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Annual Report on Danube Navigation in Austria | viadonau

Key data on Danube navigation 2021[1]

Transport volumes

8.3 million tons (+0.3%)	Import: 3.9 million tons (–1.5%)
	Export: 2.4 million tons (+17.7%)
	Transit: 1.2 million tons (–27.6%)
	Domestic: 0.8 million tons (+27.1%)

Transport performance

7.4 billion tkm (–1.5%)	Within Austria: 1.5 billion tkm (–6.2%)
7,986 transportations (–1.1%)	Outside Austria: 5.9 billion tkm (–0.2%)

Waterside transhipment at Austrian ports and transhipment sites

7.9 million tons (+8.7%)	Ores and metal waste: 2.1 million tons (+0.0%)
	Crude and manufactured minerals, building materials: 1.6 million tons (+13.4%)
	Petroleum products: 1.4 million tons (+8.6%)
	Agricultural and forestry products: 1.0 million tons (+6.3%)
	Metal products: 0.8 million tons (+20.0%)
	Fertilisers: 0.8 million tons (+18.4%)
	Other goods: 0.3 million tons (+9.2%)

Vessel units locked through Austrian Danube locks

56,956 vessel units* (+9.4%)	Freight transport: 41,432 units (–7.1%)
	Passenger transport: 15,524 units (+107.0%)

Passenger transport (including estimation)

0.3 million passengers (+75.8%)	Liner services: 155,000 passengers (+55.0%)
	River cruises: 90,000 passengers (+80.0%)
	Non-scheduled services: 45,000 passengers (+200.0%)

Accidents

12 traffic accidents with damage	Personal injuries: 0 death, 0 serious injured, 0 slightly injured
	Damage to property: 10 incidents with damage to riverbanks and facilities, 3 grounding incidents, 1 ship to ship, 0 ship sunk

Availability of the waterway

363 days	Closures due to high water: 2 days
15 year average: 359 days	Closures due to ice: 0 days

[1] Changes from 2020 are given as percentages in brackets
[2] Convoys and individual vessels

Source: Statistics Austria; Supreme Navigation Authority at the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology; miscellaneous passenger transport operating companies; viadonau

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Editorial note: Small variations of the figures within this annual report to Statistics Austria's figures may arise due to rounding differences.

Waterway – climate opportunity
Move transport to Danube now

LEONORE GEWESSLER
Federal Minister in the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology

The transport transition is one of the most important social and economic changes in recent European history. Its need is undeniable, its urgency is all-embracing, and it is solutions in the here and now that determine whether we can contain the effects of the climate crisis. The transport transition is also a unique opportunity for the Danube waterway to optimally position itself as an environmentally friendly and efficient transport alternative in a sustainable transport network of the future.

Together with viadonau, the Ministry for Climate Action is laying all the necessary foundations for exactly this. We are launching funding programmes for the modernisation of the Danube fleet, providing a modern infrastructure for navigation with refurbished moorings and onshore power supply, and coordinating with the most diverse actors in order to accelerate the relocation of transport to the waterway. In this way, we are turning the goal of the Mobility Master Plan 2030 of climate neutrality in 2040 into a concrete reality with the waterway as an important part of the European dimension.

An important step on this path is the consistent shift of heavy goods transports from the road to the Danube. On the basis of a project launched with viadonau, special transports that can be routed via the waterway are obliged to shift them to inland waterway vessels. The benefits are clear: reducing emissions, relieving road congestion and increasing road safety. For example, shifting heavy transports such as the wind power elements weighing up to 50 tonnes, which are already regularly loaded at the port of Krems, can save around 45 percent of climate-damaging CO_2 emissions. The transport transition in freight transport will only succeed if all modes of transport are optimally used and linked according to their respective strengths, and this includes inland navigation in a strong, specialised role.

From now on, the focus must be: From rethinking to switching – for a climate-friendly transport future.

