

Distr.: General  
30 January 2015

Original: English

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## **Economic Commission for Europe**

### **Inland Transport Committee**

#### **Working Party on Transport Trends and Economics**

##### **Group of Experts on Euro-Asian Transport Links**

###### **Twelfth session**

Geneva, 3–4 February 2015

Item 2 of the provisional agenda

###### **Identification of cargo flows on the Euro-Asian transport links**

### **Euro-Asian transport: maritime ports - challenges and opportunities**

#### **Note by the secretariat**

## **I. Introduction**

1. The Group of Experts on Euro-Asian Transport Links (EATL) at its eleventh session (ECE/TRANS/WP.5/GE.2/2 (Paragraph 14)) requested the secretariat to send out a questionnaire to selected ports and ask for information about the type of cargo and transport passing through ports relevant to the EATL project.<sup>1</sup>
2. This document is based on replies received from ports. It has three parts. The first one identifies cargo that is suitable for overland transport between Europe and Asia, the second part considers synergies between overland and maritime transport, while the third part outlines challenges in the Euro-Asian maritime transport.

## **II. Identification of cargo**

### **A. Cargo suitable for overland transport between Europe and Asia**

3. Cargo that can be transported by rail from Europe to Asia and vice versa covers a rather limited niche market which includes high value and small volume goods, especially the ones that may be containerised. Those are goods for which air transport is too expensive, while maritime transport is too slow. These goods include:

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<sup>1</sup> The secretariat expresses gratitude to all that provided responses to the questionnaire.

- pharmaceuticals
- electronic products
- IT products
- fashion products
- footwear
- automotive components<sup>2</sup>
- tyres
- construction materials
- timber and wood
- chemicals
- fertilisers
- white goods
- pipes
- agricultural products
- machinery

4. Electronic products are mostly transported from China to Europe, whereas there is an increasing interest to move automotive components, finished products (cars), pharmaceuticals, chemicals and food (including frozen foods) from the EU to China.

5. Cases of specific services include the following ones:

- The Chongqing-Xinjiang-Europe train carries electronics, cars, and medical equipment;
- The international cargo train (Chang'an) from Xi'an to Rotterdam carries trucks, steel, aluminium, apple juice and electric power control units;
- The Zhengzhou-Xinjiang-Europe train carries electronic products, construction machinery, vehicles and parts, medical equipment and other high value products;
- The Suzhou-Manchuria-Europe train (through Siberia) carries liquid crystal monitors and laptops.

6. Regarding temperature sensitive products, DHL introduced in January 2014 the first temperature-controlled rail container service between China and Europe on a year-round basis.

7. Railways are good alternative to maritime transport in the case of high value and small volume goods. Therefore, in the case of products that need to be delivered rather fast and on time, railways offer a good option.

8. Other cargo not mentioned above, is not typically transported by rail and generally does not present good candidate for transport by rail (or road) from Europe to Asia or from Asia to Europe. In general, cheap and bulky products such as raw materials, petroleum products and liquefied gas are not transported overland between Europe and Asia.

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<sup>2</sup> For instance BMW uses the rail connection for car parts from southern Germany to China. Car parts are rather high value and the rail link saves about two weeks.

### III. Synergies between overland and maritime transport

9. Overland and maritime is a typical combination of transport modes between Europe and Asia transport and much attention is devoted to its development. The goal of such a synergy should be to achieve the most efficient combination of low cost transport (maritime transport) and low travel times (railways). An example that has gained much attention in recent years is the transport of goods by sea from China to the port of Piraeus (Greece) and by rail from Piraeus to major distribution centres in Central Europe. This type of transport may be enhanced by further improving the connection and reducing the handling time during the transfer process, between modes.

10. The strongest synergy between overland and maritime transport occurs in container transportation. In recent decades the containerisation of cargos is developing rapidly due to possibility for easy and fast change of transport modes. For example, the hinterland destinations for containers from the port of Riga (Latvia) are the Russian Federation, Ukraine, Belarus, Kazakhstan and Central Asian countries. To enhance synergy between overland and maritime transport, it is necessary to develop rail infrastructure to those destinations in Asia and to open new reliable and fast container train services with minimised border control, customs and other bureaucratic burdens.

