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Working Party on Inland Water Transport

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Study of the current situation and trends in inland water transport in the ECE region

Note by the secretariat

I. Mandate

- 1. At its fifty-fifth session, the Working Party recalled that, for the next session, the secretariat would be submitting its biannual report on the current situation of inland navigation in the ECE region. The report would focus, as usual, on three major topics, i.e. infrastructure development, transport of goods and general policy issues. (ECE/TRANS/SC.3/191, para. 12).
- 2. The Working Party may wish to exchange information on current situation and trends in inland navigation in the ECE region, including recent developments within the European Union and River Commissions, based on a succinct report that follows, prepared by the secretariat on the basis of information available.¹

II. Introduction

3. During the two-year period addressed in this document, i.e. June 2010 to June 2012, Europe has entered into the second phase of the economic crisis, the economies of the European Union being in stagnation with figures of 1.762 per cent growth for 2010. In the same year economic growth has been recorded in some ECE economies with peaks, in particular, for Turkey (8.2 per cent) and Belarus (7.6 per cent), against the background of

¹ Unless otherwise indicated, the source of information is the communication received by the secretariat from the Government of the country concerned.



sharp declines in Greece (-4.535 per cent), Iceland (-3.473 per cent) and Croatia (-1.373 per cent). Overall, a world average growth of 4 per cent was reached in 2010, ECE economies representing a growth of 2.586 per cent.²

III. Inland navigation infrastructure development

4. No major events in inland waterway infrastructure development in 2010–2012 have been reported by member Governments to the secretariat. Detailed information on progress in implementing the medium- to long-term projects concerning the development of E waterways may be found in the draft revised Inventory of Most Important Bottlenecks and Missing Links in the E Waterway Network (Resolution No. 49). This section presents the events in inland navigation infrastructure development which were highlighted by Governments in their communications to the UNECE secretariat since the last biannual report published in 2010, which formed an integral part of the UNECE White Paper on Efficient and Sustainable Inland Water Transport in Europe (ECE/TRANS/SC.3/189, Chapters 1–4).

A. Czech Republic

5. The development of inland waterways of international importance in Czech Republic is seriously limited due to the obstruction by an environmental movement of the construction of two low-head structures on the Elbe between the German border and the city of Usti nad Labem.

B. France

6. A multi-billion euro Seine-Nord Canal project suffered a serious setback, with doubts cast over private investment in it. The project was to be funded through an initial public subsidy of \in 2.2 billion with the remainder \in 2.1 billion financed by the private sector. In August 2012 however, the French state agency for inland waterways (VNF) recognized that the private bidders "appear to have difficulties in raising capital to fund their part of the project-making it necessary to open dialogue with the European Commission and the European Investment Bank to study the possibilities of seeking recourse to funding through "project bonds", as well as demanding complementary financial support from local and regional authorities".³

C. Hungary

7. The 378 km long Hungarian section of the Danube makes part of the EU TEN network and is subject to the European Union's resolutions on transport infrastructure development. As a result of the preparatory works, a study entitled "Improvement of navigability on the Danube" was prepared and the river regulation plans were drafted. The environmental analyses required for the works were approved in final and binding resolutions, but, subsequently, they were withdrawn. In accordance with the requirements of the European Union, specific works directed at the improvement of navigation should

This figure does not take account of the growth figures for Andorra, Liechtenstein, Monaco and San Marino, which have not been documented.

³ Lloyd's Loading List, 30 August 2012.

have been started in 2010, and then the project set out in the study should be evenly distributed between the years to follow. However, after the withdrawal of resolutions comprising environmental analyses, these works were suspended. In summary it can be said that in the past decade there has been no waterway development in Hungary.

- 8. Between 2002 and 2011, Ft 3.994 million was allocated for the development of landing facilities that culminated at the following results:
 - improvement of transport connections (railway connection) of the intermodal port centre at Győr-Gönyű was completed in 2008;
 - building a Ro-Ro port at the MAHART Budapest Free Port, the construction of an embankment for pool II and dredging of pools I and II, as well as the modernization of railway connection were completed in 2008;
 - new and modern border port facilities were built at Mohács;
 - in Baja the internal road of the national public port was renovated;
 - river information service was improved in the framework of the EU-TEN-T (DATRAM, IRIS EUROPE I. and II) projects.
- 9. The following future developments are envisaged:
 - design works aimed at the complete construction of the Győr-Gönyű port have started, and the planned "large project" may be launched in 2015;
 - further port improvements are planned to take place in the Budapest Free Port;
 - a tender will be launched to build a Mohács public port as a continuation of the border port;
 - further development of the river information service will be undertaken in the framework of the EU-TEN-T (IRIS EUROPE III.) projects.

