13. Annexes

13.1 Annex 1. Market observatory tool 2022

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3. Transport volume and transport performance on the Danube

3.1. General performance

Cargo transport on the entire navigable Danube between Kelheim (Germany) and the Black Sea in Romania lies in the range between 36 and 40 million tonnes per year.[1]

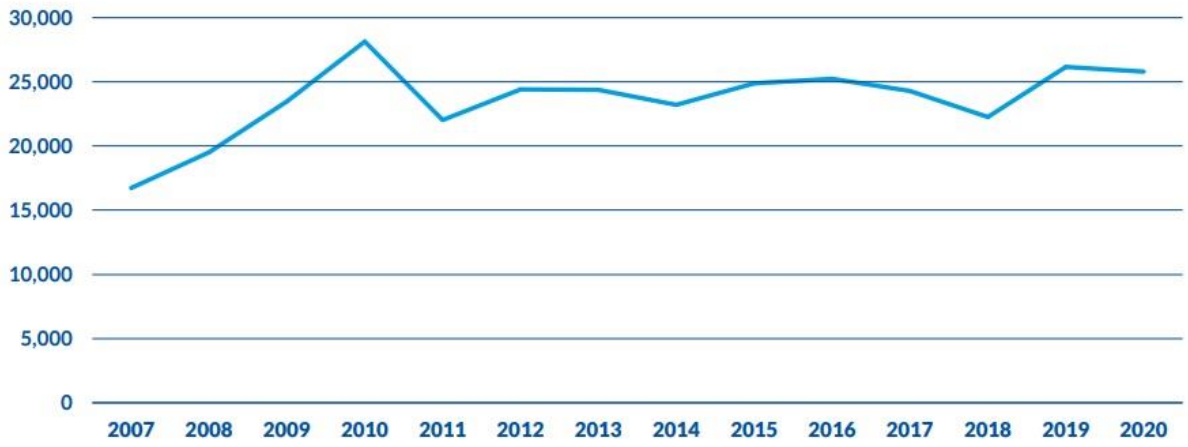


Fig. 1 Transport performance in freight transport in all EU Danube countries plus Serbia (in million tkm) (Source: CCNR Market Observation - Annual report 2021 Freight transport on inland waterways)

3.2. Danube transport at specific measurement points

"The statistical system used for observing Danube cargo transport at certain measurement points is similar to the system in the Rhine basin. The waterway administrations register data at certain borders or measurement points which are described for the Danube in the table below.
On the Danube, and in particular on the Lower and Middle Danube, transport by pushed convoys has a much higher share than it does on the Rhine. For the Middle Danube, the share of pushed convoys within total cargo transport was 75.7% in 2020, compared to 79.5% in 2019 and 78.7% in 2018. Next to the measurement points along the Danube, yearly figures are also shown for the Danube-Black Sea Canal, running from Cernavodă on the Danube River to Constanţa (southern arm)

[1] *Source: Via Donau, several annual reports available at https://www.viadonau.org/newsroom/publikationen/broschueren (last consulted 3 June 2021)*

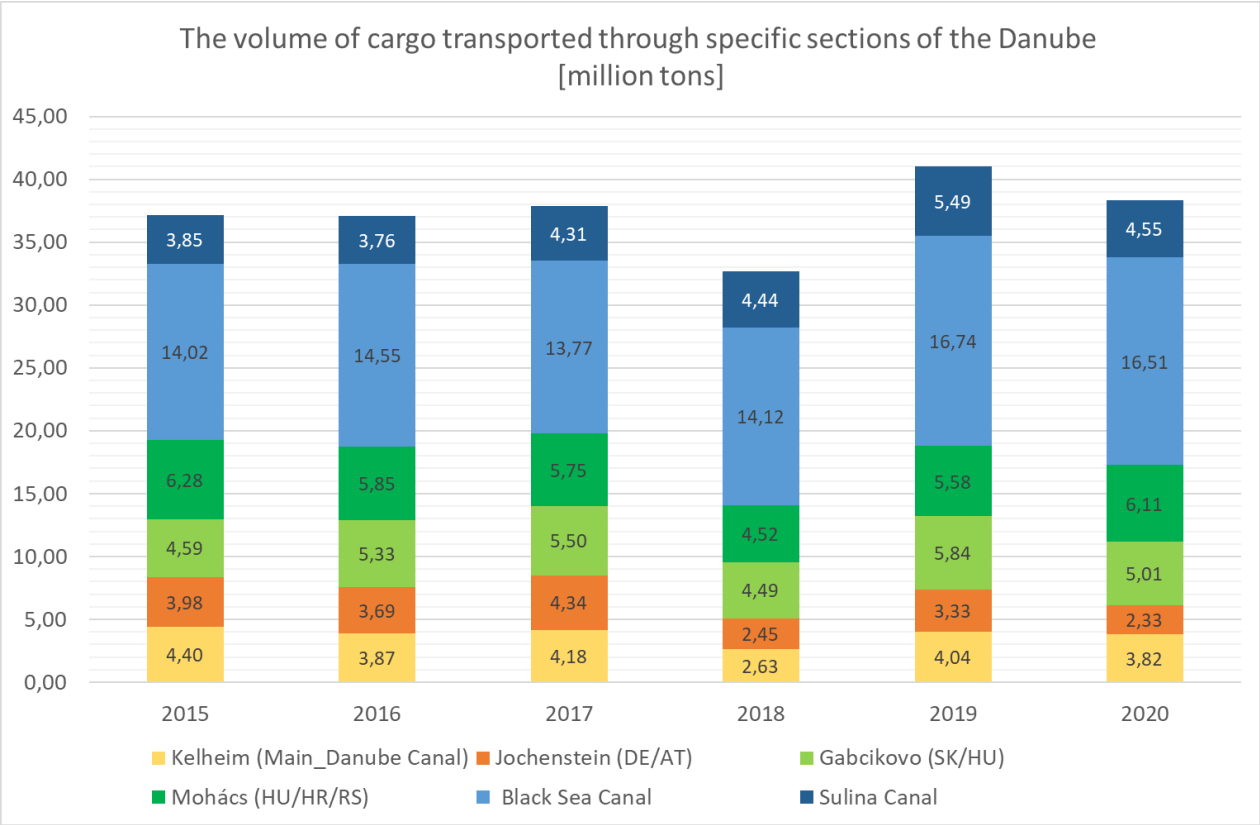


Fig. 2 Yearly freight transport at different measurement points (Source: Danube Commission annual Market Observations)

and to Năvodari (northern arm) on the Black Sea. In 2020, this canal had a transport volume of 16.5 million tonnes (a decrease of only 1.4% compared to 2019)."[2]

3.3. Danube transport by cargo segment

"Cargo volumes of iron ore, metals, metal products, steel and coking coal account for 45-55% of all goods transport on the Danube.7 Overall, iron ore and metals followed an increasing trend on the Danube between 2014 and 2019, despite low waters and macroeconomic hurdles. The reasons are the general positive macroeconomic growth environment in many Danube countries and in particular the growth in steel production in most of these countries between 2014 and 2019.8 In 2020, however, the decrease in demand for raw materials for the metal processing industry and for metal products led to a partial suspension of activity in this market segment. Further important developments were the reduction of import quotas of metals to the EU and the redistribution of supply flows as a result of the introduction of new customs duties in international trade. Altogether, there

[2] Source: CCNR Market Observation - Annual report 2021

was no stabilisation of the indicators in the steel market segment of Danube navigation until the end of 2020. The agricultural segment stabilised Danube transport: large volumes of grain and other agricultural products were transported from the ports on the middle Danube to the ports of the Danube Delta (Constanţa). The transport market on the Danube for petroleum products and products of the chemical industry could be considered as relatively stable during the year.
On the Upper and Middle Danube, iron ore is entirely transported upstream, while grain, food products and foodstuffs are entirely transported downstream. The first point reflects the provision of the steel industry in Austria, Hungary and Serbia with raw materials, while the second point reflects the export of agricultural products from Croatia, Hungary and Serbia downstream to the Lower Danube region and to seaports.
For the Middle Danube, the share of pushed convoys within total cargo transport was 75.7% in 2020, compared to 79.5% in 2019 and 78.7% in 2018."[3]

2.2.1 Container transport

As the CCNR Market Observation – Annual report 2021 puts it: "*On the Danube, container transport is still almost non-existent*.". The paper *Rhein-Danube - Fourth Work Plan of the European Coordinator – Karla Peijs (May 2020)* declares Danube container transport to be non-existent as well in the chapter "*IWW network bottlenecks*":

"*Two of the bridges (Alte Mainbrücke, Würzburg; Rail Bridge Bogen, rkm 2311.27) can represent a particular challenge for the navigation of passenger vessels and would also represent an obstacle* ***if container transport on the Danube develops.*** *However it has to be noted that the 12th century Alte Mainbrücke in Würzburg is a landmark of the city. Therefore possibly this issue cannot be solved due to the particular historic value.*"

Following figures are displaying the data of Danube Commission's annually published Market Observations. Besides the displayed most common cargo types - which represent 75-95% of total transport volume – most frequent cargo were coal, cement, and other minerals.

