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Working Party on Inland Water Transport

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Current situation and trends in inland water transport

Summary on recent developments in the field of inland navigation

Note by the secretariat

I. Mandate

1. This document is submitted in line with Cluster 5: Inland Waterway Transport, paragraph 5.1 of the programme of work 2016-2017 (ECE/TRANS/2016/28/Add.1) adopted by the Inland Transport Committee at its seventy-eighth session on 26 February 2016.
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 (EU) and River Commissions, based on the information that follows, prepared by the secretariat on the basis of the data available.^{1, 2}

II. Inland navigation infrastructure development

3. The present section highlights the inland waterway infrastructure projects that are being realized or planned by member States as indicated below.

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

² The previous report was issued in ECE/TRANS/SC.3/2014/1.

A. Netherlands

4. The Maxima Canal, a 9 kilometre-long waterway to the east of 's-Hertogenbosch linking the river Maas to the Zuid-Willemsvaart waterway at Den Dungen, was put into service in December 2014. The locks are accessible for vessels with the maximal regular dimensions of 105 x 9.6 x 3 m, an authorization can be given for bigger vessels; vessels with dimensions of 110 x 7.25 x 3 m are also allowed, but only in case the water level in the Maas at Empel reaches NAP³ + 2.55 m. The under-bridge headroom is 7 m. At the same time, the Zuid-Willemsvaart waterway from Den Dungen to Veghel (137 km) is also upgraded to conform to the new Maxima Canal dimensions. The Maxima Canal and the upgraded Zuid-Willemsvaart waterway ensure better access to North Brabant by water.

5. The project Maasroute (MoMaRo Phase 2) is aimed to modernize the Maas for class Vb requirements with a draft of 3.50 m at the north-south link Weurt-Ternaaien. It is planned to ensure the under-bridge headroom of 9.10 m at the Weurt-Born section and 7.00 m at the Grave-Lith and Born-Ternaaien sections. The opening is planned for 2018.

6. The upgrading of the Julianakanaal as a part of the MoMaRo Phase 2 project is under way. The aim is to widen the canal and introduce a new traffic management system. The project was launched in 2014 and the opening is planned for 2018.

7. Construction of the fourth lock chamber in Ternaaien is completed in 2015. The project aims to increase the capacity of the lock complex Ternaaien and increase the reliability of the waterway to reduce waiting time. The project was launched in 2011-2012.

B. Poland⁴

8. The possibility to boost inland waterway transport in Poland depends on the improvement of the operating parameters of waterways. The Transport Development Strategy for 2020 (with a time horizon to 2030) of 22 January 2013 and the Implementing Document for the Transport Development Strategy of 24 September 2014 (the Implementing Document) provide for investments aimed at restoring the operational parameters specified in the Ordinance of the Council of Ministers of the Republic of Poland of 7 May 2002 on the classification of inland waterways⁵ and increase the length of navigation routes with the parameters of at least class III navigability.

9. The above objectives served as the basis for formulating selection criteria for projects eligible for co-financing from the EU funds under the 2014-2020 financing programme. Priority investments defined in the Implementing Document include 25 projects, of which the highest ranks were given to investments planned on the Oder river waterway. It is the projects related to modernisation of the Oder River Waterway that have the greatest chance for implementation, since due to the limited amount of European funds, only some projects from the list can be carried out.

10. Due to the limited funds for investments on inland waterways between 2016-2020, searching for additional sources of financing is essential. For example from CEF, or within the framework of public-private partnership, in particular with regard to co-financing of dams, where hydropower plants will be built.

³ Normal Amsterdam Peil (mean sea tide level).

⁴ The Ministry of Maritime Economy and Inland navigation of the Republic of Poland, "Assumptions for the Development Plans of Inland Waterways in Poland for 2016-2020 with perspective by 2030", adopted by the Council of Ministers of the Republic of Poland on 14 June 2016.

⁵ Journal of Laws 2002 No. 77, item 695.

