COMMON DANUBE REPORT 2015







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Imprint

NEWADA duo project consortium Network of Danube Waterway Administrations – data and user orientation Information about the project consortium can be found on pp. 26-27

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LIST OF ABBREVIATIONS

- AIS Automatic Identification System
- AT Austria
- **BG** Bulgaria
- **DE** Germany
- **ENC** Electronic Navigation Chart
- **ERI** Electronic Reporting
- EU European Union
- EUSDR Strategy of the European Union for the Danube Region
 - FIS Fairway Information Services
 - HR Croatia
 - HU Hungary
- ICPDR International Commission for the Protection of the Danube River
- NEWADA Network of Danube Waterway Administrations
- NEWADA duo Network of Danube Waterway Administrations data and user orientation (transnational project co-funded under the EU SEE Programme)
 - **NtS** Notices to Skippers
 - **RIS** River Information Services
 - RO Romania
 - RS Serbia
 - SK Slovakia
 - **UA** Ukraine
 - VTT Vessel Tracking and Tracing
 - WLAN Wireless Local Area Network



Scope of the document

The Network of Danube Waterway Administrations is a legacy of two international projects funded by the European Union under the South East Europe Transnational Cooperation Programme. The first project of this initiative, NEWADA (Network of Danube Waterway Administrations) was implemented in the period between 2009 and 2012, while the second project, NEWADA duo (Network of Danube Waterway Administrations – data and user orientation) was implemented between 2012 and 2014.

The Common Danube Report 2015 is a joint effort of Danube waterway administrations to elaborate the Danube navigation performance indicators. This report includes cargo and passengers transport volumes, performance indicators for the Danube River associated with the provision of information on navigation conditions, availability of the Danube fairway and closures of navigation, important international activities and initiatives, as well as common international projects and plans for the further cooperation of the Danube waterway administrations in line with the NEWADA legacy. The purpose of the Common Danube Report is to raise awareness on the importance of the Danube River at the regional and European level, using commonly harmonized and comparable performance indicators.

$2^{\rm Highlights}_{\rm 2013\&2014}$

	2014	2013
TRANSPORT VOLUME	40.1 million tons	37.7 million tons
% CHANGE over the previous year	+6.3%	+1%

	2015	2014
FAIRWAY AVAILABILITY	313 days (86%)	323 days (89%)
LOCAL CLOSURES OF NAVIGATION	52 days (14%)	42 days (11%)
Longest continuous local closure	2.6 days	



3^{Sharing a} vision

Dear Danube waterway users,

The Cooperation Agreement signed on 6 November 2014 by the Directors of Danube Waterway Administrations provides a framework for cooperation within the Network of Danube Waterway Administrations (NEWADA) and states a clear determination to preserve achieved results while seeking opportunities for new ones. A strengthened NEWADA team continued to work together, for the benefit of the whole Danube navigation community.

After successful finalization of the NEWADA duo project, the Network of Danube Waterway Administrations continued to cooperate in order to preserve achieved results and generate new features towards improved navigation conditions on the Danube River. Our common vision remains unchanged and serves as our guiding orientation. We stay committed towards customer oriented waterway management system as our stronghold. The Common Danube Report is an outcome of the joint efforts of Danube waterway administrations. It is an integral part of a jointly developed and accepted customer-oriented waterway management system with a set of clear Danube performance indicators.

The Danube River is one waterway. It has a true value for the waterway transport only if it is observed and treated as such: unique, full of challenges, but also full of potential for cooperation and utilization of business opportunities.

In the hope that we are moving a further step closer to meeting your expectations,

Sincerely, The NEWADA Board of Directors

A Common vision of and shared by Danube waterway administrations:

"We, the Danube waterway administrations, want to achieve a common level of availability and harmonized level of services for the clients of the Danube waterway, in order to make our common river a sustainable part of the transport and logistic chains at Europe wide level."

4 Danube cargo transport volume

In 2014, the total volume of cargo transport on the Danube River reached 40.1 million tons. This figure demonstrates a significant growth in comparison to the 37.7 million tons achieved in 2013. Observing the data over the last 3 years, an increasing trend in the volume of cargo transported on the Danube River can be observed (Figure 1).