[3] Source: CCNR Market Observation - Annual report 2021

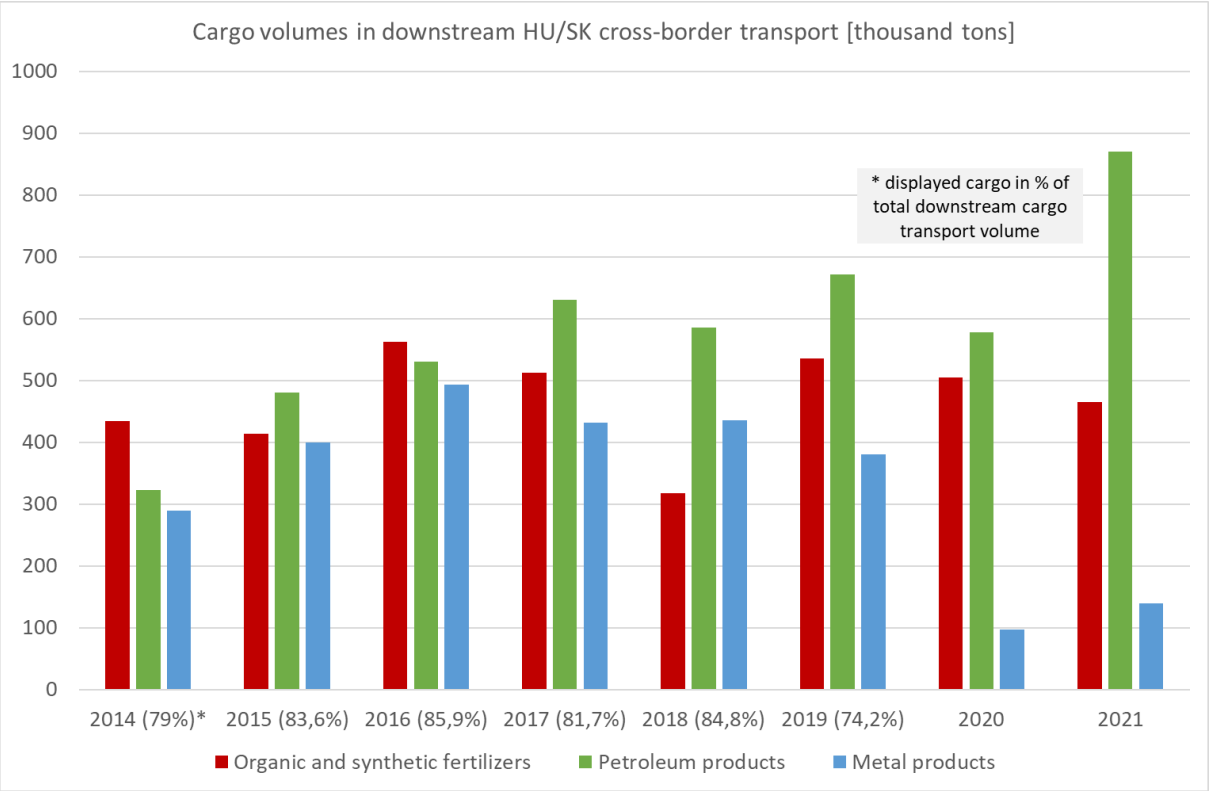


Fig. 3 Cargo volumes in downstream at Gabcikovo (Source: Danube Commission annual Market Observations)

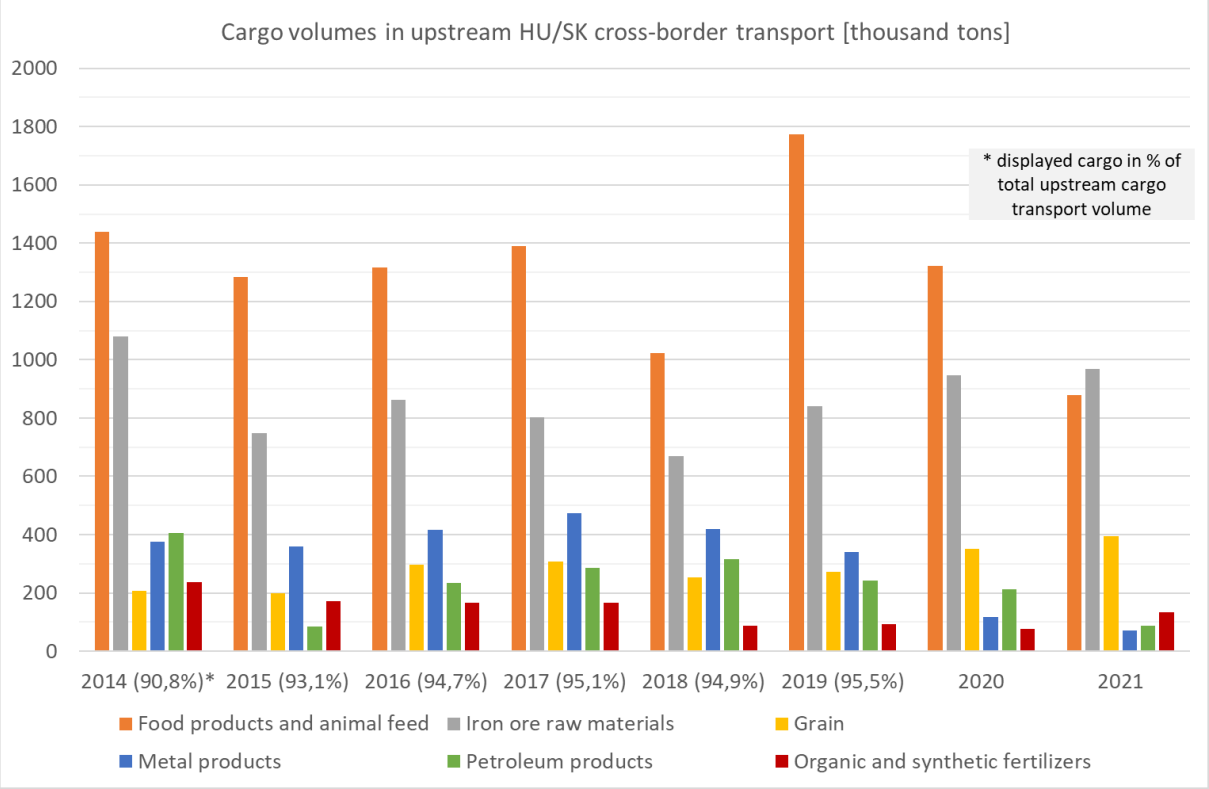


Fig. 4 Cargo volumes in upstream at Gabcikovo (Source: Danube Commission annual Market Observations)