C. Romania

11. Providing the minimum conditions for the navigation on the Danube is the main priority of the Ministry of Transport of Romania for the inland waterway transport field. The main infrastructure projects in Romania:

(a) Calarasi (375 km) – Braila (175 km) sector of the Danube: the general objective of the project is the improvement of the conditions of navigation in order to assure depths of 2.5 m, as recommended by the Danube Commission, all year round on the main branch of the Danube River (“Old Danube”). The contract for the execution of works in 3 critical points (Bala, Epurasu and Ostrovul Lupu) was signed in April 2009, the works started in August 2011 and were finalized, for Epurasu and Ostrovul Lupu, in 2016. The value of the contract was €49.65 million and the financing came from the Sectorial Operational Programme for Transport 2007-2013 (SOPT). For the Bala section (347 km – 342 km), the works were not completed and a new study aimed at identifying alternative solutions is ongoing and will be finalized in December 2016. The environmental factors were closely monitored throughout the works and will continue for another 2 years after the completion of the hydro-technical works (project ROMOMED).

(b) The project FAST Danube is aimed at the improvement of the conditions for navigation on the Romanian–Bulgarian common sector of the Danube from 845.5 km (Timok) to 375 km (Silistra). This sector of the Danube is a free flowing section characterized by variable hydrodynamic conditions (seasonal level variations of about 8 m), frequent fairway alterations and river bed erosion. The main objective of the project is to identify the technical solutions to be implemented in order to ensure navigability on this section and safe transport activities on the Danube throughout the entire year, in accordance with the recommendations of the Danube Commission. The project was approved for funding under the Connecting Europe Facility (CEF) under the 2014 call for funding and the total budget is €5.25 million. Currently the contract is in the tendering phase and was expected to be signed at the end of September 2016.

(c) Modernization of locks on the navigable canals: the objective of the project is the modernization of the Agigea, Cernavoda and Ovidiu locks as well as other equipment and installations including pumping stations and high water galleries, operated by the Administration of the Navigable Canals in Romania. The value of the projects is €228.6 million and they are being financed through SOPT and Operational Programme for Large Infrastructure 2014-2020. The works started in August 2013 and will be completed in December 2019.

(d) The protection of banks on the Danube–Black Sea Canal and Poarta Albă–Midia Navodari Canal. When these two canals were opened in 1984 and 1986 only the minimum works needed for normal traffic had been carried out. Currently, works are being carried out within the allocated state budget limits in order to consolidate the stability of the high banks.

(e) The protection of the banks on the Sulina Canal is one of the main projects for the maritime sector of the Danube and the main objective is the protection of the Sulina Canal against deterioration from the navigation lane caused by maritime vessels of high capacity as well as the protection of the Danube Delta area, the population and economic emplacements against floods. The works on the 15 km stretch were carried out between 2010-2012. In 2016 a feasibility study was carried out for works on a further 50 km. The estimated value of works is €84.61 million and the financing will be assured from the Operational Programme for Large Infrastructure 2014-2020.

(f) The project FAIRWAY Danube aims to implement the Fairway Rehabilitation and Maintenance Master Plan of the Danube and its navigable tributaries endorsed by the Ministers of Transport from the countries covered by the EU Strategy for the Danube Region (EUSDR) in December 2014. The aim of the Master Plan is to achieve and then ensure good navigation conditions throughout the year by providing a minimum level of service. The project was approved for funding in 2014 and the budget allocated for Romania is €9.19 million out of the total budget of €23.36 million. The project is implemented by a consortium of 7 partners from 6 countries (Austria, Bulgaria, Croatia, Hungary, Romania and Slovakia). The project foresees the procurement of a surveying vessel and a marking vessel.

(g) The project SWIM (Smart Waterway Integrated Management) aims to remove bottlenecks by procuring vessels to carry out works to improve the navigability of the Danube. The value of the project is €12.22 million and the financing is secured from the 2015 CEF.

