, emphasizing the development of common transport policies, published first document on this issue as White Paper in 1992. The White Paper adopted by the European Commission in 2001 sets out the action program for the next decade [5].

As for a comprehensive maritime transport policy, the lack of a port policy created problems for the interpretation of the maritime policy since ports are natural focal points in the sea freight and shipping world. In 1997, the European Commission's Green Paper opened a debate on how to improve the position of ports in the European transport network and confirmed that the efficient functioning of ports as part of the intermodal chain is an essential prerequisite to stimulate the development of maritime transport [6].

EU, believing that improvement and integration of its own transport systems and their integration would be achieved through establishment of transport networks extending to other European countries, created the concept of Pan-European Transport Networks, and the concept of the Pan-European Transport Corridors and Areas, which evolved at the Crete (1994) and Helsinki (1997) Pan-European Transport Conferences. The ten multimodal transport Corridors and the four PETrAs, that have been defined, provide an important focus for investment by the international financial institutions, and significant progress has been achieved in their development. These transport Corridors and Areas are of transnational character, play a very important role in the European transport and economic integration. There is not only the infrastructure linkage between regions, but also the interoperable operational - institutional framework along these arteries that help to bring together the various economies and societies. The 4 PETrAs are as follows:

- sea basins of the Mediterranean,
- Black Sea,
- Adriatic / Ionic seas and
- the area of the Barents sea, / the European part of Arctica;

The Black Sea Pan-European Transport Area (PETrA) is a link connecting the coastal countries of the Black Sea, with each other, the Central and Eastern European countries through the Pan-European Transport Corridors, the Caucasian Isthmus, towards Central Asia through TRACECA (Transport Corridor Europe Caucasus Asia) and the Mediterranean Pan-European Transport Area. A Memorandum of Understanding (MoU) on the development of the Black Sea Pan-European Transport Area has been signed, designed to promote the international transport of passengers and goods in a regionally integrated multi-modal transport network. The completion of maps for each country and a



regional map of BS PETrA has been started. The European Commission was invited to provide software compatible with the GIS (Geographical Information system) software.

There are 10 Pan-European Transport corridors. But related with Black Sea Zone, the following can be considered:

- Corridor IV, which can be seen as the backbone of the future Trans -European Transport network, consists of more than 3600 km. of road and 4340 km. of railways. It is one of the most important east-west corridors, passing over from Germany to Romania, Greece and Turkey, via Czech Republic, Slovakia, Hungary, Austria and Bulgaria.
- The Corridor VII, the Danube, passes through 11 countries and the synergy effects of using its route together with upgraded transport via Black Sea ports can be significant.
- Corridor VIII, is an important link between the Black Sea and the Adriatic. Its development will be an important factor for economic development of the involved countries.
- Corridor IX, the longest of the Pan European Transport Corridors from Finland (Helsinki) to Bulgaria and Greece, with a branch to Odessa, is a historic and important European Corridor, traditionally serving high freight flows, in a north-south direction, serving both the Mediterranean and the Black Sea basins.

The Corridors are considered as priorities for infrastructure investments and development.

The most important Pan-European corridor is the Corridor IV. Corridor IV links Germany, Czech Republic, Austria, Slovakia, Hungary, Bulgaria, Greece and Turkey through a 4340 km long railway line, a 3640 km long road network, 10 airports and 8 ports. The Corridor through the Bosphorus Tube Tunnel Crossing Project developed by Turkey, will provide a Northwest-Southeast transport link which would connect Europe and Asia both by road and by rail.

Another Pan European Corridor that bears great importance is Corridor VIII which links the Adriatic Sea and the Black Sea regions, to Russia and Central Asian countries across Albania, the Former Yugoslav Republic of Macedonia and Bulgaria and is also called "Trans-Balkan Transport Corridor". Black Sea Region countries will have access to the Mediterranean and to America and Asian-Pacific continent through this route. Transport links of Black Sea Region and South and Eastern European countries will be combined. It is envisaged that this transport connection will gain more importance as the most direct and the most natural extension of TRACECA towards Western Europe. Corridor VIII is an additional corridor which will connect Turkey to Macedonia-Albania as well as Italian Adriatic Ports, in other words increase route options. The latest development concerning the Corridor was the adoption of a Memorandum by transport ministers of Albania, Bulgaria, Greece, Italy, Macedonia and Turkey on 9 September 2002 defining the route of the corridor, which will link Europe with the countries of the Caucasus and Central Asia.