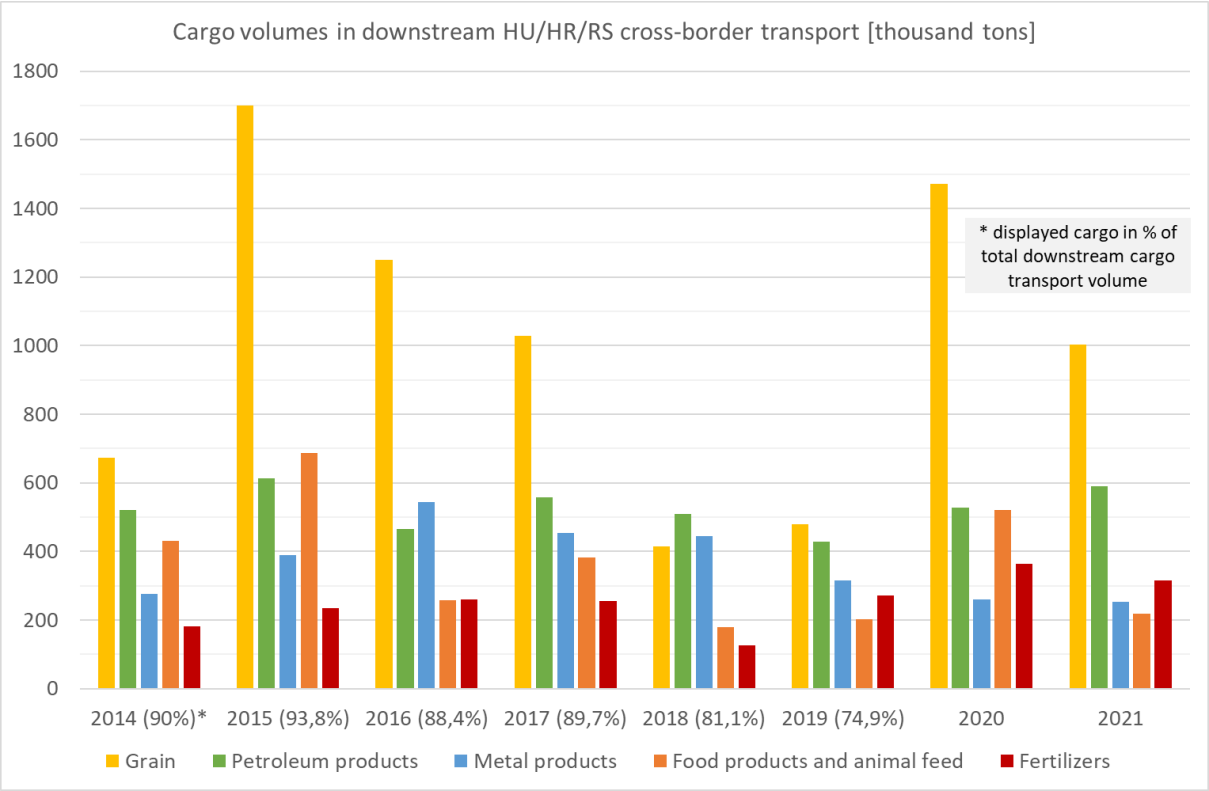


Fig. 6 Cargo volumes in downstream at Mohács (Source: Danube Commission annual Market Observations)

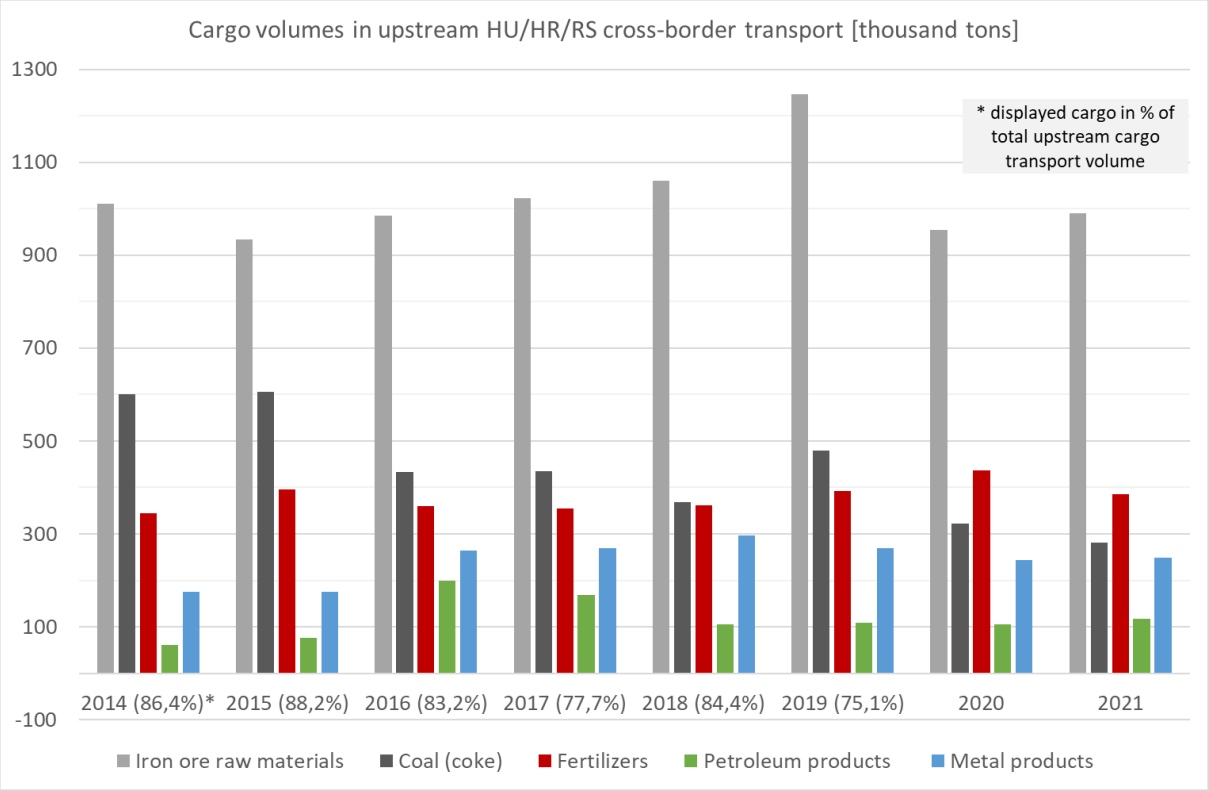


Fig. 5 Cargo volumes in upstream at Mohács (Source: Danube Commission annual Market Observations)

3.4.Danube transport at riparian states

Following figures are displaying the data content of ViaDonau's annual reports on Danube navigation. These reports are published on ViaDonau's website as well (https://www.viadonau.org/en/newsroom/publications/folders). The diagrams were fashioned to highlight medium to long term trends in riparian states.
In Fig 11. there are two data points which may seem to be inexact at first glance, namely transit on the Bulgarian Danube in years 2019 and 2020. The concerned reports do not include information on the seeming anomaly.

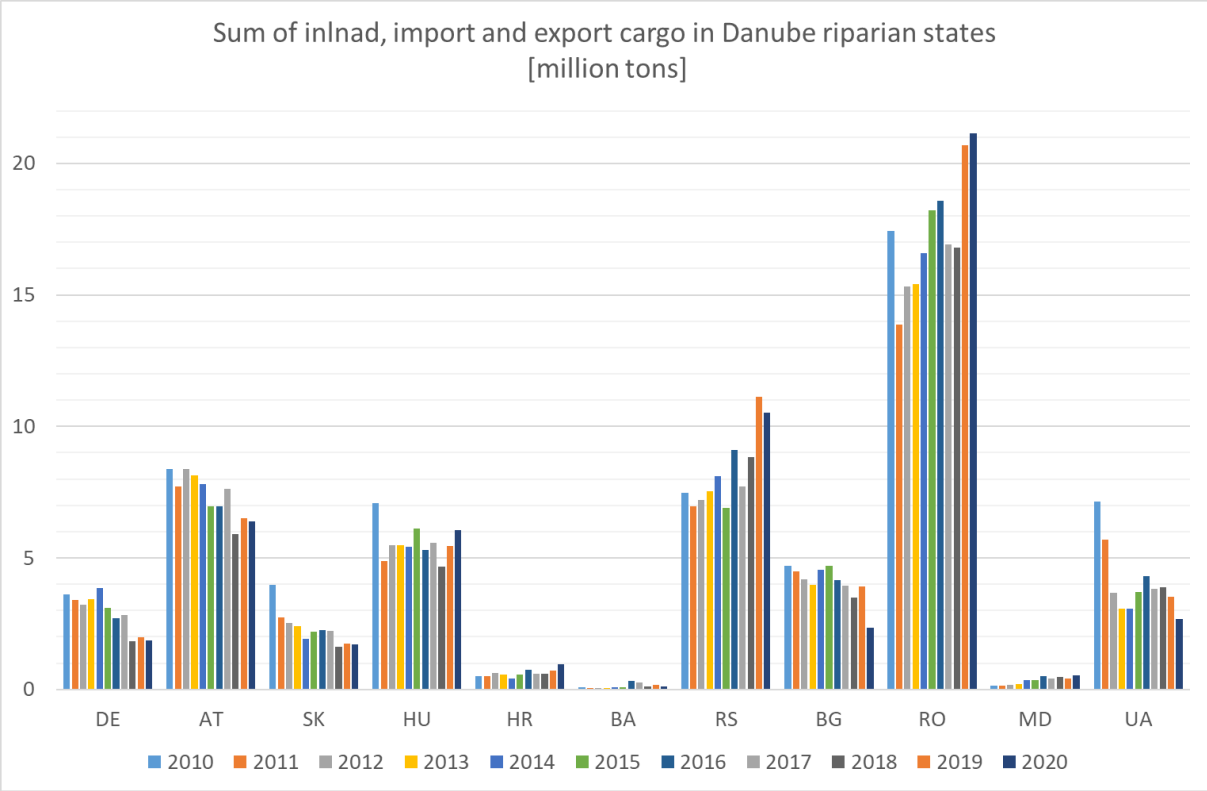


Fig. 7 Sum of inland, import and export annual cargo in riparian states (Source: Via Donau, Annual Report on the Danube Navigation, see footnote 1.)