(h) The Danube River Ports: the rehabilitation of port infrastructure in Oltenita will be finalized in 2016. The value of works is €5.68 million and the financing assured through SOPT. The construction of a multimodal terminal in Galati was approved for financing through the 2015 CEF. In Giurgiu a new terminal for barge loading/unloading is under construction with 2014 CEF financing. By 2020, further port infrastructure rehabilitation projects will be implemented in Giurgiu, Braila, Tulcea and Calafat.

(i) In the port of Constanta, in 2015, three large infrastructure projects were finalized: the extension of the North breakwater by 1,050 m, the construction of a road bridge over the Danube-Black Sea Canal connecting the port with A2 highway and the increase of railway capacity in the river-maritime area of the port. In future new projects are envisaged in order to increase depths in the port basins, the extension of Piers 3 and 4 South as well as the improvement of railway and road connections.

D. Russian Federation

12. In accordance with the Inland Water Transport Development Strategy of the Russian Federation for the period till 2030 adopted by the Order of the Government of the Russian Federation No. 327-p of 29 February 2016,⁶ the following projects are envisaged in order to eliminate bottlenecks on inland waterways which are included in the Unified Deep Water System of European Russia:

- construction of a second parallel lock at the Lower Svir hydraulic complex between 2021-2023;
- construction of the Nizhegorodsky low-head hydraulic complex on the Volga between 2016-2020;
- construction of the Bagayevsky hydraulic complex on the Don between 2016-2020.

Planning of second parallel locks on the Volga-Don waterway is envisaged between 2027-2030.

⁶ <http://government.ru/docs/22004/>.

E. Slovakia

13. Reconstruction of the bridge in Bratislava (1,868.14 km) was completed in December 2015 in order to increase the height under the bridge to 9.10 m and thus eliminate the strategic bottleneck. The dimensions of the navigable corridor are 100 x 10 m.⁷

III. Movement of goods

14. The present section highlights the data on the movement of goods by inland waterways in the ECE region in recent years.

A. Data on cargo transportation by inland waterways in the ECE region in 2011-2015

15. Statistical data on cargo transportation by inland waterways in the ECE region in 2011-2015, in thousands of tons, are shown in table 1 below.⁸

Table 1

<i>Country/Year</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
<i>Austria</i>	9 943	10 714	10 710	10 122	8 599
<i>Belarus</i>	6 711	4 023	4 486	3 758	2 960
<i>Belgium</i>	172 906	190 288	187 404	190 303	188 158
<i>Bulgaria</i>	14 448	16 378	16 726	16 922	17 201
<i>Croatia</i>	5 184	5 934	5 823	5 377	6 642
<i>Czech Republic</i>	911	836	608	802	850
<i>France</i>	68 471	68 170	68 926	65 488	63 094
<i>Germany</i>	221 966	223 170	226 864	228 489	221 369
<i>Hungary</i>	7 175	8 135	7 857	7 825	8 163
<i>Kazakhstan</i>	1 082	1 291	1 107	1 321	1 218
<i>Lithuania</i>	95	89	36	47	68
<i>Luxembourg</i>	8 956	8 506	8 987	8 390	7 107
<i>Republic of Moldova</i>	149	144	... ⁹
<i>Netherlands</i>	345 469	350 069	356 062	366 627	359 898
<i>Poland</i>	3 143	2 574	3 185	5 899	5 036
<i>Romania</i>	29 396	27 946	26 858	27 834	30 020
<i>Russian Federation</i>	125 867	137 488	134 860	119 080	118 120
<i>Serbia</i>	2 146	1 998

⁷ Informal document SC.3/WP.3 No. 4 (2016).

⁸ Sources of data: UNECE Transport Statistics Database, www.eurostat.eu, www.belstat.gov.by, <http://stat.gov.kz>, Information and statistics bulletin "Transport of Russia" of the Ministry of Transport of the Russian Federation, <https://stats.oecd.org>, <https://ukrstat.org>.

⁹ Data is not available.