Acting responsible and climate-conscious
Together for your future on the river

I am sure that many of you are feeling very much like us. After many intense months of restrictions and crisis management, we do not want to ignore the coronavirus pandemic in any way, but at last let it go a little bit into the background and devote ourselves with all our heart above all to the Danube, nature and navigation. Because our goals on the river are as varied as ever, ambitious and clearly aimed at a sustainable future. After all, climate change did not take time off, but on the contrary, every day more emphatically tests our willingness to change and look for concrete solutions. We have done our homework, want to be energy-self-sufficient by 2030 and are implementing future-orientated energy efficiency concepts with the help of internal and external experts. For example, we are equipping our service centres with photovoltaic systems, expanding our e-car fleet and actively involving our employees, their needs and ideas in this sustainable modernisation process. It is this holistic sense of responsibility that radiates continuously from the inside out, deeply influences our projects at the same time and makes their successes all the more consistent – be it the waterway networking on the Danube, Morava and Thaya, our daily work on the towpaths and locks for the safety of relaxation-seekers and navigation or the committed initiatives together with the climate protection ministry to add a good portion of waterway to the recipe for a climate-friendly European transport network.

HANS-PETER HASENBICHLER
Managing Director of viadonau

We are doing this because it is necessary, because it is the imperative of the moment in climate change, but also because the pursuit of a better ecological, social and economic tomorrow in the Danube region is firmly inscribed in the viadonau DNA. So we cannot do anything other than work day by day, passionately and reliably, for your safe future on the Danube. Whether in times of tried-and-tested means or when leaving for new shores – you can count on us.

FIGURES DATA FACTS

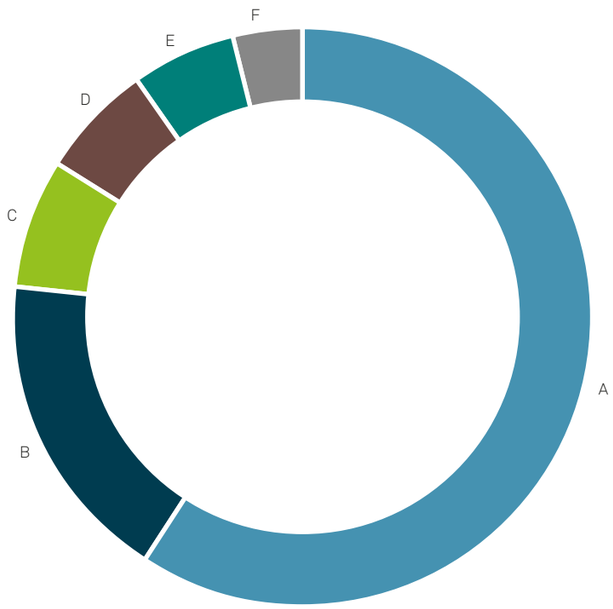
Costs per core tasks and impact scope viadonau 2021

Costs of core tasks

F
Other
3.6%
1,356,146 EUR

E
Development and innovation
6.1%
2,257,710 EUR

D
Real estate
6.1%
2,285,599 EUR

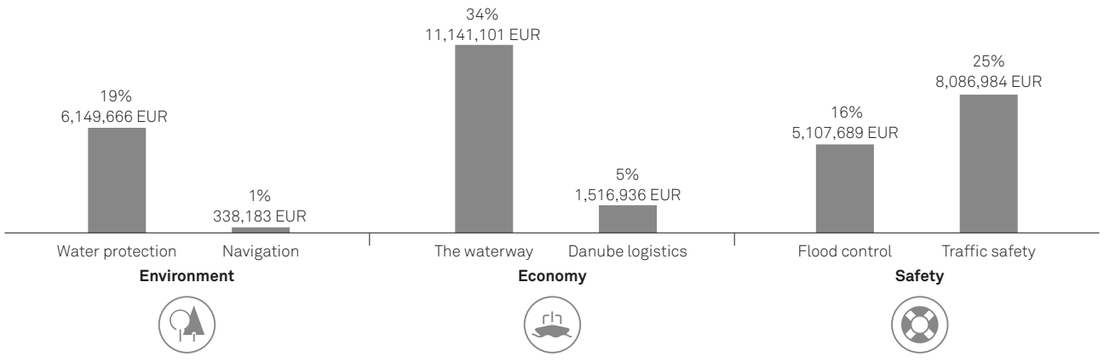


A
Infrastructure management
59.3%
22,023,781 EUR

B
Traffic management
17.6%
6,530,098 EUR

C
Flood control (excl. DHK)
7.3%
2,714,458 EUR

Costs per impact scope



BALANCE SHEET VIADONAU

More development room for nature
Upgrade of the waterway infrastructure

From outstanding nature conservation and research projects to decisive progress for the inland navigation infrastructure – despite the continued coronavirus pandemic, viadonau was able to achieve important successes for the environment, economy and the people on the river in the Danube year 2021.