Note 1: Data in Million Tons Note 2: Data for 2014 are the latest cargo transport volume data available for all countries Source: National statistics offices, aggregation and graph by the NEWADA team

FIGURE 1: DANUBE CARGO TRANSPORT VOLUME FOR THE PERIOD 2007-2014



	DE	AT	SK	HU	HR	RS	RO	BG	MD	UA
Transit	3.06	2.49	5.22	2.71	5.05	4.30	1.36	1.36	0	0
Domestic	0.15	0.80	0.06	0.33	0.05	2.61	7.21	1.43	0	0.02
Export	1.05	2.03	1.76	3.71	0.21	2.49	3.86	1.43	0.09	2.98
Import	2.65	4.98	0.10	1.37	0.14	3.02	5.50	1.70	0.25	0.06
Total	6.91	10.31	7.14	8.12	5.45	12.4	17.93	5.92	0.34	3.06

TABLE 1: DANUBE CARGO TRANSPORT VOLUME PER COUNTRY IN 2014

Note: Data in million tons Source: National statistics offices, table prepared by the NEWADA team Figure 2 illustrates a disposition of the transport volumes per country and per type (export, import, transit, and domestic) for the year 2014.

The greatest overall transport volume was recorded in Romania (17.93 million tons), followed by Serbia (12.42 million tons) and Austria (10.3 million tons).

The greatest figures for inland waterway export among Danube riparian countries were recorded in Romania (3.86 million tons), Hungary (3.71 million tons) and Ukraine (2.98 million tons), while in import the biggest figures were achieved by Romania (5.5 million tons), Austria (4.98 million tons) and Serbia (3.02 million tons). The largest volume in transit transport was recorded in Slovakia (5.22 million tons), Croatia (5.05 million tons) and Serbia (4.3 million tons). The biggest volume of domestic transport was identified in Romania (7.21 million tons), Serbia (2.61 million tons) and Bulgaria (1.43 million tons).



Closures of Inavigation in 2015

Source: National navigation authorities, aggregation and chart prepared by the **NEWADA** team

In 2015, the entire Danube fairway was accessible for navigation for 313 days (86%). This figure is comparable to the conditions recorded in 2014, when the Danube fairway was fully available for 323 days (89%). Closures of navigation on the Danube River in 2015 mostly had a local character, not affecting fairway availability on the rest of the Danube River. These closures lasted in total 52 days (not continuous figure), with average duration of less than 1 day, and were limited on small stretches, not influencing navigation on the rest of the Danube River. Closures of navigation in 2015 were mostly due to occasional events, (such as sport manifestations, fireworks) for a total duration of 9 days, maintenance works in total duration of 25 days. Additionally, unfavorable meteorological conditions such as wind (13 days) and fog (5 days) also contributed to closures, mainly at the Iron Gate area and on the Danube-Black Sea Canal.



FIGURE 3: AVAILABILITY OF THE DANUBE FAIRWAY IN 2015



Over the years, cruise journeys on the Danube River have become increasingly appealing. This trend has had a positive impact on the growth of overall passenger transport. Therefore, 2015 saw rise in passenger traffic, where daily line-transport transport keeps contributed to this tendency as well.

Danube Dpassenger positive trend



Fairway conditions were very difficult along the whole Danube in 2015. Water discharge was significantly below multi-annual average on the Upper as well as on the Middle and Lower Danube. Combined with insufficient maintenance works (and required capital interventions) on some stretches, this led to very unfavorable fairway conditions - like long waiting times, blockages of the fairway or vessel groundings - especially on the Lower Danube.

Data on the number of days reaching 2.5m minimum fairway depth at critical sectors in 2015 is given in Table 2 below and in 2014 in Table 3. Sectors were identified as critical if the 2015 ratio of days above Low Navigable Water Level (LNWL) at the reference gauge and days above 2.5m fairway depth at the sector was negative or very small (below 5%) for a specified fairway width (Level of service 1). Levels of service with regard to fairway depth and width have been introduced by the Danube waterway administrations, in order to demonstrate the continuity of navigation on the entire Danube fairway.

