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Item 3 of the provisional agenda
Current situation and trends in inland water transport

Summary on recent developments in the field of inland navigation in the ECE region

Note by the secretariat*

I. Mandate

1. This document is submitted in line with cluster 5: Inland Waterway Transport, paragraph (a) 5.2 of the Transport subprogramme of work 2018-2019 (ECE/TRANS/2018/21/Add.1) adopted by the Inland Transport Committee at its eightieth session (23 February 2018).

2. The Working Party may wish to exchange information on the current situation and trends in inland navigation in the ECE region, based on this document, prepared by the secretariat on the basis of information transmitted by the Governments of member States. [1]

3. Detailed data on the transport of goods by inland waterways in member States of the European Union, the Danube Commission and Switzerland is available in the market observation issued by the Central Commission for the Navigation of the Rhine at www.inland-navigation-market.org/en/rapports/2017/q2/2-freight-traffic-on-inland-waterways.

* The present report was submitted after the deadline in order to reflect the most recent information.

[1] Unless otherwise indicated.

II. Current situation and trends in the inland water transport sector of the member States

A. Austria**

Movement of goods

4. Data on the freight transport volumes carried on the Austrian part of the Danube in 2014-2017 is given in Table 1 below.

Table 1
Transport volumes on the Austrian part of the Danube in 2016-2017

Freight transport volumes, million tons	*2016*	*2017*
Import	4.300	4.822
Export	1.976	2.381
Domestic	0.609	0.389
Total	9.071	9.619

[1] Since 2005, figures have been extrapolated by Statistics Austria.

5. In general, in 2017 total transport and waterside transhipment volumes increased by around 500,000 tons compared to 2016. The total transport performance in the federal territories increased by 3.1per cent to over 2 billion ton-km. The entire transport capacity, both within and outside of Austria, increased by 4.8 per cent and reached 9.7 billion ton-km. Cross-border freight traffic (the sum of export, import and transit) recorded an increase of 9.1 per cent or nearly 0.8 million tons compared to 2016. A total of 8.0 million tons of goods were handled waterside at Austrian Danube ports and transhipment sites, showing an increase of 6.5 per cent as compared to 2016. The most significant Danube port in Austria in 2017, in terms of volume, was once again the industrial port of Voestalpine, Linz. With a total handling volume in 2017 of around 3.6 million tons, this port accounted for 45.1 per cent of total waterside transhipment of all ports and transhipment sites on the Austrian Danube.

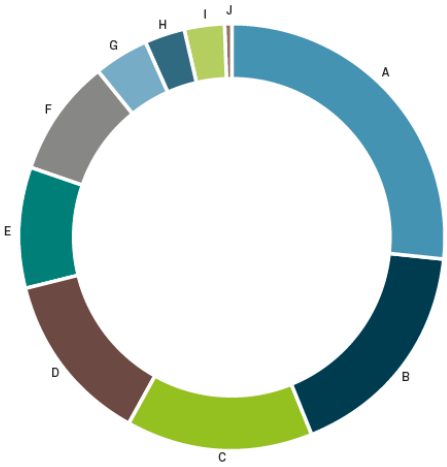
6. Transport volumes by commodity groups on the Austrian Danube 2017 are shown on Figure 1 below.

7. Passenger transport on the Austrian stretch of the Danube was able to record an increase in numbers for the fourth year running in 2017. A total of approximately 1,265,000 passengers were transported, representing an increase of 2.8 per cent in comparison to 2016. A total of six newly constructed vessels were brought into service on the Austrian section of the Danube.