PlasticFreeDanube crosses the finish line: After three and a half years of research on the Danube, the internationally acclaimed "PlasticFreeDanube" project officially crossed the finish line with a closing event on 23 February 2021. The partners of the Austrian-Slovak INTERREG project were able to present numerous results from the analysis of plastic waste and its entry paths into the Danube. These should help to implement effective strategies for plastic waste prevention on the Danube and beyond.

FAIRway Danube – follow-up projects take off: While the EU-co-financed FAIRway Danube project ended in 2021, two follow-up projects were already initiated in spring 2021. The main activity of the project "FAIRway works! in the Rhine-Danube Corridor" is the modernisation of the Serbian lock Iron Gate II planned for 2022 and 2023. Initiatives in Austria mainly concerned the modernisation of public berths in Linz, Wildungsmauer and Vienna. The main focus of "Preparing FAIRway 2 works in the Rhine-Danube Corridor": preparatory work for river engineering activities to take into account the specific environmental conditions along the critical bottlenecks in the Serbian-Croatian Danube section.

End and new beginning in the Wachau: The completion in spring 2021 of the EU-funded renaturation project "LIFE+ Auenwildnis Wachau" implemented by viadonau represents an important new beginning for nature. Along a newly created 1.6-kilometre-long branch, which is again connected to the Danube, animals and plants are now to recolonise diverse habitats.

Further reduction of administrative hurdles: The DoRIS portal operated by viadonau provides users of the waterway with another free service: the DAVID Creator. This will enable the electronic production of the internationally harmonised border control forms "Danube Navigation Standard Forms" and thus further reduce administrative barriers in the Danube region.

More natural dynamics on Morava and Thaya: In autumn and winter 2021, the Morava and the Thaya underwent intensive renovation activities. While the longest unspoilt riverbank course in the border section of the river was created on the Morava as part of the Austrian-Slovak INTERREG project "Kli-Ma", the re-networking of another meander took place on the Thaya as part of the Austrian-Czech INTERREG project "Thaya Wellendynamik".

„Our diverse project successes are based on a future-orientated concept of sustainability, which we consistently live within the company. Thus, in keeping with the spirit of the United Nations Agenda 2030 on sustainable development, we are implementing concrete measures of the Austrian environment and energy strategy of the BMK and BMLRT."

NINA PERSCH
Project Manager Environment/Ecology

Freight transport on the Austrian Danube
2017–2021

2021	8,270,869 t
2020	8,246,781 t
2019	8,511,553 t
2018	7,202,368 t
2017	9,619,520 t

Minimum continuously available fairway depths on the free-flowing stretches of the Danube 2021