7 Fairway parameters availability in 2014 & 2015

River stretch	rkm - rkm	Fairway width	Number of days above LNWL	Number of days equal or above 2.5m fairway depth
Vienna – AT/SK border	1888 - 1884	40 - 80	310	224
Nyergesújfalu (common SK-HU stretch)	1736 - 1734	60	294	244
Dömös	1698 - 1697	120	322	205
Göd	1668 - 1666	80	320	208
Kisapostag	1567 - 1565	80	268	224
Solt	1559 - 1558	100	270	210
Bechet	678 - 676	80	277	285
Corabia	629 - 626	100	258	272
Milka, Belene, Coundour Island	568 - 562	80	285	212
Vardim	542 - 541	80	285	268
Batin island	524 - 523	80	288	246
Turcescu	345 - 342	80	279	260
Chochirleni	309 - 308	80	295	236

TABLE 2: AVAILABILITY OF 2.5 M DEPTH ON CRITICAL SECTORS IN 2015

The data above was taken from the National Action Plans (May 2016 update) of the Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries. The Action Plans contain regular updates as regards the status of critical locations, hydrological conditions, rehabilitation and maintenance activities as well as respective cost and budget for the Danube and its navigable tributaries.

These Action Plans delivered the basis for a meeting of the Transport Ministers of the Danube riparian states in Rotterdam in June 2016. In their Conclusions, the majority of the ministers have agreed to step up fairway rehabilitation and maintenance efforts in 2016 and beyond in order to improve fairway conditions according to the rele-

vant target values defined in the Fairway Master Plan. The ministers announced to allocate the necessary national budgets and to make full use of EU co-financing opportunities for the implementation of required measures. More information can be found on www.danube-navigation.eu.

River stretch	rkm - rkm	Fairway width	Number of days above LNWL	of days equal or above 2.5m fairway depth
Vienna – AT/SK border	1888 - 1884	40 - 80	355	222
Nyergesújfalu (common SK-HU stretch)	1736 - 1734	60	360	307
Dömös	1698 - 1697	120	365	264
Göd	1668 - 1666	80	357	286
Kisapostag	1567 - 1565	80	357	246
Solt	1559 - 1558	100	358	232
Bechet	678 - 676	80	365	365
Corabia	629 - 626	100	365	365
Milka, Belene, Coundour Island	568 - 562	80	365	337
Vardim	542 - 541	80	365	360
Batin island	524 - 523	80	365	352
Turcescu	345 - 342	80	365	345
Chochirleni	309 - 308	80	365	319

TABLE 3: AVAILABILITY OF 2.5 M DEPTH ON CRITICAL SECTORS IN 2014

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8 Locks statistics

Number of locked vessels for 2015 in Austria, Slovakia, Serbia and Romania is presented in the table below. In Austria, the highest number of locked vessels, 12,629 in total was recorded by Freudenau lock, where on the other hand, the Aschach lock was recorded the lowest number of 8,584 locked vessels. In the Slovakian lock, Gabcikovo there were 13,050 locked vessels observed, while Serbian lock Iron Gate I had 15,393 locked vessels for the same year. During 2015, Cernavoda lock in Romania reached a value of 22,128 locked vessels, which was the highest number among Agigea, Cernavoda, Ovidiu and Navodari locks.

	Number of locked vessels												
Lock	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Aschach	399	422	580	532	871	994	972	903	829	924	555	603	8584
Otthensheim	422	435	598	555	879	1014	972	908	822	947	592	642	8786
Abwinden	531	545	750	759	947	1105	1079	1033	975	1078	717	781	10300
Wallsee	495	523	686	735	911	1076	1000	998	952	993	657	724	9750
/bbs-Persenbeug	499	527	687	729	903	1068	997	986	956	995	655	715	9717
Melk	502	520	687	728	908	1087	994	974	959	1003	654	702	9718
Altenwörth	494	529	719	795	988	1165	1088	1036	1031	1011	675	727	10258
Greifenstein	499	520	714	811	993	1157	1091	1076	1037	1039	699	750	10386
Freudenau	581	626	776	1031	1278	1470	1450	1348	1328	1202	772	767	12629
Gabcikovo	658	632	838	1006	1229	1493	1440	1398	1279	1315	845	917	13050
Iron Gate I	1126	1341	1495	1615	1733	1500	1408	1228	952	1033	886	1076	15393
Iron Gate II	1103	1318	1432	1597	1800	1471	1338	1181	931	1013	853	1069	15106
Agigea	1608	1411	1552	1649	1787	1706	1827	1804	1563	1721	1151	1308	19087
Cernavoda	1670	1518	1806	1949	2113	2092	2120	2097	1872	1971	1412	1508	22128
Ovidiu	65	81	198	223	290	371	279	231	246	200	172	160	2516
Navodari	23	33	39	46	42	89	66	62	66	38	25	50	579
per month	10675	10981	13557	14760	17672	18858	18121	17263	15798	16483	11320	12499	