** Annual Report on Danube Navigation in Austria, viadonau, 2018 is available at www.viadonau.org/newsroom/publikationen/broschueren/?jumpurl=fileadmin%2Fcontent%2Fviadonau%2F01Newsroom%2FDokumente%2F2018%2FBroschueren%2FJahresbericht_2017_en.pdf&juSecure=1&mimeType=application%2Fpdf&locationData=267%3Att_content%3A288&juHash=29fc9c473482eae85cf976f52c49f4d69e704801

Figure I

Transport volumes by commodity groups on the Austrian Danube 2017

J **Chemical products** 0.5%		A **Ores and metal waste** 26.8%
I **Machinery, vehicles, and other articles** 2.9%		B **Agricultural and forestry products** 13.3%
H **Solid fuels** 3.0%		C **Petroleum products** 14.2%
G **Foodstuffs and animal fodder** 4.2%		D **Metal products** 12.9%
F **Crude and manufactured minerals** 9.0%		E **Fertilisers** 9.2%

Inland waterway development projects

8. The Federal Ministry of Transport, Innovation and Technology and viadonau are engaged in a number of projects and programmes aimed at increasing the efficiency of inland navigation, encouraging a shift in transport modes from land to inland waterway and promoting its significance in multimodal transport, including:

- The Action Programme Danube of the Federal Ministry of Transport, Innovation and Technology aiming at promoting the Danube as a safe and environmentally friendly transport route;
- The European Transport Ministers' Maintenance Master Plan for the entire Danube based on state-of-the-art digital solutions to establish harmonized high standards of conservation, maintenance and information at an international level in order to improve the Danube's quality of both in Austria and throughout the whole Danube region;
- The use of a Waterway Asset Management System (WAMS) with the use of customised digital tools to analyse the waterway on a daily basis and optimise it;
- The introduction of international projects such as RIS COMEX and FAIRway Danube[2] aimed at ensuring a Europe-wide harmonization of fairway information.

B. Belarus

9. The overarching development strategy for inland water transport in the Republic of Belarus is determined by the subprogramme "Development of inland water transport and maritime transport of the Republic of Belarus" of the State Programme for the Development of the Transport System of the Republic of Belarus for 2016-2020, adopted by Decree No. 345 of the Council of Ministers of the Republic of Belarus of 28 April 2016. This subprogramme includes the upgrading of the Dnieper-Bug Canal hydraulic engineering structures and the modernization of the fleet of cargo vessels and worksite craft. In addition to this, works in relation to upgrading of the Ragodosh hydroelectric complex and construction of a port for mineral building materials on the Belarusian section

[2] International projects with the participation of Germany are described in section H.

of the E-40 waterway in Brest are also underway. The commissioning of these facilities is planned for 2019.

10. Data on the freight transport volumes in Belarus in 2016-2018 is set out in Table 2 below.

Table 2
Movement of goods by inland waterways of the Republic of Belarus in 2016-2018

	2016	*2017*	*2018 (January-August)*
Freight turnover, million ton-km	21	28.7	9.071
Freight volume, thousand tons	2,144	2,019	1,312

C. Germany

Inland waterway infrastructure projects

11. There are the following ongoing projects: [3]

(a) Modernization of the fairway on several German waterways: the West German canal system, the river Main, the Mittelland Canal, the river Weser (Middle Weser) and others;

(b) Construction and modernization of locks: the construction of new locks on the river Weser, the construction of new lock chambers on the Kiel Canal and Mosel, extending of locks on the Neckar;

(c) Ship lifts: the construction of a new ship lift on the Havel-Oder-waterway) and upgrading of an existing ship-lift in Lüneburg.

12. Modernization of the fairway on the lower and upper Elbe, the lower and upper Weser, the Middle Rhine and the Danube is planned for the coming period.

13. Germany is currently preparing a “Master Plan for Inland Navigation” as a response to current challenges in inland navigation. The master plan is prepared in cooperation with stakeholders from the inland navigation sector.

14. On 17 October 2018, a high-level ceremony will be held in Mannheim (Germany) on the commemoration of 150th anniversary of signing the Revised Act concerning Navigation of the Rhine (Act of Mannheim) of 1868.

D. Netherlands

Movement of goods[4]

15. In 2017, the total cargo volume by inland waterways in the Netherlands reached 317 million tons, 1 per cent less than expected, and the actual growth rate was only 0.6 per

[3] RIS COMEX (RIS Corridor Management Execution) project with the participation of Germany is described in section H.