Wachau

91.2%
above 2.5 m

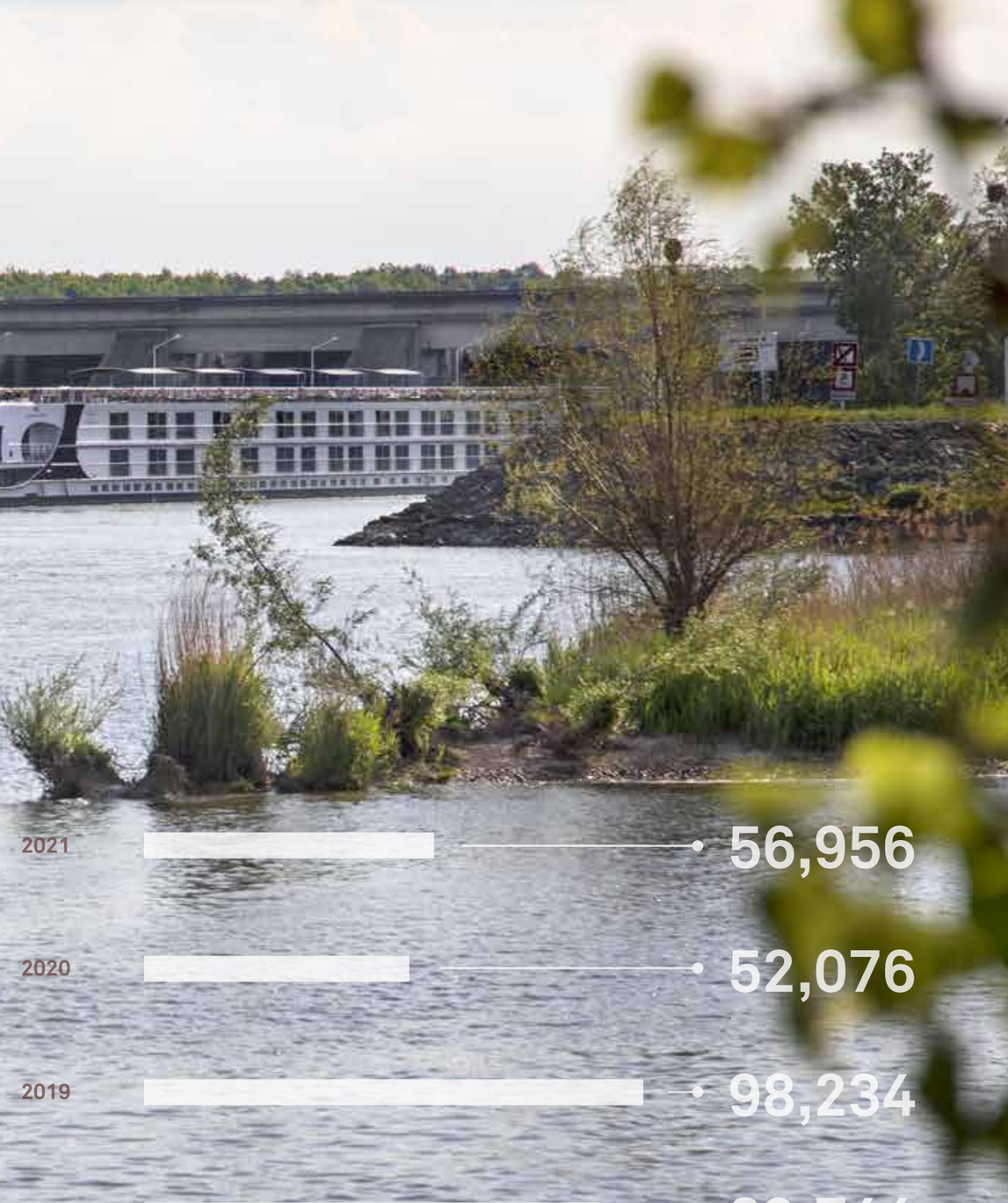
8.8%
below 2.5 m

East of Vienna

86.3%
above 2.5 m

13.7%
below 2.5 m

Locked-through vessel units
2017–2021



CUSTOMER SATISFACTION: INFRASTRUCTURE

Top marks again in the Danube region
Proactive maintenance

- Users give viadonau a 1.7 rating for the quality of waterway services
- Proactive maintenance combined with targeted hydraulic engineering measures are the key to success

For the purpose of more effective service delivery, continuous monitoring of customer satisfaction is an important indicator for viadonau. For this reason, an annual survey of commercial users of the waterway, i.e. freight and passenger navigation, is conducted. The feedback is used to further improve the waterway infrastructure services operated by viadonau. A total of 57 responses from the navigation sector were received in the customer survey conducted in winter 2021/2022.

The customer survey assesses, among other things, the quality of the maintenance of the fairway in the Austrian section of the Danube, i.e. maintenance dredging operations carried out by viadonau. In the current survey, this was rated at an average of 1.7 on a school grades scale of 1 to 5, with 87.5% of respondents giving the ratings “excellent” and “good”. As in previous years, viadonau is thus also the best-rated waterway infrastructure operator of all the Danube states. The chart on the opposite side illustrates the detailed results of the current customer survey.