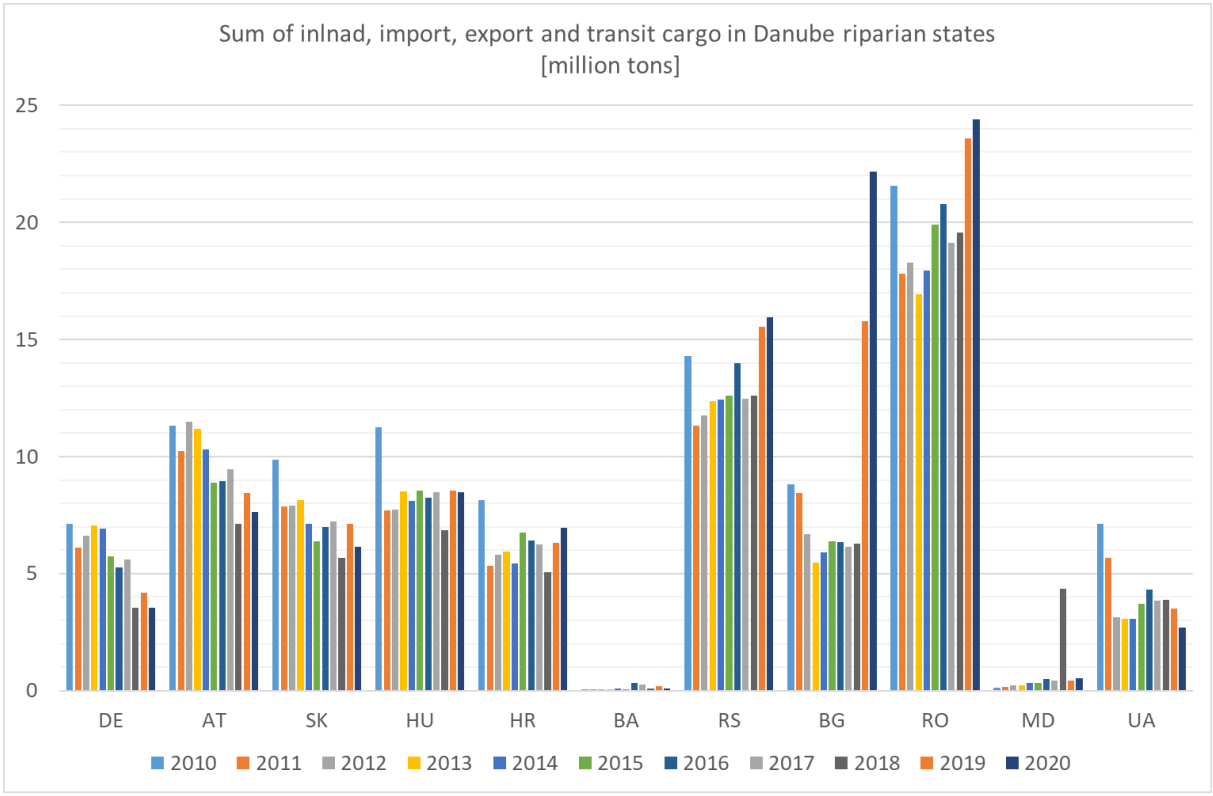


Fig. 8 Sum of inland, import, export and transit annual cargo in riparian states (Source: Via Donau, Annual Report on the Danube Navigation, see footnote 1.)

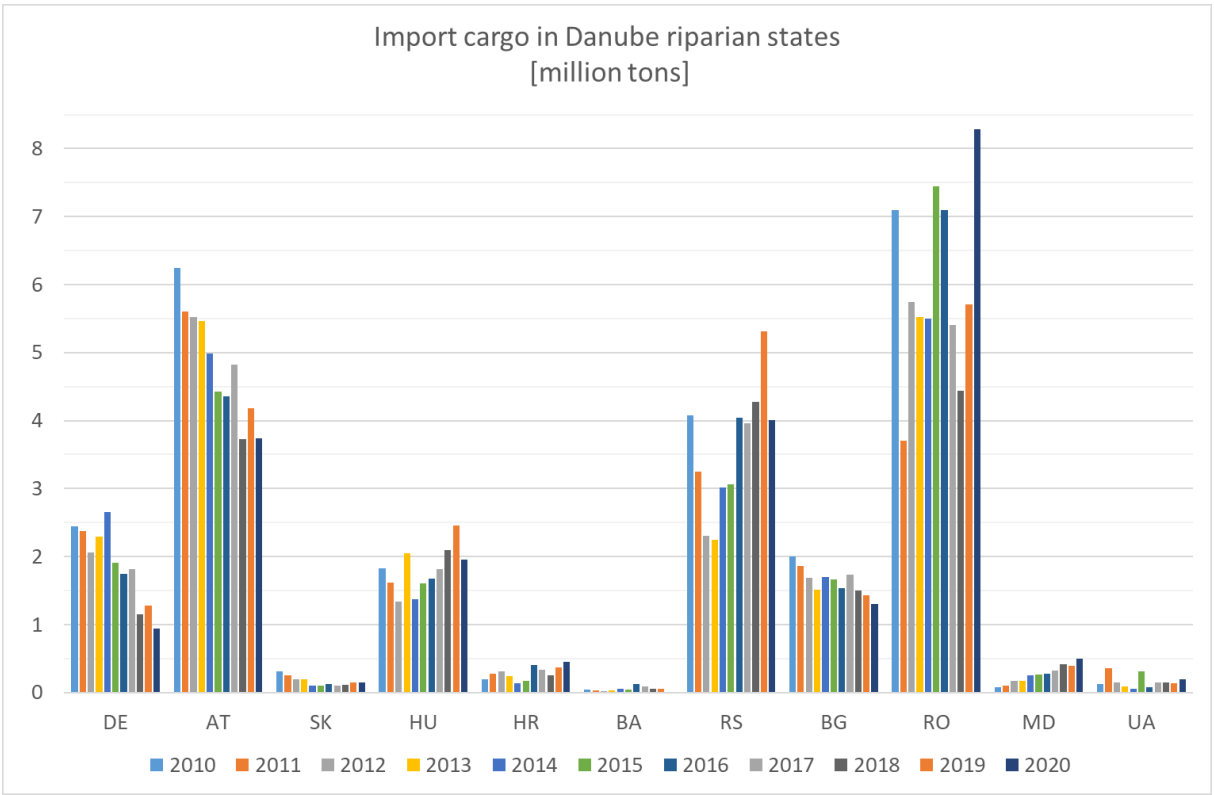


Fig. 9 Import cargo in riparian states (Source: Via Donau, Annual Report on the Danube Navigation, see footnote 1.)