D. Lithuania

- 10. Lithuania has 921.9 km of inland waterways, including 818.9 km of international importance, 68 km of local importance and 35 km projected. Navigation in Lithuania in 2012 started on 25 April. During the navigation period of 2012, 384.4 km of inland waterways are open for navigation, of which 383.4 km are equipped with navigation signs, of which 197.1 km are marked with lighted markings and 1 km of the Mituva Canal is equipped with a guidance system.
- 11. In 2012 it is planned to start the first phase of a construction project of a new goods pier at Marvel in Kaunas.

E. Russian Federation

- 12. Inland water transport infrastructure development is carried out in accordance with the subprogramme "Inland Water Transport" of the Federal Tusk Programme "Development of the Transport System of Russia (2010–2015)". The main investment projects in the subprogramme are:
 - Construction of a low-head hydraulic complex on the Volga River in Nizhniy Novgorod;
 - Construction of the second leg of the Nizhne-Svirsk hydraulic complex on the Svir River;

- Modernization works on the infrastructure of the Kanal imeni Moskvy and the hydraulic engineering installations of the Universal Deep Water System of the European part of the Russian Federation;
- Modernization of bank production objects and installations;
- Modernization and development of institutional technology communications.

F. Serbia

- 13. Several projects and initiatives are currently under implementation in the Republic of Serbia, aiming to improve infrastructure and inland navigation safety.
- 14. Project "Preparation of documentation for river training works on critical sectors of the Danube River in Serbia" is currently under implementation under which 24 critical sectors have been identified. The Stakeholders' Forum of the project is established in line with the long-term programme of the Directorate for Inland Waterways aimed at the application of modern concept of inland waterways management and proper balancing between interests of navigation and interests of environmental protection.
- 15. Project "Implementation of RIS in Serbia" is entering its final stage of implementation. AIS coverage of the Danube River in Serbia has reached 100 per cent, and is being extended to the Sava River, as well. All governmental authorities have been supplied with RIS equipment and are using it. The equipment programme is still ongoing, enabling all commercial users of inland waterways to acquire necessary RIS equipment.

G. Danube navigation infrastructure

16. As a result of low depths at critical sections of the Danube in the course of the year only an average loaded vessel draught of 2.20–2.30 m is ensured. In exceptional circumstances the vessels' loaded draught must be reduced to as little as 1.8 m in the critical sections. There were, however, also instances (September-November 2011) in which depths at fords were 1.2–1.5 m. Which means that the Danube fleet has to systematically operate under low water conditions. As a result, taking into account the squat effect and under keel allowance, the required fairway depth for a loaded vessels' draught of 2.5 m cannot be ensured without significant capital investment in the construction of additional barrages or without fundamentally redesigning individual Danube sectors. Implementing projects to develop navigation infrastructure on the Danube requires unconditional compliance with international environmental regulations e.g. based on the "Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin" established by the Danube Commission, Sava Commission and the International Commission for the Protection of the Danube River.⁴

IV. Movement of goods

17. The world economy has significantly recovered since its nadir in the middle of 2009. This recovery provisionally ended in the middle of 2011, and was followed by a change of direction back towards recession. This turnaround was caused primarily by fears on the part of market participants and observers that the Eurozone debt crisis cannot be overcome. The heightened nervousness of the markets and banking sector in view of the spreading of the

⁴ Market observation 2012–1.

currency and financial crisis in the Eurozone ended up by impacting on the real economy. For example, in its April 2012 report, the International Monetary Fund (IMF) says "Faced with the recent escalation in perceived risks in the Eurozone, Europe has fallen back into recession. Numerous economic indicators – both macroeconomic and those emanating from the transport sector – point to a slowdown in the second half of 2011. The oil price can be cited here as an important macroeconomic indicator, its progression being clearly correlated with the slowdown in the second half of the year.⁴