Country/Year	2011	2012	2013	2014	2015
<i>Slovakia</i>	8 211	8 242	8 107	7 010	5 721
<i>Switzerland</i> ¹⁰	5 678	7 211	6 830
<i>Ukraine</i> ¹¹	9 900	7 800	6 300	6 000	6 400
<i>United Kingdom of Great Britain and Northern Ireland</i>	3 478	3 693	5 252	5 689	5 594
<i>EU</i>	526 427	531 452	534 781	552 405	544 712

16. Statistical data on the cargo turnover by inland waterways in the ECE region in 2011-2015, in millions of tons-km, are shown in table 2 below.¹²

Table 2

Country/Year	2011	2012	2013	2014	2015
<i>Austria</i>	2 123	2 191	2 353	2 177	1 806
<i>Belarus</i>	143	134	84	49	21
<i>Belgium</i>	9 251	10 420	10 365	10 451	10 426
<i>Bulgaria</i>	4 310	5 349	5 374	5 074	5 595
<i>Croatia</i>	692	772	771	716	879
<i>Czech Republic</i>	42	38	25	27	33
<i>France</i>	9 035	8 916	9 213	8 803	8 516
<i>Germany</i>	55 027	58 488	60 070	59 093	55 315
<i>Hungary</i>	1 840	1 982	1 924	1 811	1 824
<i>Kazakhstan</i>	78.5	61.9	32.3	26.6	30.9
<i>Luxembourg</i>	305	290	313	285	235
<i>Republic of Moldova</i>	1	1	1	1	...
<i>Netherlands</i>	46 462	47 593	48 627	49 295	48 535
<i>Poland</i>	161	131	91	110	88
<i>Romania</i>	11 409	12 520	12 242	11 760	13 168
<i>Russian Federation</i>	58 174	76 274	80 100	72 320	62 560
<i>Serbia</i>	963	605	701	759	...
<i>Slovakia</i>	931	986	1 006	905	741
<i>Ukraine</i> ¹³	7 365	5 325	4 615	5 462	5 434
<i>United Kingdom of Great Britain and Northern Ireland</i>	144	165	211	169	166
<i>EU</i>	141 970	149 988	152 796	150 877	147 327

¹⁰ On the Rhine.

¹¹ River and sea transport.

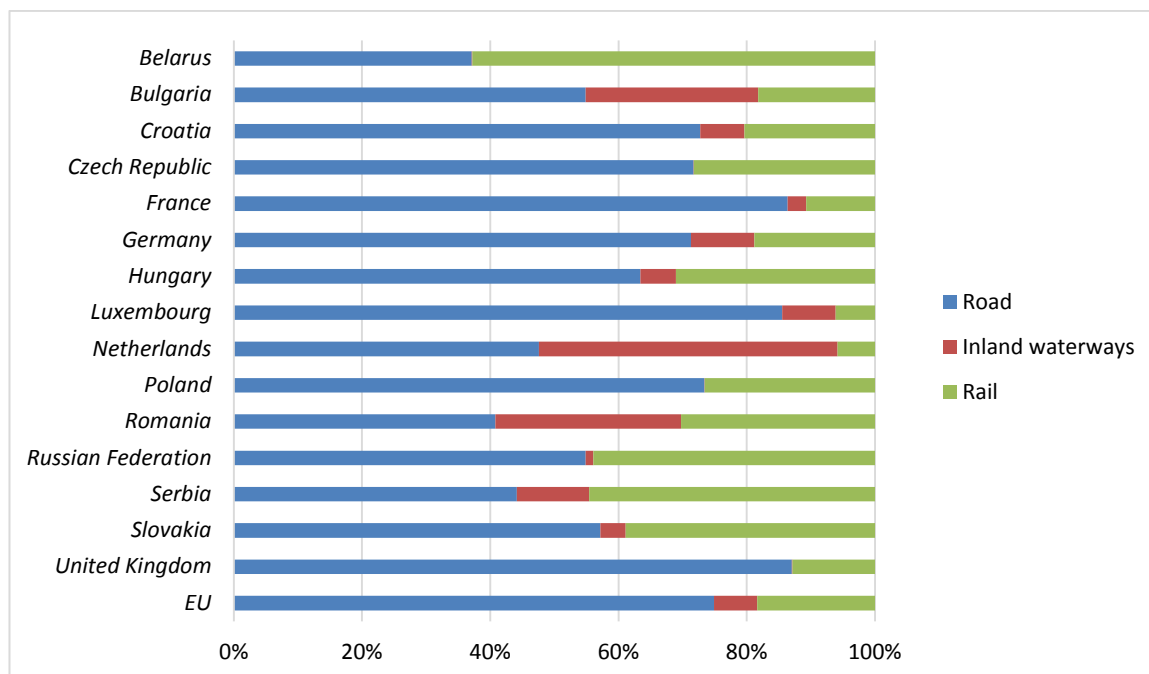
¹² Sources of data: UNECE Transport Statistics Database, www.eurostat.eu, www.belstat.gov.by, <http://stat.gov.kz>, Information and statistics bulletin "Transport of Russia" of the Ministry of Transport of the Russian Federation, <https://stats.oecd.org>, <https://ukrstat.org>