[4] Medium-term forecasts for the freight volume of inland navigation in the Netherlands issued by Panteia in the report “Strengthening Observation Market Inland Navigation”. A brief overview has been issued by the Economic Committee of the Central Commission for the Navigation on the Rhine in the document ECO(18)12 of 4 June 2018.

cent due to several reasons, such as the seaport congestion that hindered the expansion of internal container transport, the reduction of coal volumes and the interruption of navigation on the Maas and the Maas-Waal canal due to the dam accident at Grave. In 2018, 0.5 per cent increase was expected in the volume carried by inland waterways amounting to 319 million tonnes and by 2022 ― 323 million tonnes. The expected average growth rate in 2017-2022 is, therefore, only 0.35 per cent.

16. In 2017, dry cargo vessels and convoys transported 178 million tonnes of cargo in total; 71 million tonnes for the domestic market, 66 million tonnes were exported, in particular, to Germany and Belgium, and 41 million tonnes were imported from these countries. The cargo volume expected for 2018 is 181 million tonnes, and by 2022 – 184 million tonnes. The volume of liquid cargo was 98 million tonnes: 35 million tonnes for the domestic market, 36 million tonnes were exported, particularly to Germany and Belgium, and 27 million tonnes were imported from these countries.

17. The major fast-growing segment until 2022 is container transport, with a share of nearly 40 per cent of the total increase in dry cargo transportation volumes. The opening of new container terminals in Almelo and Lelystad will contribute to this.

Inland waterway infrastructure projects

18. The opening of the modernized Maas section at the north-south link Weurt-Ternaaien (project MoMaRo Phase 2),[5] is now re-scheduled for 2020-2022.

19. The upgrading of the Julianakanaal (project MoMaRo Phase 2)[5] is under way, and the opening is now re-scheduled for 2020-2022.

E. Romania

20. The main inland water transport policy issues of the Ministry of Transport of Romania are:

(a) Ensuring the minimum conditions required for safe navigation on the Danube. In this context, the cooperation in the framework the European Union Strategy for the Danube Region (EUSDR), Priority Area 1a – Inland waterways, has created the basis for the Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries[6] and its endorsement by the Transport Ministers of the Danube riparian countries. The Master Plan establishes the level of service for the fairway maintenance and the necessary equipment needed by the river administration for the fulfilment of their tasks. Furthermore, the technical capacity of the Lower Danube River Administration has been improved;

(b) A new Administration of navigable Bega Canal Timiș was established through the Government Decision No. 451/2018, under the authority of the Ministry of Transport. The administration is responsible for the Romanian sector of navigable Bega Canal which is 42.444 km long. Currently, the new administration is under organization and is preparing the navigation rules for the Bega Canal;

(c) In order to reduce administrative procedures in inland waterways, River Information Services (RIS) are in operation in Romania since 2007. The system can be used for vessel arrival and departure formalities and is a source of information on the fairway conditions and the traffic. A manual on the border controls along the Danube and its

[5] Detailed information is available in ECE/TRANS/SC.3/2016/1.

[6] More information is available in section H.

navigable tributaries has been finalized, and a set of recommendations is now under discussion in order to harmonize procedures for controls and the preparation of document templates. Danube Navigation Standard Forms (DAVID) have been developed for arrival and departure reporting, the crew and passenger lists;

(d) The development and implementation of 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, the Romanian public institution under the coordination of the Ministry of Transport of Romania, carries out education and training of personnel of sea-going and inland navigation vessels and those involved in auxiliary and related activities. CERONAV is involved, together with the Ministry of Transport, in implementing the provisions of Directive (EU) 2017/2397 of the European Parliament and of the Council of 12 December 2017 on the recognition of professional qualifications in inland navigation. For inland navigation training, new facilities are available in Galați.

Inland waterway infrastructure projects[7]

Improvement of the navigation conditions on the Calarasi (375 km) – Braila (175 km) sector of the Danube

21. The general objective is to ensure depths of 2.5 m, as recommended by the Danube Commission, all-the-year-round on the main branch of the Danube River ("the 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 in 2016. The price of the contract was 49.65 million EURO, financed from the Sectorial Operational Programme for Transport 2007-2013 (SOPT). For the Bala section (347 km-342 km), the works have been not completed, and a new study aimed at identifying alternative solutions is ongoing and will be finalized in December 2018. The environmental factors were closely monitored throughout the works and for two years after the completion of the hydrotechnical works (project ROMOMED).