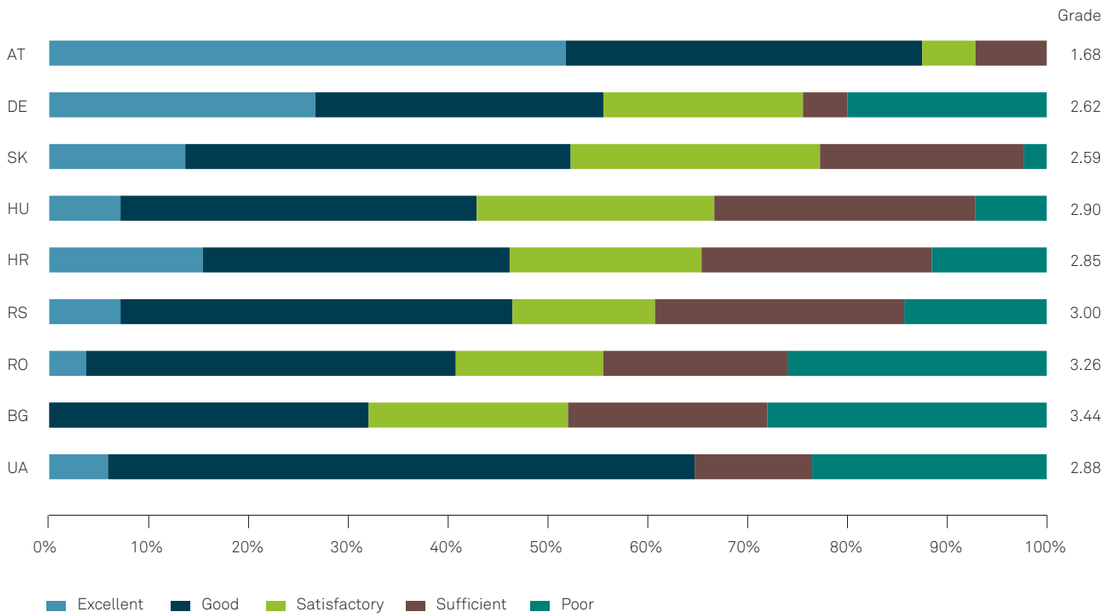
The evaluation of the operation of the ten Danube locks in Austria by viadonau was equally good: for the friendliness and competence of the lock employees the rating 1.7 was awarded in the customer survey, while the general execution of the locks on the Austrian Danube section was rated at 1.8.

In the current customer survey, there was also a rating of 1.8 for the visibility and positioning of the fairway buoys for marking the fairway. In 2021, the construction of a second, energy-efficient pusher was commissioned, which after commissioning in autumn 2022 will allow an optimised manipulation of floating water marks due to reduced response times in the repair of damage.

An assessment of the availability and the equipment of public berths owned by the Federal Government is also included in the viadonau customer survey. They were awarded the mean grade of 3.0 in the current survey. Prompted by the results of surveys in recent years, viadonau has located a need for action here and has already carried out or initiated several projects for the refurbishment and upgrading of these public berths. In 2021, the construction for the “upgrading of the Linz dry cargo transhipment site” was carried out and the official permits for the construction of a new public berth in the Wildungsmauer area were obtained. In both projects, a corresponding supply of onshore power is envisaged for the transhipment sites.

FIGURES DATA FACTS

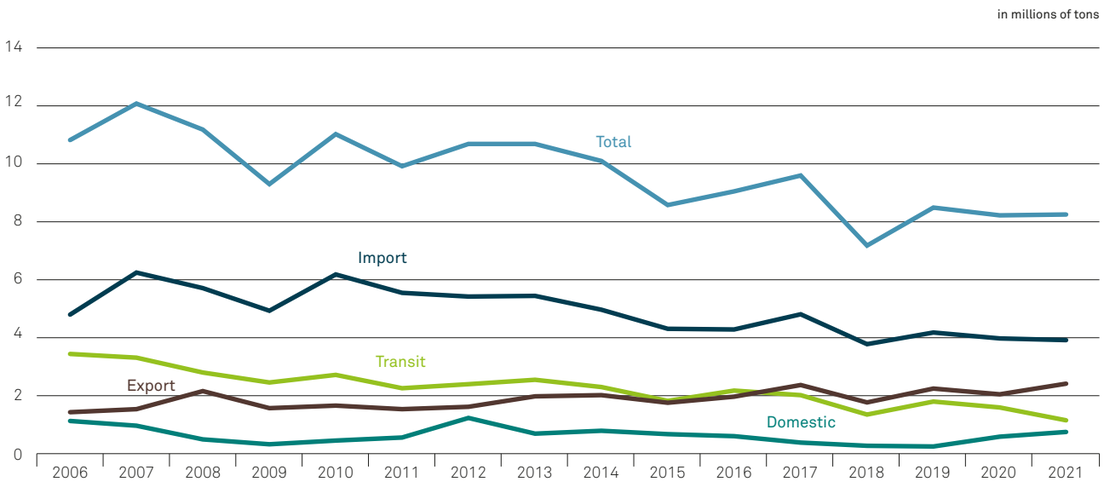
Waterway infrastructure quality in the Danube countries 2021