¹³ River and sea transport.

17. Modal split of inland transport modes in the ECE region in 2014 is shown in the figure below.¹⁴

Figure

Modal split of inland transport modes by cargo turnover (except pipelines) in the ECE region in 2014



B. Poland

18. Polish inland waterway transport operates mainly on local sections of the Oder (90 per cent of national waterway transport) and the Vistula, as well as on waterways in Western Europe, primarily in Germany. In 2014, Polish inland waterway transport carried 7,629,000 tons of cargo, which accounted for less than 0.4 per cent of its share in the transport services market. One fourth of the cargo was transported between foreign ports. In 90 per cent of cases, the distance on which cargo in the national transport was carried did not exceed 50 km.

C. Romania¹⁵

19. The total volume of cargo transported in Romania on inland waterways in 2015 was 30,020,000 tons, increasing by 7.9 per cent compared with the traffic volumes registered in 2014.

20. The main ports in terms of river traffic in 2015 are:

- Constanța (12,387,000 tons);

¹⁴ Sources of data: UNECE Transport Statistics Database, www.eurostat.eu, www.belstat.gov.by, Information and statistics bulletin "Transport of Russia" of the Ministry of Transport of the Russian Federation, <https://stats.oecd.org>

¹⁵ Source of data: Romanian National Institute for Statistics.

- Galați (5,955,000 tons);
- Brăila (1,713,000 tons);
- Tulcea (1,503,000 tons);
- Cernavodă (877,000 tons);
- Drobeta Turnu Severin (872,000 tons);
- Mahmudia (680,000 tons); and
- Giurgiu (615,000 tons).

21. The total number of containers transported on inland waterways amounted to 1,380 TEU,¹⁶ representing 44.3 per cent of the traffic registered in 2014.

22. The ship traffic registered in 2015 on the inland waterways was 25,563, out of which 12,174 in international voyages, 8,798 national transports and 4,591 in transit.

23. The main categories of cargo transported were:

- Metal ores and other mining and quarrying products (14,539,000 tons);
- Products of agriculture, hunting, and forestry; fish and other fishing products (8,699,000 tons);
- Coal and lignite; crude petroleum and natural gas (2,358,000 tons);
- Coke and refined petroleum products (1,383,000 tons);
- Basic metals; fabricated metal products (1,245,000 tons); and
- Chemicals, chemical products (1,178,000 tons).

24. Transport of agricultural products had the main share (47.3 per cent) for international transport and metal ores and other mining and quarrying products (72.8 per cent) had the main share of domestic movements.

25. Romania's partner countries for international cargo traffic are: Serbia (33.6 per cent), Hungary (29.6 per cent), Bulgaria (14.4 per cent) and Ukraine (11.2 per cent).

IV. General inland water transport policy issues

26. The present section highlights the main issues related to national inland water transport policy submitted by member States.

A. Poland

27. In order to create stable conditions for the functioning and development of Polish inland waterway transport, the Ministry of Maritime Economy and Inland Navigation of the Republic of Poland is currently seeking accession by Poland to the European Agreement on Main Inland Waterways of International Importance. The main purpose of the development of inland waterways of importance for transport is to build or modernize them to the parameters of at least class IV.