FAST Danube

22. The project is aimed at improving the navigation conditions on the Romanian-Bulgarian common sector of the Danube from 845.5 km (Timok) to 375 km (Silistra). This sector is a free-flowing section characterized by variable hydrodynamic conditions, frequent fairway alterations and the river bed erosion. The main objective is to identify technical solutions for ensuring 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 with the total budget of 5.25 million EURO. The works started in March 2017: two measurement campaigns were performed in 2017, by plane, from the water and on the river banks. A list of possible solutions has been identified and the necessary environment procedures are under preparation.

Modernization of locks on navigable canals

23. The main objective is the modernization of the Agigea, Cernavoda and Ovidiu locks, the equipment and installations, including pumping stations and high water galleries, operated by the Administration of Navigable Canals in Romania. The value of the projects is 228.6 million EURO and they are financed through SOPT and the Operational

[7] International project FAIRWAY Danube with the participation of Romania is described in section H.

Programme for Large Infrastructure for 2014-2020. The works started in August 2013 and will be completed in December 2019.

Protection of the banks on the Danube–Black Sea Canal and Poarta Albă–Midia Navodari Canal

24. When these two canals were opened in 1984 and 1986, only the minimum scope of works required to ensure normal traffic conditions had been accomplished. Currently, works are being carried out within the allocated state budget limits in order to consolidate the stability of the high banks.

Protection of the banks on the Sulina Canal

25. This is one of the main projects for the maritime section of the Danube aimed at the protection of the Sulina Canal banks against deterioration from the navigation lane caused by maritime vessels of high capacity as well as the protection of the Danube Delta area, its population and economic establishments against floods. The works on the 15 km-stretch were completed in 2010-2012. In 2016, a feasibility study was carried out for the next 50 km-section. The estimated cost of works is 82.74 million EURO with funding coming from the Operational Programme for Large Infrastructure 2014-2020.

SWIM (Smart Waterway Integrated Management)

26. The purpose of this project is to remove bottlenecks by carrying out dredging works to improve the navigability of the Danube. The value of the project is 12.22 million EURO and the financing is secured from the 2015 CEF. The dredging equipment includes a cutter-suction dredger, a pusher, two hopper barges and a pontoon for berthing and loading the hopper barges. The equipment will be delivered in March 2019 and will be used for dredging works in Corabia port, the Calafat-Vidin bridge and the Bechet areas.

The Danube River Ports

27. 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, other port infrastructure rehabilitation projects will be implemented in Braila and Tulcea.

Upgrading the infrastructure of the port of Constanta

28. The purpose of this project is to increase depths in the port basins and the access fairway. The project is currently under tender and the 50.4 million EURO of financing is being provided by the Operational Programme for Large Infrastructure for 2014-2020. New projects are at the stage of preparation and they envisage the construction of a new oil terminal on the artificial island, modernizing the utilities (water and electricity) networks, the extension of Piers 3 and 4 South and the improvement of the railway and road connections.

F. Russian Federation

29. Measures for the development of inland water transport are envisaged in:

- The Transport Strategy of the Russian Federation for the period until 2030, approved by Decree No. 1734-r of the Government of the Russian Federation of 22 November 2008;

- The Development Strategy for Inland Water Transport of the Russian Federation for the period until 2030, approved by Decree No. 327-r of the Government of the Russian Federation of 29 February 2016;
- The State Programme of the Russian Federation "Development of the Transport System", approved by Decree No. 1596 of the Government of the Russian Federation of 20 December 2017.

30. In the 2017 navigation period, the total volume of cargoes transported by inland waterways of the Russian Federation reached 118.6 million tons, including 26.7 million tons in international transport (the total cargo turnover of 67 313 million ton-km), the number of passengers reached 2.6 million (the total passenger turnover of 562.4 million passenger-km).