11. The Port of Riga has a strong interoperability between maritime and overland transport for dry bulk cargo from the Russian Federation, Kazakhstan and Central Asian countries. To enhance this, it is necessary to improve the port infrastructure and access infrastructure from/to hinterland, to synchronize the port operations and to avoid bottlenecks in cargo handling. For example, at the Port of Riga the maritime infrastructure is fully developed to handle large *Panamax* type vessels, but the rail infrastructure at the port and access to rail infrastructure is not sufficient to receive large amount of dry bulk cargo at the short period of time to allow simultaneous rail-sea handling at the port.

12. When transporting export cargoes from Uzbekistan, synergy is observed in the transport between such goods as cotton and mineral fertilizers. The greatest effect of the synergy is observed in the reduction in the cost of transport of these types of goods to the nearest seaport.

13. The inter-modal change between maritime and railway transport can be developed by unifying the railway system that differs the CIS countries from other European countries. For instance, in Turkey a project was concluded in Samsun Port for a change of gauge of the wagons coming from the CIS countries to Turkey.

14. The types of cargo that might have strong synergies between overland and maritime transport include petroleum products, machinery and other manufacturing products, chemicals, building minerals, solid mineral fuels, foodstuffs, agricultural products, crude oil, metal waste and metal products, chemicals and fertilisers.

### IV. Challenges in Euro-Asian maritime transport

15. Maritime transport is without doubt the dominant transport mode between Asia and Europe, which until recently, exhibited an average growth rate of over 6% per year. This continuous and significant increase in maritime trade, along with other developments in the sector such as increased vessel size, however, has resulted in major congestion problems at several ports and other freight hubs, and has created serious environmental concerns. Traffic concentration problems, both at ports and hinterlands are particularly evident in China, where there are several constraints in access to the hinterland.

16. Slow steaming practices of the shipping lines aiming to reduce fuel cost and lengthy detours often taken to avoid extremely congested ports, have significantly increased trip

durations. Congestion, along with the increase in labour costs, especially on the east coast of China, partly attributed to the workers getting organised in unions and fighting for higher wages, have resulted in several industries locating their manufacturing facilities in the western parts of China and using air transport for moving goods to Europe. As air transport becomes more expensive, rail may increase in relevance.

17. Another important problem in the maritime transport is the increasing number of piracy incidents. Safety of goods and crew is very important and for this reason companies often prefer to take longer routes instead of risking getting involved in a piracy event. This however does not come without a consequence, as it leads to higher costs and increase in the overall travel time. Cargo security, however, can also be an issue in overland transport between Europe and Asia.

18. Currently the competitiveness of rail transport from Asia to Europe is limited by undeveloped rail infrastructure in some parts of Asia. Other limiting factors are border crossing (customs and other complicated) bureaucratic procedures which increase the transportation time and costs. Due to those reasons, air transport is the most appealing for high value, small in size or perishable cargo.

19. Road transport is, for example, important for the Port of Riga. Of all containers coming by sea, 80 % are delivered to destinations in the hinterland (Baltic countries, Russian Federation, Kazakhstan, Central Asia and even Afghanistan) by trucks. Undeveloped rail network in those destinations makes road transport more competitive because of 'door to door' and 'just in time' deliveries.

20. An important problem for container cargo is a necessary repositioning of empty containers due to imbalance in containerised cargo flow in direction of Europe and Asia. For most of transport operators it is necessary to find ways how to increase containerised cargo flow in both directions, to avoid transportation of empty containers.

21. In order to enhance the synergy between the transport modes, facilitation of border crossings with simple border procedures are of utmost importance. Facilitation of the port procedures may have direct and substantial effect on expediting the operations at the container terminals because containerised cargoes require fast exchange of information.

22. The fact that there are two different transport legal regimes and documents as well as different track gauges in OSJD member countries and OTIF members leads to additional formalities and hence waste of time.

23. The biggest problem that exists in the Euro-Asian maritime transport refers to transport times which are extremely long. This problem could be overcome by the use of more efficient sea lines, combination with other modes of transport and improved time consuming procedures when the ships are arriving and departing from ports. Proposals are:

- To improve communication and to simplify the exchange of information between the different parts of the logistic chain.
- Customs have a key role in the facilitation and the boosting of trade. Customs rules and procedures should be efficiently implemented with a view to shortening the time thereby reducing the impact in terms of cost and time for business.
- A major challenge is to meet the environmental challenges that both market forces and society impose upon transport industry in order to boost the blue and green economy and achieve sustainable development.