TABLE 4: NUMBER OF LOCKED VESSELS IN 2015

Observing the graph below, where the number of locked vessels are presented per lock, Cernavoda Lock (Romania) has the largest number of locked vessels with the figure of 22,128. This value is followed by Agigea Lock (Romania) with 19,087 of locked vessels and Iron Gate I (Serbia - Romania) with 15,393 of locked vessels.



FIGURE 4: NUMBER OF LOCKED VESSELS PER LOCK IN 2015

Summer period, between May and October, represents the busiest months. In June, number of locked vessels reached a peak with the value of 18,858. On the contrary, the lowest number of locked vessels was recorded at the begining of 2015. In January 10,675 vessels were locked, while in February that number amounted 10,981.



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec FIGURE 5: NUMBER OF LOCKED VESSELS PER MONTH IN 2015



The Danube waterway administrations are continuously developing and improving the Fairway Information Services (FIS) web portal, as one unique window for all Danube navigation-related data (water levels, forecasts, depth at critical sectors, active Notices to Skippers, data on waterway infrastructure, electronic navigational charts, atlas of berths and contacts of relevant national navigation authorities).

Paper navigational charts and Atlas of berths for different Danube riparian countries, as well as up-to-date status of the waterway marking system can be downloaded from the Danube FIS portal.



Illustration by the NEWADA team

The Danube FIS portal was developed within the NEWADA and NEWADA duo projects, co-funded under the EU South East Europe Transnational Cooperation Programme. The Danube waterway administrations pay close attention to investing efforts ensuring that data available in the FIS portal are up-to-date and accessible for all Danube waterway users. In that sense, the portal is available in the following languages: English, German, Slovak, Hungarian, Croatian, Serbian, Romanian and Bulgarian.

River Information Services (RIS) are either implemented or under implementation in all Danube countries. Soon, usage of RIS will be mandatory all along the Danube River. This will improve safety of navigation by provision of accurate and real-time information on navigation conditions and improve traffic management system. The current status of implementation and availability of RIS services along the Danube River is summarized in Table 5.

Service	AT	SK	HU	HR	RS	RO	BG
AIS coverage	100%	100%	100%	100%	100%	100%	100%
VTT	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ENCs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NtS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ERI	Yes	Yes	Partially	Yes	Yes	Yes	Yes
Electronic lock management system	Yes	Yes	No locks	No locks	Yes	Yes	No locks
Hull database	Yes	Yes	Yes	Pending	Yes	Yes	Pending
Is RIS obligatory?	Yes	Yes	Yes	Pending	Yes	Pending	Pending

TABLE 5: Coverage of fairway information services along the danube

10^{Utilizing} through projects and initiatives

PLATINA II

PLATINA II (2013 - 2016) was a European Coordination Action supporting the implementation of the NAIADES 2 policy package "Towards quality inland waterway transport", which aims at promoting this sustainable mode of transport. PLATINA 2 brought together all the relevant actors in the inland waterway sector in a multi-disciplinary knowledge network to foster the development of inland navigation into an even more sustainable and competitive part of multimodal European transport networks.

The most important results of the PLATINA II project are:

- Outlined market opportunities for continental container transport in North-West Europe as well for inland waterway transport in the Danube region
- Continued the operation of a comprehensive and easy-to-use funding database for entrepreneurs (http://www.naiades.info/funding/)
- Executed research on market mechanisms and on ways for increasing transparency
- Developed a tool for estimation cost and impact of greening technologies (http://greeningtool. NAIADES.info/web/)
- Prepared technical inputs for the definition of ship-handling simulators
- Developed concepts and scenarios for the electronic service record book
- Facilitated the integration of inland waterway transport in curricular of logistics learning institutes
- Defined possible needs and objectives of a revised legal framework for River Information Services
- Established an expert group on inland waterway maintenance and prepared a good practice manual