31. On inland waterways of the Russian Federation open for the entry of vessels flying a flag of a foreign state, two priority projects are under way:

- The construction of the Bagayevsky hydraulic complex on the Don (E-90) to be commissioned in 2020, in order to increase the capacity up to 23 million tons in the navigation period;
- The construction of the Nizhny Novgorod low-pressure hydraulic complex on the Volga (E-50) to be commissioned in 2021, in order to increase the capacity up to 28.6 million tons in the navigation period.

32. In 2024, it is planned to put into operation the second lock at the Nizhnesvirsky hydraulic complex on the river Svir (E-50) in order to increase the capacity up to 20 million tons in the navigation period.

G. Serbia

Movement of goods

33. The total volume of waterway cargo transport in the Republic of Serbia for 2017 was 10.46 million tons, with a decrease compared to 12.22 million tons in 2016 (see Figure 2 below). Waterborne transport in the Republic of Serbia is highly internationalized, as 86 per cent of the total volume is cross-border transport (consisting of export, import and transit). The share of import, export, domestic and transit flows is shown in Figure 2 below. In terms of waterways, the majority of transport is carried out on the Danube River (91 per cent), while 6 per cent was generated on the Sava River and the remaining 3 per cent on other waterways.

Figure II
Structure of transportation by waterways in Serbia (2017)

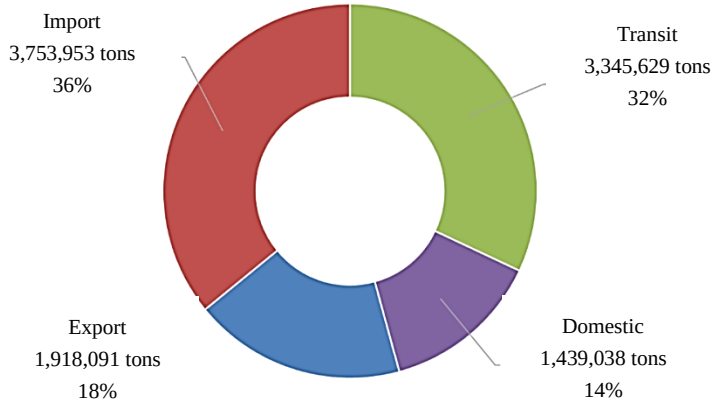
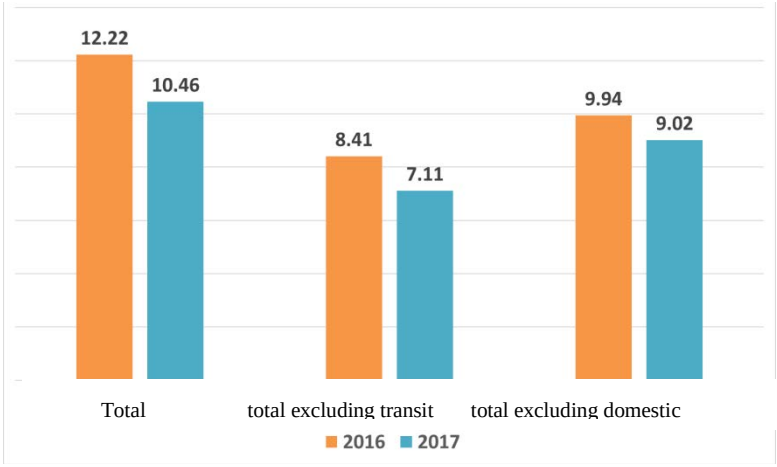


Figure III
Volume of goods, 2016-2017 (million tons)



Inland waterway infrastructure projects

Supervision and Environmental Monitoring of River Training and Dredging Works on Critical Sectors on the Danube River in Serbia

34. The objective of the project is the improvement of navigation conditions on the Danube in terms of available fairway parameters during low water periods, by implementation of environmentally sound measures and strict environmental monitoring programme. The project area covers six critical sectors for navigation on the Danube River in Serbia, on the stretch between km 1,295 and km 1,170. The following activities are covered within the project:

- Supervision of river training and dredging works on six critical sectors for navigation on the Danube River in Serbia;
- Environmental monitoring before, during and after works, and
- Execution of river training and dredging works.