A. Austria

18. On the Austrian section of the Danube just under 10 million t, 10 per cent less was carried in 2011 than the year before (2010: approximately 11 million t). Transit traffic had the worst of it, namely, shrinking by 17 per cent. Cross-border receipts fell by 10 per cent, exports by 7 per cent. Only domestic traffic posted an increase, significantly up at +24 per cent. Domestic traffic was unable, however, to get things back into the black, but at best somewhat mitigate the overall decline.⁴

B. Belgium

19. Increases were posted in 2011 on the Belgian waterways, both in Flanders and in Wallonia. Vessel traffic in Flanders increased by 5.7 per cent to reach 72.5 million t; this figure was more than one million tonnes more than the previous record result in 2007. Inland container traffic increased by 518 thousand TEUs (+4 per cent compared with 2010). Container traffic as well broke the record 2007 figure. Transport volumes in Wallonia rose 5 per cent to 44.3 million t. 34 per cent of this was accounted for by cross-border shipments (exports), 32 per cent by cross-border receipts (imports), 26 per cent by transit traffic and 8 per cent by domestic traffic.⁴

C. France

20. Three per cent less freight by volume was transported on French waterways than in the year before. Of the 58.6 million t in 2011, 39.4 per cent were accounted for by the "sand, soil & building materials" segment. It even proved possible to increase volumes by 3 per cent in this important segment. In the case of agricultural products, also an important segment (with a 17 per cent share), transport volumes fell by 9 per cent. Container traffic recorded 532,000 TEU, or 8.6 per cent more than in 2010. Container traffic on the Seine continued to flourish, growing by 21.5 per cent. Since 2000, the quantity of TEUs on the Seine has increased more than sevenfold. Inland container traffic on the French section of the Rhine has declined by 14 per cent year-on-year, whereas the waterways in the north of France and the Rhône have gained ground.⁴

D. Germany

21. In 2011 a total of 6 million t were transported on the German Danube between Kehlheim and the Austrian border, compared with 7 million t the year before. At the Jochenstein lock as well (German-Austrian border point on the Danube) the performance was significantly below that of the previous year at 4.5 million t (-15 per cent). The freight transport on the German section of the Danube was hampered by the severe drought and consequent obstacles to navigation. The drought in the spring and in November resulted in numerous ships running aground, blocking navigation. Almost all of these accidents occurred in the difficult to negotiate stretch of the Danube between Straubing and

Vilshofen, where the loaded draught in November was only 1.80 m, compared with the minimum loaded draught of 2.80 m. The river section in question is currently the subject of an EU inquiry. This survey is to devise an appropriate upgrade scheme.

- 22. Navigation on the Elbe experienced very patchy regional development. Freight traffic on the Upper and Middle Elbe suffered a relatively significant decline of -13 per cent (Upper Elbe) and -17 per cent (Middle Elbe). The drought will have had a negative impact here. On the Lower Elbe, by contrast, within the catchment area of the seaport of Hamburg, there was an approximately 5 per cent increase in freight traffic. The Lower Elbe in the Hamburg region, as the graphic illustrates, is typically used much more for freight transport than the Upper and Middle Elbe. 11.3 million t were transported on the Elbe between Hamburg and the North Sea in 2011.
- 23. Freight transport on the Mittelland Canal remained broadly constant compared with the previous year, at approximately 15 million t.
- 24. Freight transport on the Main was 15.5 million t; that corresponds to a sharp decline of 2.9 million t or 16 per cent.
- 25. The Ruhr region possesses numerous canals, the most important of which are the Rhine-Herne Canal and the Dortmund-Ems Canal. Freight transport amounted to 38.1 million t within the Ruhr district in 2011, compared with 43.4 million t the year before. The Dortmund-Ems Canal branches northward from the Ruhr towards the Ems and the North Sea. Together with the Ems, which adjoins it, the part of the Dortmund-Ems situated outside the Ruhr constitutes an autonomous section of waterway. In 2011, 19.5 million t were transported on this section, compared with 19.8 million t in 2010.⁴