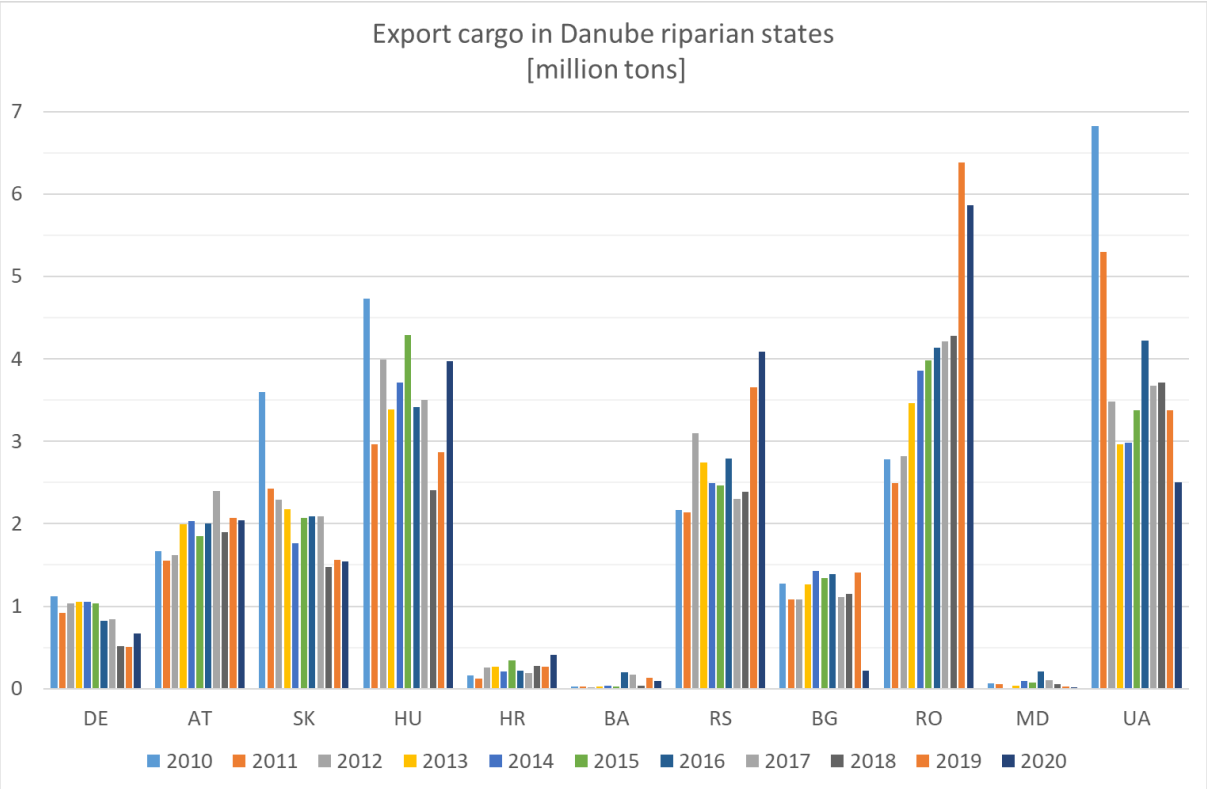


Fig. 11 Export cargo in riparian states (Source: Via Donau, Annual Report on the Danube Navigation, see footnote 1.)

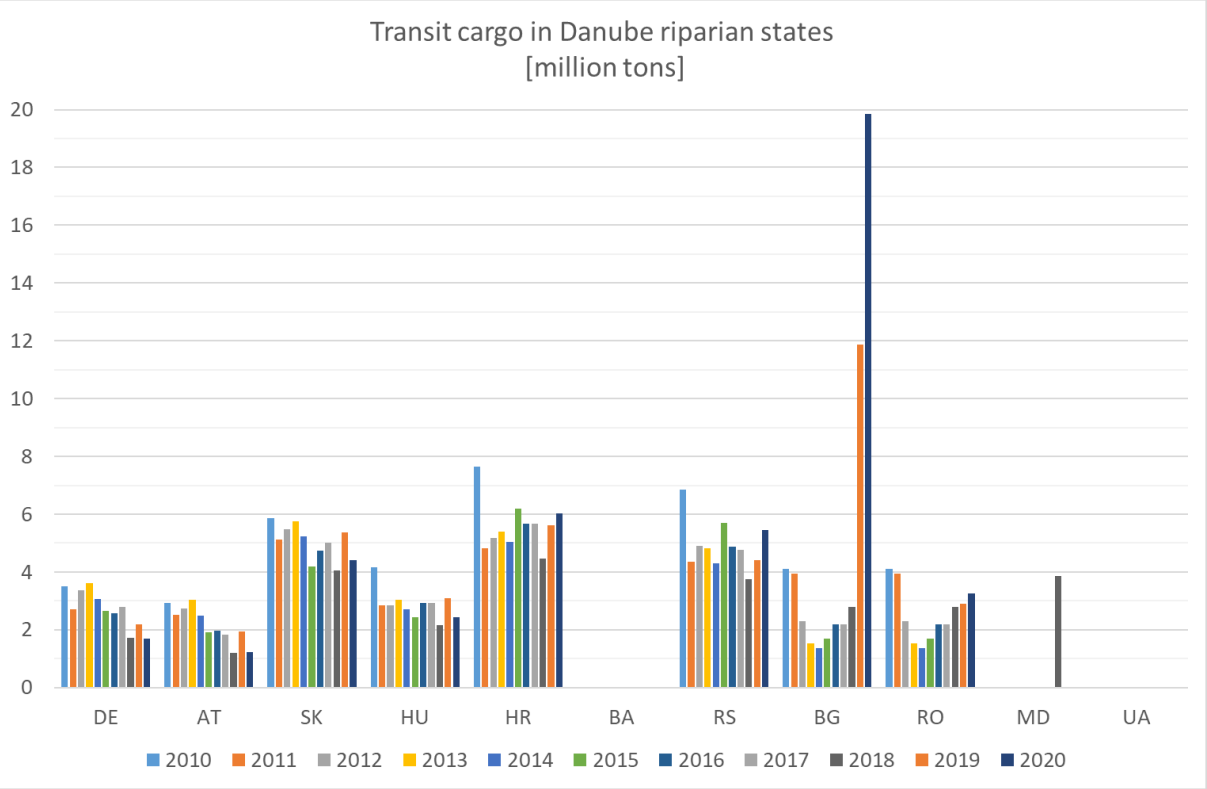


Fig. 10 Transit cargo in riparian states (Source: Via Donau, Annual Report on the Danube Navigation, see footnote 1.)

4. Fairway conditions

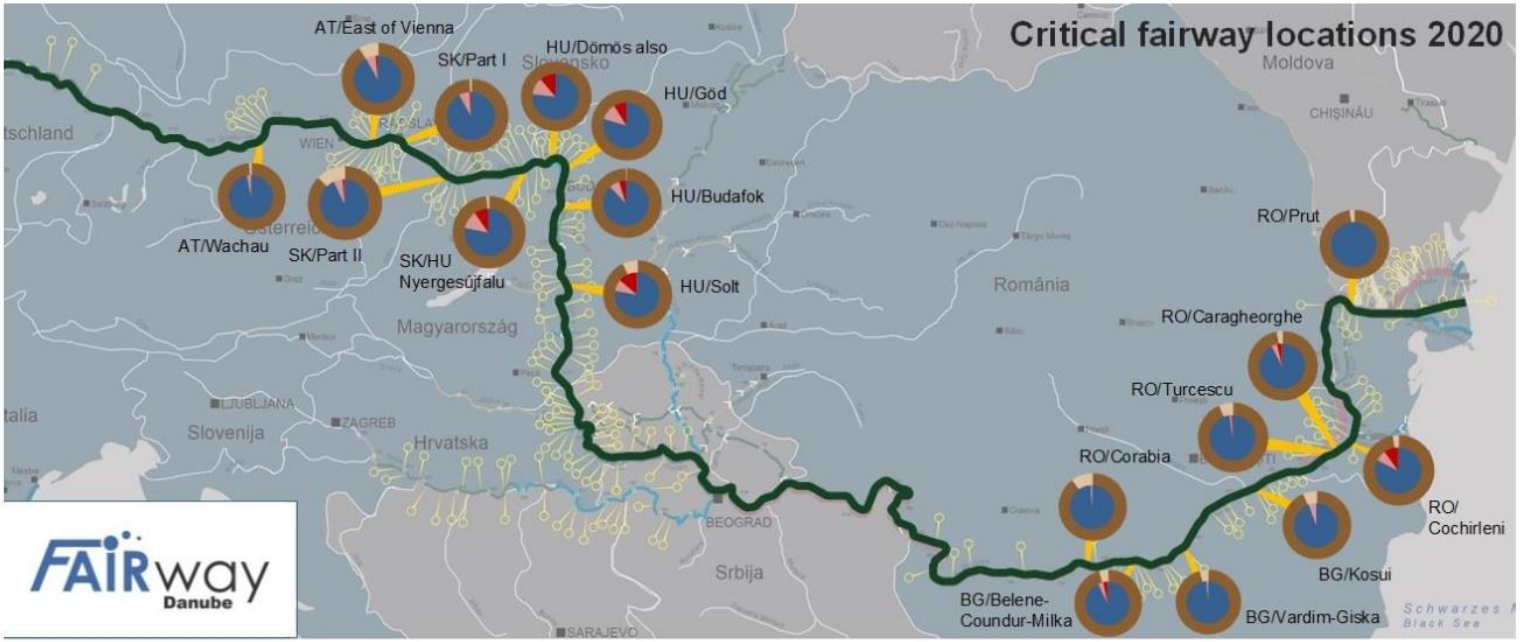
It is quite hard to characterize fairway conditions on the whole length of the Danube, especially for a whole year. However, there is a document – *National Action Plans*[4] -, updated at least every may, which does the job pretty well. It is prepared within the framework of the CEF-financed FAIRway Danube project. The first version was based upon the initiative of the Technical Secretariat for PA1a and the Danube Region Strategy. Unfortunately, the latest update was published in May 2021. The FAIRway Danube project ended in December 2021, hopefully updates will be prepared henceforward in the framework of Danube Region Strategy. In the absence of updated National Action Plans the second-best source is Danube Commission's annual market observation. Fairway conditions of year 2020 is presented using relevant National Action Plans, while year 2021 is presented by means of DC's Market Observation. DC's approach is more straightforward, therefore less detailed.