The execution of works officially started on 21 August 2018 at the critical sector Futog, after the environmental monitoring has been finalized that provided the baseline values for indicators defined in the field of hydromorphology, sediment and water quality and

biology. More information is available in Serbian and English at www.plovput.rs/forum-zainteresovanih-strana.

Technical Assistance and Supervision for Installation of Equipment and Integration of Navigation Monitoring System on the Danube River

35. This project will contribute to increasing the capacity and safety of environmentally sound and sustainable inland waterway transport on the Danube river as a part of the Trans-European Transport Network (TEN-T) Rhine-Danube core network corridor. The scope of the project is the development and integration of the Navigation Monitoring and Reaction System on the Serbian part of the Danube:

- To develop the software that ensures the integration of the system components and utilizes the existing infrastructure of the Beneficiary Institution and End Recipient for the tracking and tracing of vessels on the Serbian stretch of the Danube River;
- To install and integrate the central system in order to make it a fully functional and tested Navigation Monitoring and Reaction System;
- To perform a training program for the staff of the End Recipient who will operate the system;
- To conduct test operations to confirm reliability and stability of the system for regular operations.

36. For the deployment of the system into operation, the existing AIS tracking and tracing infrastructure on shore will be utilized, as well as the central segment of already existing RIS Serbia system. The Detailed Design was finalized and officially accepted. The Implementation phase officially started on 1 September 2017.

H. Slovakia

Movement of goods

37. Statistical data on cargo transportation and turnover by inland waterways in the Slovak Republic in 2016-2017, in thousands of tons, are shown in the table below.[8]

Table 3
Cargo transportation by inland waterways in the Slovak Republic in 2016

	2016	*2017*
Cargo transportation, thousand tons	6,758	6,896
International transport	1,878	1,809
Cargo turnover, million ton-km	903	933
International transport	68	60

The development of the inland waterway infrastructure

38. The Strategic Transport Development Plan of the Slovak Republic aims to set up an effective direction for the development of the transport sector and determines the way of realizing its development vision. It identifies the key bottlenecks in the transport infrastructure and in public passenger and non-motorized transport as well as in traffic,

[8] Data from the Statistical Office of the Slovak Republic.

maintenance and transport organization. The main goals of the Strategic Transport Development Plan in the water transport sector are:

- Development, modernization and reconstruction of the waterway infrastructure;
- Maintenance, restoration, modernization and development of the public port infrastructure;
- Introducing new technologies;
- Reducing the environmental impacts of transportation by water,;
- Creating conditions for education of personnel in the field of water transport;
- Increasing the energy efficiency, reducing the consumption of natural resources, protecting ecosystems and developing an alternative low-carbon economy;
- Increasing transport systems' safety.

39. It is planned to implement the strategy in two stages: stage I – by 2020 and stage II between 2021-2030.

Operational Programme Integrated Infrastructure 2014-2020

40. In the field of water transport, the preparation and implementation of new projects in 2016-2017 was supported by a set of measures. The national programme "Operational Programme Integrated Infrastructure 2014-2020" (OPII) was approved by the European Commission on 28 October 2014. It is a strategic document of the Slovak Republic supportive of the transport and ICT[9] sector (improving the access, usage and quality) for 2014-2020. The following projects are being prepared and implemented within the framework of OPII, Priority Axis 4:

Project	*Stage*
1. Modernization and construction of the public port of Bratislava	Feasibility study:
2. Modernization and construction of the public port of Bratislava (modernization of infrastructure - connecting elements, perpendicular edges, stairs, coastal walkways, anchorage for waiting positions, warning signs)	Project documentation
3. Revitalization and completion of port edges and reinforced surfaces	Project documentation
4. Security Project and Public Port Emergency Plan Bratislava	
5. Technical measures for ensuring the required parameters of the Danube waterway navigation route in the rkm[10] 1880,26 - rkm 1708,20	Feasibility study, Phase I
6. Construction of the LNG terminal in the public port of Bratislava	Pre-project preparation
7. Security protection of ports	Pre-project preparation
8. Construction of the background for vessels in the public port of Bratislava	Pre-project preparation
9. Modernization of Layout and Navigation Marking on a Danube Waterway	Feasibility study
10. Regular passenger water transport along the Danube – DUNAJBUS	Pre-project preparation
11. Changing the flow velocity in the lower part of Hrušov Reservoir	Pre-project and project preparation

[9] Information and communications technologies.