E. Hungary

- 26. Goods transported by inland waterways to Hungarian destinations consist nearly exclusively sand and gravel. A considerable part of the goods transported on Hungarian waterways are carried to destinations abroad. Based on the statistical data, the total volume of loaded and unloaded goods reported by operators was 6,865 thousand t in 2010 and 4,628 thousand t in 2011, with a highly significant part comprising agricultural and mineral oil processing products. The smaller but not negligible part of the total loaded volume comprised coal, non-ferrous metal and other mining products (sand and gravel), metal base material and metal processing products.
- 27. In view of the data of the previous years, in a European perspective with its 4.5 per cent modal split share, the performance of Hungary's inland navigation remains slightly below EU27 average (5.6 per cent).

F. Lithuania

28. In the first half of 2012 42,500 t of goods were transported on the inland waterways of Lithuania compared to 64,600 t in 2011 and 68,000 t in 2010.

G. Russian Federation

29. In 2011 126.7 million t of goods were transported on inland waterways of the Russian Federation, of which 108.6 million t domestically (+23.6 per cent) and 18.0 million t in international operations (+5.8 per cent), resulting in an overall 20.7 per cent increase over 2010 figures. Performance grew by 8.4 per cent resulting in 59.6 billion tonne-km.

The volume of handling operations by inland ports in 2011 was 184.3 million t. A total of 14.1 million passengers were transported in 2011, all modes of transport combined.

H. Turkey

30. Current state of inland water transport:

Lake Van			
Line	Number of vessels running	Number of vehicles carried by vessel	Number of passengers carried by vessel
Van-Tatvan	17	775	23 000
Keban reservoir on the I	River Euphrates		
Line	Number of vessels running	Number of vehicles carried by vessel	Number of passengers carried by vessel
Elazığ- Çemişgezek/Tunc eli	2	50 000	250 000
Elazığ- Pertek/Tunceli	3	250 000	500 000
Elazığ- Ağın/Elazığ	2	22 650	50 000
Karakaya reservoir on th	he River Euphrates		
Line	Number of vessels running	Number of vehicles carried by vessel	Number of passengers carried by vessel
Battalgazi-Baskil	2	-	-
Atatürk reservoir on the	River Euphrates		
Line	Number of vessels running	Number of vehicles carried by vessel	Number of passengers carried by vessel
Kahta-Hilvan	1	3 600	10 000
Kahta-Siverek	2	3 700	9 200
Birecik reservoir on the	River Euphrates		
Line	Number of vessels running	Number of vehicles carried by vessel	Number of passengers carried by vessel
Birecik-Rum Kalesi	1	-	3 390
Halfeti-Rum Kalesi	5	-	20 000

I. United Kingdom of Great Britain and Northern Ireland

31. In 2010, 19 per cent of the United Kingdom's domestic freight was transported by water transport, against 68 per cent by road, 9 per cent by rail and 5 per cent by pipeline. 71

per cent of goods moved on UK domestic waters was traffic around the coast, 26 per cent was one-port traffic (to or from offshore installation, or dredged materials) and 3 per cent was inland waters traffic (including both non-seagoing traffic and seagoing traffic crossing into inland waters).

- 32. In the decade since 2000, inland waters traffic has fallen by 18 per cent. However, at 1.4 billion tonne-kilometres, 2010 inland waters traffic is 7 per cent higher than in 2009.
- 33. Crude petroleum and petroleum products were the main type of cargo moved in 2010, accounting for 67 per cent of all water-borne freight moved.
- 34. The River Thames was the busiest of the major inland waterways, with 0.55 billion tonne-kolometres of goods moved (40 per cent of inland waters total) in 2010. This was followed by the River Forth and the River Humber (both at 0.17 billion tonne-kolometres).
- 35. The leading areas for inland waters traffic in terms of goods lifted⁵ were Thames and Kent (40 per cent of total traffic), Scotland's East coast (20 per cent), Lancashire and Cumbria (13 per cent) and Humber (12 per cent). Humber, which has a large proportion of foreign tonnage (87 per cent), returned the second highest amount of goods moved after Thames and Kent.
- 36. Of the 43 million tonnes lifted on inland waters in 2010, liquid bulk made up 37 per cent, dry bulk 31 per cent, and unitized traffic 22 per cent. In terms of goods moved, dry bulk made up 37 per cent, liquid bulk 30 per cent, and unitized traffic 23 per cent.
- 37. The mean length haul of non-seagoing traffic was 47 km in 2001. In this year 35 per cent of cargo travelled 20 km or less whilst 21 per cent travelled more than 70 km.