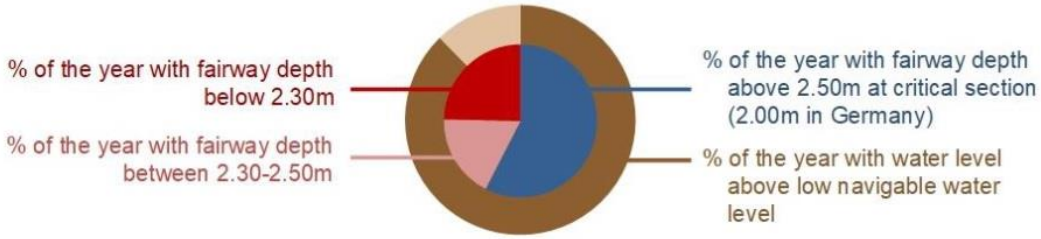
4.1. Fairway conditions in 2020[5]

Fairway conditions Throughout 2020, hydrological conditions along the entire Danube were favourable, and although water discharge was below average in some parts of the Lower Danube, water levels remained above LNWL for much of the year. Only in January and early February and in September and October a few days with water levels below LNWL were recorded. Likewise, fairway conditions along the entire Danube were much more favourable compared to the last three years. Especially on the Lower Danube, where the worst nautical bottlenecks are usually located, fairway conditions have been gradually improved in recent years through maintenance dredging and extensive fairway marking activities. In 2020 the most critical bottlenecks were located on the Hungarian Danube stretch, in particular the locations Nyergesújfalu and Solt, where the minimum fairway depth of 2.5 m was not achieved for 80 days and 81 days, respectively. Maintenance dredging and fairway marking activities were intensified on the Lower Danube in recent years, resulting in more stable fairway conditions and significantly improved fairway availability during the low water seasons in summer. In Romania and Bulgaria dredging works were carried out in several critical sectors in 2020, amongst others in Cochirleni (RO), Prut (RO, maritime Danube) and Isaccea (RO, maritime Danube), Vardim (BG) and Belene (BG). The figure below provides a status overview of the main critical locations on the Danube in 2020. Locations are only

[4] https://navigation.danube-region.eu/documents/
[5] Source: Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries: NATIONAL ACTION PLANS UPDATE MAY 2021

displayed if they showed a critical status in the reporting period. For each critical location, the figure illustrates the situation as regards fairway availability (inner circle) – i.e. the effectiveness of interventions by the waterway managers, in relation to the water levels (outer circle) – i.e. the given hydrological framework conditions that cannot be influenced by the waterway managers. High water levels, measured at static gauging stations, do not automatically guarantee sufficient fairway depths over the fairway width which is required for navigation. Due to the intense dynamics in the free-flowing river sections, the morphology of the riverbed and thus fairway depth and/or width may change rapidly. Maintenance interventions are needed to provide the required fairway parameters under the given hydrological circumstances.





For Germany, no data currently available. In the free-flowing section between Straubing and Vilshofen a fairway depth of 2.50 m is neither developable nor maintainable. **In this section the objective is to maintain the fairway depth of 2.00 m related to Low Navigable Water Level.** Depicted values in Germany therefore refer to 2.00 m fairway depth.

The recommended **target** of the Fairway Rehabilitation and Maintenance Master Plan is to provide **a fairway depth exceeding 2.5 m[6] at least on as many days per year as show actual water levels equal to or above the statistical Low Navigable Water Level (LNWL)**[7]. *This situation would correspond to an equal share of the blue and the dark brown circle in the figure above.*

Key facts displayed in the "Critical fairway locations 2020" figure above:
The **recommended Level of Service of 2.50 m fairway depth** at Low Navigable Water Level **could not be reached in some of the main critical locations** throughout the year 2020 (inner blue circle does not reach the level of the outer dark brown circle). Hydrological conditions were quite favourable in 2020, water levels remained above LNWL for much of the year (large share of the dark brown colour in the outer circle) resulting in increased fairway availability, particularly on the Lower Danube.
Riparian states especially on the Lower Danube are **closer to reaching the maintenance target** of providing 2.50 m fairway depth at Low Navigable Water Level, due to targeted dredging interventions conducted since 2018.
In **some sections, fairway depths just slightly below 2.50 m could be provided for some days** (light red colour in the inner circle). In other locations the maintenance target was even overachieved.

Please note: **For detailed interpretation, the individual conditions of the critical sections and locations illustrated in the country chapters of the Action Plans need to be considered[8]**, as the causes, detailed locations and severity of the critical sections are strongly varying. For example, some sections continuously provide fairway depths just slightly below 2.50m.

In addition, supporting measures like providing high quality information on the morphology of the critical section to skippers can improve navigability significantly, especially during low water periods.

In the next figure, **the fairway availability of critical locations in 2020 is compared with the previous years**. Locations are displayed if they had been identified as critical by waterway users in 2014 and if data for 2012–2020 was available. Analogous to the first figure, the targeted availability of 2.5m fairway depth17 at Low Navigable Water Level would correspond to an *equal height of the blue/ green (availability of*

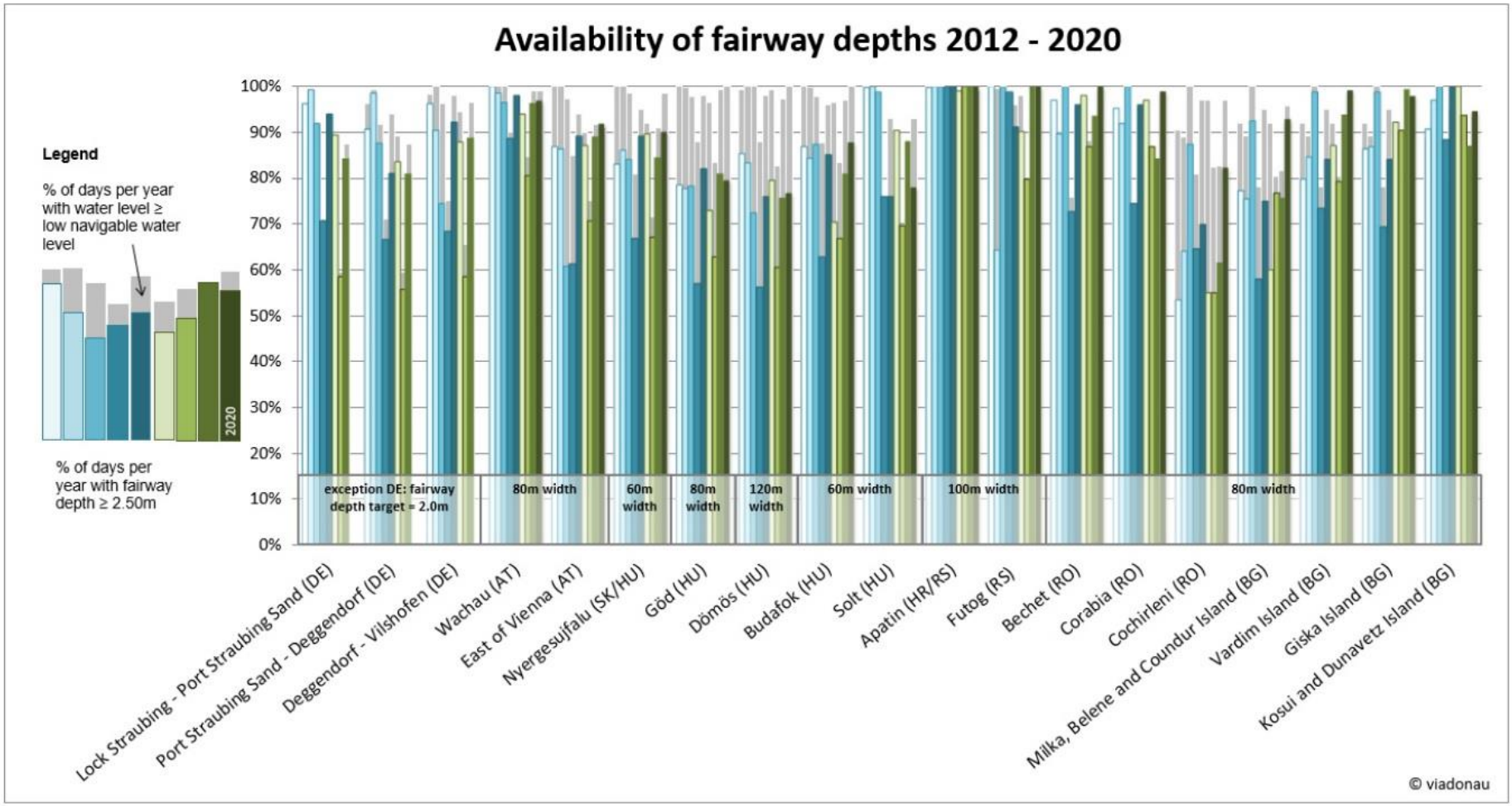
[6] Or the respective target value relevant for the special section (e.g. 2.0 m in Straubing-Vilshofen on the German Danube)
[7] LNWL = the water level reached or exceeded at a Danube water gauge on an average of 94% of days in a year (i.e. on 343 days) over a reference period of several decades
[8] NATIONAL ACTION PLANS UPDATE MAY 2021