• Provided technical expertise in the area of emission reduction of inland waterway vessels

FAIRway Danube – basis for the improvement of fairway conditions

Between July 2015 and June 2020 FAIRway Danube will provide current and harmonized information about shallow sections, water levels and water level forecasts. Available depths will be used optimally by adapting the location of the waterway to the current conditions. In parallel, FAIRway Danube aims at preparing the harmonized rehabilitation of the Danube and its navigable tributaries. Pilot operations of new harmonised services for waterway users, the provision of feedback and the contribution to technical specifications or operational concepts are integral parts of FAIRway Danube. A key objective is also the involvement of stakeholders for approval and validation of results by means of pilots. In short, FAIRway is thriving to contribute to an increased safety, efficiency and environmental friendliness of inland navigation by setting the following steps:

- Update national action plans regularly
- Purchase of advanced equipment for hydrological services (gauging stations, surveying and marking vessels)
- Realize and evaluate pilot activities:
 - basic data for all critical sections
 - coherent monitoring scheme for the navigation status
 - harmonised water level forecasts
 - optimized relocation of the fairway
- Develop innovative approaches in the area of aerial monitoring, modern Aids to Navigation, and other tools
- Prepare the documentation for selected future measures

FAIRway will be carried out in a harmonized way in six countries: Austria, Slovakia, Hungary, Croatia, Bulgaria and Romania under the umbrella of the Innovation and Networks Executive Agency (INEA) of the European Commission. Responsible for the coordination of the project is the Austrian Ministry for Transport, Innovation and Technology (bmvit) and viadonau.

FAST Danube

The main objective of the FAST Danube (2014-2018) project is to identify the technical solutions to be implemented, in order to ensure navigation conditions on the Romanian-Bulgarian common sector of the Danube and safely conducting the transport activities on Danube throughout the entire year, in accordance with the recommendations of the Danube Commission in Budapest. The actions under the project are:

- Investigating and developing technical solutions to be included in the feasibility study to ensure stable navigation conditions throughout the year, on the Romanian-Bulgarian common sector of the Danube;
- Identification and preliminary design of the necessary works to eliminate the existing difficult points;
- Carrying out the Environmental Impact Assessment and Appropriate Assessment for developing the documentation in order to obtain the Environmental Agreement;
- Completion of technical specifications for carrying out the works on this sector of the Danube.

More information can be found under: http:// www.fastdanube.eu/

RIS COMEX

The project "RIS Corridor Management Execution (RIS COMEX)" aims at implementing harmonised interoperable cross-border RIS services and systems according to common quality standards and to ensure the maximum benefits of RIS operation through coordinated international data exchange. Thereby mainly efficiency (Economics – Danube Logistics) but also traffic safety shall be increased. The project has been submitted in the latest CEF call in February 2016; the funding decision by CEF is expected in summer 2016.

Based on the results of the projects IRIS Europe 3 and CoRISMa relevant systems and services towards an efficient RIS corridor management will be identified and implemented within COMEX. The focus is put on the reduction of administrative barriers (cross-border electronic reporting), the increase of efficiency in inland navigation (cross-border data exchange for logistics) as well as improved planning of IWT and shortening of transport times (cross-border transport planning, portal for fairway information services). In addition, by means of specific measures the following criteria shall be ensured: evolution of RIS standards, acceptable quality level of the offered river information services, sustainable operation of national RIS infrastructure.

Further information

Danube Strategy > www.danube-navigation.eu > www.danube-region.eu River Commissions > www.danubecommission.org > www.savacommission.org

> www.icpdr.org

11 Strenghtening partnership & network

The network of Danube waterway administrations managed to harmonize a number of services for navigation along the Danube River in the past years. For the last year and a half, Danube waterway administrations are cooperating to preserve achieved results and prove that they can be sustainable. At the same time, new challenges are arising in the field of new and improved customer oriented services, and those will be the subject of new common projects for which application is undergoing.

Danube Waterway Administrations continue to strengthen the partnership between the members of the network, as well as with other relevant institutions and users of the Danube waterway. The NEWADA umbrella gathers institutions which are natural partners, sharing the same challenges, but also the same vision.



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