¹⁶ Twenty-foot equivalent unit.

28. The projects relating to Polish waterways include:
- Updating of national strategic documents to adjust them to new objectives related to the use of inland waterways, possibly including the Implementing Document;
 - Drawing up the documentation for all investments to be implemented in the long run, including among others the feasibility studies, functional-utility projects, strategic environmental impact assessments, etc., including also hydrological analyses and indicating possible requirements with regard to the construction of additional reservoirs providing water for navigational purposes. The documents should not refer to individual investments, but should cover the entire waterways and recommend optimal solutions;
 - Updating of Water Management Plans to include the planned investments on Polish inland waterways.
29. Concepts and feasibility studies for individual inland waterways and missing connections will be developed in order to achieve the objectives of the document “Assumptions for the Development Plans of Inland Waterways in Poland for 2016-2020 with a Perspective to 2030”.

B. Romania

30. The main inland water transport policy issues in Romania are:
- (a) Ensuring of the minimum conditions required for safe navigation on the Danube. In this context cooperation in the EUSDR framework, Priority Area 1a – Inland waterways made possible the establishment and endorsement by the ministers of transport for Danube riparian countries of the Fairway Rehabilitation and Maintenance Master Plan – Danube and its navigable tributaries. The Master Plan establishes the level of service for fairway maintenance and the necessary equipment needed by the river administration for the fulfilment of their tasks.
 - (b) Reducing administrative procedures in inland waterways. River Information Services (RIS) system is operational in Romania since 2007. The system can be used for the ship arrival and departure formalities and it is a tool for information on the fairway conditions as well as on traffic. Further work is needed on the exchange of information between the national authorities and integrating logistic information for voyage planning. Starting 1 December 2016 the ships entering the inland waterways of Romania have the obligation to be equipped with the Automatic Identification System, the equipment to be switched on and programmed with complete and accurate data concerning the voyage in progress.
 - (c) A Manual on border controls along the Danube and its navigable tributaries was elaborated and a set of recommendations are under discussion in order to harmonise the procedures for controls and the preparation of document templates.
 - (d) The preparation of the Standards for Training and Certification in Inland Navigation. Currently there is a lack of specialized personnel in inland navigation. Common training standards and the promotion of inland navigation can solve this problem. CERONAV is the Romanian public institution, under the coordination of the Ministry of Transport of Romania, carries out the education and training of the personnel serving the maritime and inland waterway ships as well those involved in auxiliary and related activities. For inland navigation training, new facilities will be available soon in Galați.

C. Russian Federation

31. The Inland Water Transport Development Strategy of the Russian Federation for the period to 2030 was adopted by the Order of the Government of the Russian Federation No. 327-p of 29 February 2016. The strategy envisaged a set of measures aimed at the improvement of the current status of inland water transport, creating a basis for the effective development of this sector and providing the potential for an effective competition with land transport modes. The main goals of the Strategy are:

- Creating conditions for the re-distribution of cargo flows from land transport to inland waterways to ensure a balanced development of the transport system;
- Enhancing the competitiveness of inland water transport in relation to other transport modes;
- Increasing the inland water transport availability and quality of services for shippers;
- Ensuring effective passenger transportation by inland water transport;
- Increasing the safety and greening of inland water transport.

32. It is planned to implement the strategy in two stages: stage I – by 2020 and stage II between 2021-2030. At the first stage, the main directions of the inland water transport development are the elimination of bottlenecks in the Unified Deep Water System of European Russia, the development of port infrastructure on inland waterways of international importance, increasing the extension of inland waterways with guaranteed fairway dimensions, upgrading of navigable hydraulic engineering facilities, modernization reconstruction of passenger terminals and improving service quality for passengers, construction of cargo and passenger vessels. At the second stage it is expected to reach the dynamic development of river transportation including container transportation. The implementation of measures of state support for the Russian shipping and shipbuilding sectors will result in enhancing the upgrade of cargo and passenger fleet.