[10] River kilometre.

41. National projects, including individual investment and non-investment projects, stipulate activities that either focus on clearly defined regional or national policies or complement these policies. They are linked to the strategy defined within OPII and implemented with a particular emphasis on reducing regional disparities. The total eligible costs are less than 75 million EURO. In the case of phased projects, the total expenditure does not exceed 50 million EURO. The main projects are set out below.[11]

Technical measures for ensuring the required parameters of the Danube waterway in the section rkm 1880,26 – rkm 1708,20

42. In terms of the TEN-T[12] Core transport network, the Danube is designated as European Transport Corridor VII. As a waterway of international importance, a certain transport performance should be ensured on the Danube for a minimum of 300 days a year, according to the criteria of the Danube Commission and the European Agreement on Main Inland Waterways of International Importance. Improving the Danube navigability would also have a significant impact on more extensive and efficient use of the existing Danube ports in the Slovak Republic. The analysis shows that each of the logically separated sections of the Danube (the mouth of the Morava River-Bratislava, Bratislava-Sap and Sap-Štúrovo) has serious deficiencies in terms of ensuring proper navigation conditions.

43. At present, there are critical sites in the Danube waterway section, especially rock bottom broods, which create barriers for navigation and, therefore, hinder the full use of the Danube waterway transport capacity throughout the year. To improve this, research made since the 1950s, have proved the need to continue implementing measures to channel the Danube waterway, similar to the measures implemented on the upper Danube in Germany and Austria. The project should build on the already implemented projects in this field and has an objective to propose individual technical measures to ensure safe navigation on these critical sections and a sufficient transport performance. The total project budget is 5,051,628.80 EURO, the duration is September 2018-August 2020.

Construction of a LNG terminal at the public port of Bratislava

44. Pre-project preparation is financed from the resources of OPII Priority Axis 4 Infrastructure for Water Transport (TEN-T Core Network corridors). The specific objective is improving the quality of services provided in the public port of Bratislava. The implementation of the project will contribute to the greening of the public port of Bratislava in line with the requirements for the introduction of alternative fuels in public ports within the European Union. The main activity of the project is the development of a feasibility study. The total budget is 686,856.80 EURO, the duration is January-December 2018.

National projects co-financed from CEF

45. CEF is a key funding instrument of the European Union to promote growth, jobs and competitiveness through a targeted infrastructure investment at the European level. It supports the development of high-performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments are aimed at filling missing links in the European energy, transport and digital backbone.

[11] International projects with the participation of the Slovak Republic are described in section H.

[12] Trans-European transport network.

Modernization of the Gabčíkovo locks

46. The aim of this project is to increase the efficiency, reliability and thus the competitiveness of the Danube waterway, which is a part of TEN-T. Among other objectives, it aims to strengthen the sustainability of waterway transport between the Slovak Republic and other Danube riparian states as well as, in accordance with the policy of the European Union, to support this economically efficient and environmentally friendly transport mode, which has enough spare capacity. The project consists of the following construction works:

- Replacement of the upper and lower gates on the Gabčíkovo lock chambers;
- Restoration of the filling and emptying system with the application of new technologies in order to achieve the fastest possible filling and emptying of the locks while minimizing loads on parts of the filling system;
- Replacement of the upper flap gates;
- Replacement of the gate dynamic protection;
- Sealing of the subsoil and expansion joints of the Gabčíkovo locks in order to increase the reliability and structural safety of the lock chambers;
- Design and implementation of an expert control system to avoid any risk for vessels due to limited fairway parameters or incorrect manipulation with the flow rates and levels.