2.5m fairway depth) and the grey (water level above Low Navigable Water Level) columns in the figure below.

The fairway widths in the figure are minimum widths for minimum Levels of Service which were defined based on the usual traffic volumes on the respective sections.

Key facts illustrated in the "Fairway availability 2012–2020" figure on the next page:
Fairway availability varies quite intensely (predominantly dependent on hydrological conditions and implemented maintenance measures).
The figure clearly illustrates the (possible) gap between the available water levels and the actual fairway depths. The **sections for which the gap is the largest over the years show the biggest need for maintenance and/or rehabilitation interventions**. Highly critical locations in terms of maintenance and rehabilitation can be identified: the Hungarian Danube, the area around Milka/ Belene/Coundur (BG) and Cochirleni (RO). The section Straubing–Vilshofen (DE) is also critical in terms of navigation conditions. In some Danube sections, measures that go beyond maintenance and rehabilitation would have been required in order to reach the recommended Level of Service.

As already mentioned, it is important to take the depth classes close to 2.5m into account when interpreting this graphic, as these provide a certain range of navigability although not meeting the 2.5m threshold.


Availability of fairway depths 2012 - 2020
Legend
% of days per year with water level ≥ low navigable water level
2020
% of days per year with fairway depth ≥ 2.50m
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
exception DE: fairway depth target = 2.0m
80m width
60m width
80m width
120m width
60m width
100m width
80m width
Lock Straubing - Port Straubing Sand (DE)
Port Straubing Sand - Deggendorf (DE)
Deggendorf - Vilshofen (DE)
Wachau (AT)
East of Vienna (AT)
Nyergesujfalu (SK/HU)
Göd (HU)
Dömös (HU)
Budafok (HU)
Solt (HU)
Apatin (HR/RS)
Futog (RS)
Bechet (RO)
Corabia (RO)
Cochirleni (RO)
Milka, Belene and Coundur Island (BG)
Vardim Island (BG)
Giska Island (BG)
Kosui and Dunavetz Island (BG)
© viadonau

4.2.Fairway conditions in 2021[9]

Water flow and operating draught of vessels

Absence of freezing on the river and lack of ice phenomena provided for uninterrupted navigation in the first quarter of 2021 and thereafter. Relatively sufficient water flow was ensured only in February – May, which made it possible to load cargo vessels to a draught of 2.5 m during these periods. The phase of summer shallow waters in 2021 occurred later compared to 2020, meanwhile, in the third and fourth quarters operating vessel draughts were lower compared to 2020. (Table 1).

Month	Loading, upstream (cm)	Loading, downstream, (cm)
January	230 (230)[10]	210 (210)
February	250 (250/260)	210/220 (210/220)
March	250 (250/270)	210/220 (220/230)
April	250 (230/240)	250 (230/240)
May	250 (210/220)	210/220 (190/200)
June	230 (230)	210/220 (210/220)
July	230 (230)	200/210 (210)
August	210 (230)	190/200 (210)
September	190 (210)	180/190 (200)
October	190 (210)	180/190 (200)
November	190 (200)	180/190 (200/210)
December	190 (210)	180/190 (200/210)

Table 1 Draughts of cargo vessels during navigation in 2021

5. Danube port's services

ViaDonau created and operates Danube Logistics Portal[11]. The website offers valuable information and interactive services for newcomers, forwarders, cargo owners. Among those services there is an updated data base of Danube ports. Displayed port data includes all important data to judge a port's serviceability

[9] Source: Danube Commission, Market observation for Danube navigation, results in 2021
[10] Operating draughts of cargo vessels are indicated in parenthesis for the relevant period of 2020.
[11] https://www.danube-logistics.info/

from a forwarder’s point of view. Website contains more details on port authorities, custom offices, and logistic service providers for each port.

Main data	Port	Kelheim	Regensburg	Straubing	Deggendorf	Passau	Linz	Enns / Ennsdorf	Ybbs	Krems	Korneuburg
	Country	Germany	Germany	Germany	Germany	Germany	Austria	Austria	Austria	Austria	Austria
	Location (rKm)	2411	2373	2 313,3	2283	2232,38	2128,19	2111,83	2057,67	1998	1942,95
	Total area (m2)	800000	1.850.000	220.000	550.000	250.000	1.350.000	3.530.000	60.000	484	
Cargo Types	Dry bulk	x	x	x	x		x	x		x	x
	Container	x	x		x		x	x	x	x	
	Break bulk	x	x	x	x		x	x	x	x	
	High & heavy cargo	x	x	x	x			x		x	
	Ro-ro cargo	x	x	x	x			x			
	Petroleum products refined		x		x		x	x			
	Crude oil										
	Liquid bulk				x			x			
Handling facilities and devices [yes/no/number of items]	Gantry crane	5					2	6		2	
	Mobile crane	1	1			1	1	11	8	2	
	Luffing/Slewing crane		7	3		1				1	
	Ro/Ro-ramp	x	x	x	x	x		x			
	Pneumatic equipment				x			x			x
	Covered water transshipment		x			x		x			
	Floating crane										
	Conveyor belt	x	x	x	x	x		x		x	
Storage Facilities	Open storage area	x	x	x	x	x	x			x	
	Covered storage area	x	x	x	x	x	x			x	
	Customs warehouse	x			x		x			x	
	Storage of dangerous cargo						x				
	Storage 5										
Maintenance and disposal facilities	Waste disposal		x	x		x	x	x		x	
	Bilgewater disposal	x	x				x	x			
	Fresh water supply	x	x		x	x	x	x		x	
	Onshore power supply	x	x	x	x		x	x		x	
	Bunkering facilities		x	x		x		x			
	Shipyard						x				