Today, when the combined transport techniques have progressed so much, inland waterways can be used in the most efficient way. Their low external cost



of transport, including the environmental benefits, can provide the critical factor to make an inland waterway route attractive. In this respect, Corridor VII, the Danube, can be seen as a very important transport artery, and as a route, efficiently incorporated in the logistics chains of many alternative origins/ destinations, from the Black Sea to the heart of Europe and the Atlantic, and vice-versa. The system is ideal to serve the freight transport of a wide spectrum of goods, such as agri-bulk products (they represent traditionally about 40% of the activity, most of it in the West-East direction), iron and steel products, metallurgical products, construction materials, machinery and manufactured goods, coal, hydrocarbons, scrap, etc. The traffic levels reached the last years, i.e. (excluding internal traffic), totals of about 2.5 million tonnes from the Rhine to the Danube and about 1.8 million tonnes in the opposite direction. Transport by sea and inland waterway is promoted in the White Paper. Short- sea shipping and inland waterway transport, which are underused, are presented as two modes which could provide a means for coping with the congestion of certain road infrastructure [7].

Inland waterway transport is also encouraged as a complement to sea transport since there is a very dense network of rivers and canals within the European Union. Technical requirements for inland waterway vessels, boatmaster's certificates and social conditions for crews will be readapted. Very recently Rhine -Main -Danube link is established. Six member states can use this network where 9% of goods are carried by this way. By the accession of new countries, the Danube Basin will reach up to Black Sea. Some of the countries which are not connected up to the northwest European network have their own systems such as the Rhone, or the Po which are becoming important at regional level. Since 50 tons/km can be carried by 1 litre of fuel, this figure is 97tons/km for rail and 127 tons/km for inland waterways, this system is very energy-efficient and quiet. Apart from this it is very safe mode especially for carrying dangerous goods.

Although there seem to be many problems still existing, the free and efficient navigation of the Danube currently is rather more a political issue than a technical one. The efforts therefore should focus on a political decision to reestablish all the necessary conditions for free and efficient navigation on the Danube, after which technical solutions can be implemented [8].

3.1 Traceca Project (Transport Corridor Europe-Caucasus-Asia)

The Traceca Program is a series of EU funded technical assistance and investment projects aiming towards the development of the transport corridor from the Europe across the Black Sea through the Caucasus and the Caspian Sea to Central Asia, renovation of old "Silk Road". One of the objectives of the project is to establish a link to the Trans-European Networks and Pan European Transport Area. At the Pan-European Transport Conference in Helsinki (1997) it is decided to integrate TRACECA with the Pan European Transport Area (PETRA). In order to support the agreements, investment projects costing ECU 15 million have been incorporated within the TRACECA program. The main links related with maritime transportation is as follows [9]:



Black Sea ports to Baku as the central corridor through the Caucasus,

A ro-ro link from Poti in Georgia to Ilyichevsk for Corridor IX,

A ferry from Ilyichevsk to Varna in Romania linked to Corridor IV,

A ferry from Poti in Georgia to Varna in Bulgaria linked to Corridor VIII.

4 Conclusion

European integration is an ongoing process. It would be a great mistake to draw borders and stop this process in its current limits. Transport has an essential role to play for this integration. European transport planning and policy should take into consideration all the regional interests and the existing potential of developing international routes. The region of the Black Sea offers the best possibility for efficient southeast and east-west transport, provided that its capacity will be strengthen, upgrading its ports system and its multi-modal links towards central and western Europe.

The complete concept of the pan-European networks, including the pan-European transport corridors (PETrA) spans the whole of Europe, from the Atlantic to the Urals, as well as the EU-associated peripheral countries bordering the Mediterranean, which means an economic area and transport system for over one billion people [10].

The development of Euro-Asian transport links (EATL) is currently being considered in more detail within the UNECE (UN Economic Commission for Europe). The prevailing view is that EATL should primarily connect the major regions in Asia with the system of Pan-European Transport Corridors. In pursuing these objectives, it is also felt that in planning the development of Euro-Asian links, great attention should be paid to the adoption of transport facilitation measures before large-scale infrastructure investments can be considered. With this perspective in mind, the UNECE is taking up the planning and development of Euro-Asian transport links in close cooperation with the UN Regional Commission for Asia and the Pacific (UNESCAP). Emphasis will be placed on the application of regulatory and organisational measures ensuring to make the best use of existing infrastructures. Additionally, the UNECE-UNESCAP project also intends to contribute to the identification of priority links and projects along the Euro-Asian corridors [11] Development of transport infrastructures in Southeastern Europe and connection and harmonisation of these infrastructures with internal European networks and transport networks in neighbour countries, are significant as a means of ensuring economic development of countries in the region, improvement of living standards and political and economic integration with Europe through regional integration, social cohesion and provision of sufficient environmental conditions. Today, trade between East and West is worth billions of dollars. Transport has gained particular importance with regard to transfer of excess production from West to East and transfer of raw materials from East to West. According to IRU (International Road Transport Union) statistics, in 2002 the size of the road transport market operating between East and West was approximately 400 billion dollars, the importance of improvement



of transport infrastructures within the region for making better use of this potential would become more obvious.

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