47. The total budget is 144,665,000 EURO. The duration is February 2016-December 2020.

Project DaReM – Danube Rehabilitation Measures

48. The main objectives of the project are:

- To ensure sustainable use of the Danube fairway and mitigation of negative impacts of sedimentation in the reservoir Hrušov on the section rkm 1845-rkm 1868;
- To enhance the quality and safety of navigation;
- To remove bottlenecks on the Slovak section of the Danube waterway;
- To create conditions for the removal of sediments following the demands of the environment and the market.

49. The total budget is 9 750 000 EURO.The duration is February 2017-December 2020.

Master plan and Feasibility study for the public port of Komárno

50. This project is a part of an international project that aims to develop an integrated network of inland multimodal ports along the Danube to foster sustainable transport and the regional development. The main objectives are:

- Preparation of the Master Plan which will define wider relationships for efficient functioning of the public port of Komárno, in line with national and European legislation;
- Preparation of a feasibility study for the development of the public port Komárno, which will reflect the Master Plan outcomes and will assess alternative options for the modernization of the public port of Komárno.

51. The total budget is 673,100 EURO. The project duration is September 2016-October 2019.

I. International projects

Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries and FAIRway Danube

52. The multi-beneficiary CEF project FAIRway Danube is the first implementation phase of the "Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries", which is part of the TEN-T Corridor Work Plan for the Rhine-Danube Core Network Corridor. The Master Plan envisages harmonized initiatives for tackling the infrastructure bottlenecks along the Rhine-Danube Corridor and has been elaborated in close cooperation with all Danube riparian states.

53. 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 maintain good navigation conditions throughout the year by providing a minimum level of service. The project was approved for funding in 2014 with the total budget of 23,400,000 EURO. The duration is July 2015-June 2020.

54. Under the motto "Committed to the increased safety, efficiency and environmental friendliness of inland navigation", FAIRway Danube is being implemented in a harmonized way by a consortium of seven project partners of in six countries: Austria, Slovak Republic, Hungary, Croatia, Bulgaria and Romania by. The project coordinator is viadonau. FAIRway Danube includes the following steps:

- Concerted purchase of advanced equipment for hydrological services (surveying and marking vessels);
- Pilot activities and the evaluation of results;
- Collection of the basic data for all critical sections of the Danube waterway;
- Analysis and evaluation of the data collected as basis for coherent monitoring of the navigation status;
- Harmonized water level forecasts;
- Optimized routing of the fairway based on current depth measurements.

Project RIS Corridor Management Execution

55. The main objectives of RIS COMEX are:

- Development of an overall Corridor RIS Management concept (starting from CoRISMa results) in dialogue between RIS providers and logistics users (e.g. shippers, boat masters, vessel and fleet operators, terminal operators) to ensure the relevance of the implemented services;
- Implementation and permanent operation of selected parts of the overall concept providing increased quality and availability of Fairway-, Traffic- and Transport Information Services resulting especially in a considerable increase of efficiency within Inland navigation transports and also directly contributing to the utilisation of the general benefits provided by RIS, i.e. increase of safety, efficiency and environmental friendliness of inland navigation as a transport mode;

- Defined and agreed operational arrangements (legal, organisational, financial, technical, quality) to ensure sustainable further development, implementation and operation of infrastructure and services for harmonised RIS enabled Corridor Management beyond the lifetime of the project;
- Harmonization of data exchange concepts for RIS data through the cooperative development and specification of RIS enabled Corridor Services avoiding the rise of different data exchange concepts;
- Progress on harmonization of transport information services on European and/or Corridor level based on existing solutions and concepts.

56. RIS COMEX will develop harmonized RIS for inclusion in the DINA[13] initiative of the European Commission and will bring RIS one step further to integration with other transport modes. The project is implemented by fifteen project partners from thirteen countries: Austria, Belgium, Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Luxembourg, Netherlands, Romania, Serbia and Slovakia. The project coordinator is via donau (Austria).

57. The total project budget is 1,970,000 EURO. The project is co-financed by CEF. The duration is February 2016-December 2020.

[13] Digital Inland Waterway Area.