	Port	Vienna	Bratislava	Komarno	Sturovo	Győr-Gönyü	Komarom	Nyergesujfalu	Budapest	Dunaujvaros	Dunavecse
Main data	Country	Austria	Slovakia	Slovakia	Slovakia	Hungary	Hungary	Hungary	Hungary	Hungary	Hungary
	Location (rKm)	1920	1867	1867	1722	1794	1767	1735	1640	1579	1572
	Total area (m2)	3.000.000	1.431.586	643.000		1.100.000	24.777	39.510	1.520.000	52.023	42.300
Cargo Types	Dry bulk	x	x	x	x	x	x		x	x	x
	Container	x	x			x			x		
	Break bulk	x	x	x		x	x		x	x	x
	High & heavy cargo	x	x			x	x				x
	Ro-ro cargo	x	x			x		x	x		
	Petroleum products refined	x	x			x			x		
	Crude oil	x							x		
	Liquid bulk	x	x								
Handling facilities and devices [yes/no/number of items]	Gantry crane	3	19	8	1				4	7	
	Mobile crane	1	2	2	1	4					2
	Luffing/Slewing crane										
	Ro/Ro-ramp	x	x			x		x	x		
	Pneumatic equipment		x			x			x		
	Covered water transshipment	x	x	x					x		
	Floating crane										
	Conveyor belt	x	x		x	x	x				x
Storage Facilities	Open storage area	x	x	x		x		x	x	x	x
	Covered storage area	x	x	x		x			x	x	
	Customs warehouse	x		x					x		
	Storage of dangerous cargo										
	Storage 5										
Maintenance and disposal facilities	Waste disposal	x				x				x	
	Bilgewater disposal	x				x				x	
	Fresh water supply	x	x	x	x	x			x	x	x
	Onshore power supply	x	x	x	x	x			x	x	x
	Bunkering facilities		x							x	
	Shipyard		x							x	

Main data	**Port**	Paks	Bogyiszlo	Baja	Mohacs	Vukovar	Apatin	Backa Palanka	Beocin	Novi Sad	Belgrade
	Country	Hungary	Hungary	Hungary	Hungary	Croatia	Serbia	Serbia	Serbia	Serbia	Serbia
	Location (rKm)	1528	1503	1479	1450	1335	1401	1295	1268	1254	1168
	Total area (m2)	150.000	11.837	208.795	32.000	35.000	30.000	640.000		24.000	1.000.000
Cargo Types	**Dry bulk**	x	x	x	x	x	x	x	x	x	x
	Container			x		x	x			x	x
	Break bulk	x		x	x	x		x		x	x
	High & heavy cargo			x		x					x
	Ro-ro cargo			x							
	Petroleum products refined			x		x				x	
	Crude oil									x	
	Liquid bulk									x	
Handling facilities and devices [yes/no/numbe of items]	**Gantry crane**			1	1	3	1	1	1	4	11
	Mobile crane	1		1		1		1		1	2
	Luffing/Slewing crane										
	Ro/Ro-ramp			x				x		x	x
	Pneumatic equipment	x		x		x	x	x		x	
	Covered water transshipment						x	x	x	x	x
	Floating crane										
	Conveyor belt	x	x	x	x		x	x		x	x
Storage Facilities	**Open storage area**	x	x	x	x	x	x	x	x	x	x
	Covered storage area	x		x	x	x		x		x	x
	Customs warehouse	x		x	x	x				x	x
	Storage of dangerous cargo					x					
	Storage 5										
Maintenance and disposal facilities	**Waste disposal**			x		x	x			x	
	Bilgewater disposal			x							
	Fresh water supply			x		x	x	x		x	x
	Onshore power supply	x		x	x	x	x	x		x	x
	Bunkering facilities			x		x				x	
	Shipyard			x							

Main data	**Port**	Pancevo	Smederevo	Prahovo	Sremska Mitrovica	Sabac	Senta	Brcko	Moldova Veche	Drobeta Turnu Severin	Cernavoda
	Country	Serbia	Serbia	Serbia	Serbia	Serbia	Serbia	Bosnia and Herzegovina	Romania	Romania	Romania
	Location (rKm)	1153	1111	861	133	103	122	221	1050	927	298
	Total area (m2)	1.270.296	433.384	70.473	500.000	5.600	179.000		31.240	113.485	126.322
Cargo Types	**Dry bulk**	x	x	x	x	x	x		x	x	x
	Container	x		x							
	Break bulk	x	x	x	x	x	x		x	x	x
	High & heavy cargo	x									
	Ro-ro cargo										
	Petroleum products refined	x	x	x			x			x	
	Crude oil	x	x	x							
	Liquid bulk	x	x	x							
Handling facilities and devices [yes/no/numbe of items]	**Gantry crane**	3	3	6	1	1	1		2	3	3
	Mobile crane	3	1			1					
	Luffing/Slewing crane										
	Ro/Ro-ramp	x		x							
	Pneumatic equipment	x		x	x		x				
	Covered water transshipment	x	x	x	x	x	x				
	Floating crane										
	Conveyor belt	x		x	x		x				
Storage Facilities	**Open storage area**	x		x	x	x	x		x	x	x
	Covered storage area	x		x	x	x	x		x	x	x
	Customs warehouse	x		x	x		x				
	Storage of dangerous cargo	x					x				
	Storage 5										
Maintenance and disposal facilities	**Waste disposal**									x	
	Bilgewater disposal								x	x	
	Fresh water supply	x		x	x	x	x		x	x	x
	Onshore power supply			x	x	x	x		x	x	x
	Bunkering facilities	x		x					x	x	x
	Shipyard									x	x

Main data	**Port**	Medgidia	Murfatlar	Constanta	Braila	Galati	Tulcea	Vidin	Lom	Oryahovo	Somovit
	Country	Romania	Romania	Romania	Romania	Romania	Romania	Bulgaria	Bulgaria	Bulgaria	Bulgaria
	Location (rKm)	37,5	25		160	160	70	785	742	678	608
	Total area (m2)	413.000	200.000	39.260.000	398.630	868.656	82.762	65.000		12.300	30.000
Cargo Types	**Dry bulk**	x	x	x	x	x	x		x	x	x
	Container			x		x					
	Break bulk	x	x	x	x	x	x		x	x	x
	High & heavy cargo			x	x	x				x	x
	Ro-ro cargo			x						x	x
	Petroleum products refined			x		x				x	x
	Crude oil			x		x				x	x
	Liquid bulk			x		x				x	x
Handling facilities and devices [yes/no/numbe of items]	**Gantry crane**				12	31	8				5
	Mobile crane				8	10					
	Luffing/Slewing crane										
	Ro/Ro-ramp										
	Pneumatic equipment				x						
	Covered water transshipment				x						
	Floating crane				2	9					
	Conveyor belt				x	x					
Storage Facilities	**Open storage area**	x	x	x	x	x	x		x		x
	Covered storage area	x	x	x	x	x			x		x
	Customs warehouse			x					x		x
	Storage of dangerous cargo			x							
	Storage 5										
Maintenance and disposal facilities	**Waste disposal**	x	x	x	x	x	x				
	Bilgewater disposal			x	x	x					x
	Fresh water supply	x	x	x	x	x	x	x			x
	Onshore power supply	x	x	x	x	x	x	x			x
	Bunkering facilities			x	x	x	x				x
	Shipyard			x	x	x	x				

	Port	Belene	Svishtov	Ruse	Tutrakan	Silistra	Giurgiulesti	Reni	Izmail	Kilia	Ust-Dunaysk
Main data	Country	Bulgaria	Bulgaria	Bulgaria	Bulgaria	Bulgaria	Moldova	Ukraine	Ukraine	Ukraine	Ukraine
	Location (rKm)	567	554	491	432.68	381	133.8	127.8		46,5	0.01
	Total area (m2)	28.800	300.000	825.000	4.414	73.000	1.200.000	934.600	946.980	43.660	75.000
Cargo Types	Dry bulk	x	x	x	x	x	x	x	x	x	x
	Container	x	x	x		x	x	x	x		
	Break bulk		x	x	x	x	x	x	x	x	x
	High & heavy cargo	x					x	x	x		
	Ro-ro cargo		x	x				x			
	Petroleum products refined		x				x	x	x		
	Crude oil										
	Liquid bulk			x			x		x		
Handling facilities and devices [yes/no/numbe of items]	Gantry crane	3	11	17	1			36	28	4	3
	Mobile crane						1	1			
	Luffing/Slewing crane	2									
	Ro/Ro-ramp			x				x			
	Pneumatic equipment			x				x			
	Covered water transshipment		x								
	Floating crane		1					2	2	1	8
	Conveyor belt			x				x			
Storage Facilities	Open storage area	x	x	x	x		x	x	x	x	x
	Covered storage area		x	x			x	x	x	x	x
	Customs warehouse		x	x	x		x		x		
	Storage of dangerous cargo						x				
	Storage 5										
Maintenance and disposal facilities	Waste disposal									x	
	Bilgewater disposal			x							
	Fresh water supply	x	x	x	x		x		x	x	
	Onshore power supply		x	x	x		x		x	x	x
	Bunkering facilities			x	x		x				
	Shipyard										