V. Transport by traffic axes and regions

A. Rhine

- 38. The 2010 result was exceeded in 2011 by one per cent, with 185.7 million t of freight moved in the so-called traditional Rhine traffic (on the section between Basel and German/Dutch border). Various disruptive factors prevented a better performance. Worthy of mention is the accident involving the acid tanker in January, which caused the closure of the Rhine for a period of several weeks. Other adverse factors were the low water in March and November. And finally the weakening of the economy in the second half of the year also depressed the result.
- 39. Differences in traffic intensity can be observed between individual stretches of the Rhine. 27.8 million t were transported on the Upper Rhine, 73.8 million t on the Middle Rhine and 172.2 million t on the Lower Rhine. All three stretches of the Rhine suffered minor traffic losses compared with 2010, but the decline was not uniform. The Lower Rhine fared best with freight traffic on the Upper Rhine and on the Middle Rhine experiencing more significant reductions.

⁵ Traffic is measured both in terms of "goods lifted" (the tonnage of goods transported) and "goods moved" (the tonnage of goods lifted multiplied by the distance travelled and expressed as tonne-kilometres).

B. Danube

40. The main indicators of the volume of goods carried on the Danube in 2010 and 2009 are presented in table 2.6

Volume of goods carried (thousands t)

Direction of the goods transport		2010
Export from ports on the Danube to ports of other countries on the Danube		25 373
Import to ports on the Danube from ports of other countries on the Danube		18 407
Domestic traffic between ports on the Danube		9 802
Total traffic between ports on the Danube		53 323
Export from ports on the Danube to non-Danube ports of other countries		5 552
Import to ports on the Danube from non-Danube ports of other countries		2 687
Domestic traffic between ports on the Danube and non-Danube ports		189
Total freight between ports on the Danube and non-Danube ports		8 428
Domestic Danube upstream traffic in through transit		9 674
Domestic Danube downstream traffic in through transit		5 562
Total freight in through transit		15 236
Total freight on the Danube		76 978

- 41. The growth of the volume of freight in 2010 increased by 5.2 per cent compared to 2009, and 25 per cent compared to 2001. Of the overall volume of freight for 2010, Romania represents 18,366 thousand t, Serbia 15,348 thousand t, Austria 11,050 thousand t and Slovakia 10,103 thousand t.
- 42. In 2010, the largest ports on the Danube with a turnover of more than 3 million t were Izmail (6,780 thousand t), Linz (5,202 thousand t), Galati⁷ (4,677 thousand t), Bratislava (3,968 thousand t), Smederevo⁸ (3,030 thousand t). The ports of Reni, Ruse, Pančevo, Dunaújváros, Budapest, Vienna, and Regensburg had a turnover of over 1 million t.
- 43. Goods transport on the Danube-Black Sea Canal (Cernavodă-Constanța) peaked at 9,270,733 t in 2009, of which 39.5 per cent were cereals. In 2009 the main transport on the Canal was performed by vessels under the flag of Romania (71.8 per cent), Hungary (6 per cent), Ukraine (4.9 per cent) and Bulgaria (4.5 per cent).

⁶ Data from some member States of the Danube Commission are missing.

⁷ Data for 2009.

⁸ Data for 2008.

⁹ Rechnoy Transport (XXI vek), No. 2, 2012.

C. Main and Main-Danube Canal

44. In 2011 the freight transport on the Main was 15.5 million t that corresponds to a sharp decline of 2.9 million t or 16 per cent. Approximately 5 million t of freight were carried on the Main-Danube Canal in 2011, compared with 6.2 million t the year before (-20 per cent). 4.1 million t were recorded at the Kehlheim lock, 2.2 million t of which were carried towards the Danube and 1.9 million t towards the Rhine. On a year-on-year comparison 2011 / 2010, traffic bound for the Rhine declined by more, -33 per cent, than traffic bound for the Danube (-18 per cent).⁴

D. Mosel

- 45. A total of 7,513 cargo carrying vessel units with a cargo of 12.6 million t passed through the Koblenz lock in 2011. The year before, the figure was 14.3 million t. There was a decline on the French section of the Mosel in Apach as well, by 14 per cent to approximately 7.9 million t. 8.2 million t were recorded at the Luxembourg lock at Grevenmacher and thus 15 per cent less than the year before. The sharpest drop was experienced at the Koblenz lock for solid mineral fuels (-18 per cent) as well as iron ore and scrap metal. Together with agricultural and forestry products, these two categories of goods constitute quantitatively the most important goods segments on the Mosel, which in the case of coal and ores is attributable to the steel industry in Lorraine and in the Saarland. Looking at things by month reveals that May and November, in particular, were very bad months in a multi-year comparison. This applies both to the lock at Koblenz as well as the Apach lock in France and the Grevenmacher lock in Luxemburg. The reason for this was the drought experienced in these months, which was also the main reason for the poor performance for the year.⁴
- 46. Overall, developments in inland navigation in Europe in 2011 presented a mixed picture depending on the river or region being studied. In total, the Rhine posted a small decline of 1 per cent, which in the context of the adverse circumstances throughout the year (accident in January, pronounced low water levels in the spring and November) can be seen as a remarkable result. Other waterways, such as the Danube, the Elbe, the Mosel and the Main-Danube Canal suffered losses of approximately 15 per cent (primarily because of the drought and low water levels). Transport volumes fared relatively well in France and Belgium, where sands, soil and building materials account for approximately 40 per cent of the transport volume. This freight segment responds less sensitively to economic downturns. In Belgium, there was an approximately 5 per cent increase and in France a moderate decline of approximately 3 per cent.⁴ By contrast, a positive dynamic was observed in the Russian Federation where both transport volume and performance grew considerably in 2011 in comparison with 2010.

VI. General inland water transport policy issues

A. Hungary

47. As a member State of the European Union, Hungary makes effort in implementing the transport policy published in the EU's White Paper.

B. Lithuania

48. With the accession of Lithuania into the European Union, new perspectives have opened for the development of inland water transport. The main activity of the State enterprise "Directorate of Inland Waterways" is the implementation of the programme "Ensuring the inland waterway connection", including the technical servicing of inland water infrastructure, dredging, fairway straightening, hydrographical measurement, and fairway marking.

C. Russian Federation

49. A number of regulations in the field of inland navigation have been adopted recently in the Russian Federation. In particular, the "Technical Regulations concerning the Safety of Inland Water Transport Objects", adopted by the Governmental Decree of the Russian Federation No. 633 of 12 August 2010, establishing requirements for vessels of projects which have been approved and construction contracts concluded from 23 February 2012, as well as materials and equipment for vessels, manufactured since 23 February 2012. Amendments have been made to the Inland Water Transport Code of the Russian Federation. In particular, the terms "small craft" and "pleasure craft" have been introduced; the procedure for Governmental registration of vessels has been explained in more detail; provisions governing the navigation of vessels under foreign flags on the on the inland waterways of the Russian Federation; a fleet safety management system for inland water transport is foreseen.

D. Serbia

50. The work on Strategy for Development of Inland Water Transport of the Republic of Serbia will start later this year. Currently, a public hearing on the Law on Vessels Nationality and Registration is under way.

E. Danube¹⁰

51. Within the framework of the EU Danube Region Strategy (EUSDR) and on the basis of an initiative of the Inland Water Transport sector, most of the Ministers of Transport of the Danube riparian states signed a Declaration on effective waterway infrastructure maintenance on the Danube and its navigable tributaries on 7 June 2012 in Luxembourg during the EU Ministers' Council. This initiative was triggered by an extreme low-water period in the fall of 2011 on the Danube which revealed shortcomings in waterway maintenance by some of the Danube countries. Also within the EUSDR, Romanian and Bulgaria established an Inter-Ministerial Committee in order to streamline the implementation and development of waterway infrastructure related projects along the common Rumanian-Bulgarian stretch of the Danube. More Information on this activity can be found in the Roadmaps section of EUSDR annual report.

¹⁰ Extracted from EUSDR annual report.