Source: viadonau

FIGURES DATA FACTS

Freight traffic on the Austrian Danube 2006–2021



Transport volumes in tons	Import	Export	Transit	Domestic	Total
2021	3,930,863	2,424,784	1,159,264	755,958	8,270,869
2020	3,989,282	2,060,982	1,601,604	594,913	8,246,781
2019	4,193,338	2,258,611	1,805,896	253,708	8,511,553
2018	3,793,364	1,776,694	1,355,563	276,747	7,202,368
2017	4,822,231	2,380,773	2,027,367	389,148	9,619,520

Source: Statistics Austria, adapted by viadonau

TRANSPORT VOLUMES

8.3 million tons cargo
Slight increase compared to 2020

A total of 8.3 million tons of goods were shipped on the Austrian Danube in 2021. Despite the negative framework conditions, such as uncharacteristically low fairway conditions in the months of March and April, there was a slight overall increase of 24 088 tons or 0.3% compared to the previous year.

The imports traffic area experienced only a slight decrease of 1.5% compared to the previous year. At 3.9 million tons, however, imports remain the highest-volume transport sector on the Austrian Danube.

However, there were major changes compared to the previous year in the other transport areas.

Exports, which continued their long-term rising trend in 2021, increased sharply by 17.7% and have been the second most important traffic area since 2017. In turn, transit traffic experienced a further decline in 2021, falling significantly by 27.6% to 1.2 million tons.

In 2021, for the second time in a row, the volume transported domestically increased. This represents a significant increase of 27.1% to 0.8 million tons, which in 2021 was mainly due to shipments of excavation material in connection with infrastructure works in Linz.

The crucial importance of cross-border transport for the Austrian Danube is illustrated by its relation to domestic traffic: in 2021, the volume of goods shipped domestically was exceeded by a factor of 10 by the volume of goods transported in international traffic.

In the same period, transport capacity, i.e. the product of tons transported and distance travelled in kilometres, decreased slightly by 1.5% to 7.4 billion ton kilometres compared to the previous year. In addition, the average transportation distance per ton decreased slightly by 19 km, or 2.1%, to 872 kilometres compared to 2020.

- Imports highest-volume traffic area
- Strong increase in volumes transported in export traffic
- 7.4 billion ton-kilometre transport capacity

PORT TRANSHIPMENT

Total volume continues to increase
No changes in ports ranking

- Waterside transhipment continues to show slight growth
- The voestalpine industrial port remains Austria's most important Danube port
- The Port of Vienna records the largest increase in the quantity handled

In 2021, Austria's Danube ports and transhipment sites handled a total of around 7.9 million tons of goods on the waterside. Port transhipment grew by 8.7% or by just under 0.6 million tons, following a slight growth trend, as in the previous two years.

There were no significant changes in the proportional port transhipment compared to 2020. The ranking of the Austrian Danube ports and transhipment sites, as measured by the volume of turnover, remained constant in 2021.

In 2021, the voestalpine industrial port in Linz once again recorded the largest port-to-port volume along the Austrian Danube. Measured by total volume, 36.0% was transhipped on the waterside in the voestalpine industrial port. This corresponds to a turnover volume of around 2.8 million tons (+6.1% compared to 2020).

The other ports and transhipment sites include Aschach, Schwerlasthafen Linz, Pöchlarn, Pischelsdorf, Korneuburg and a transhipment site in Linz created in connection with infrastructural works. This group of ports handled around 1.6 million tons, representing a slight increase of 3.9% compared to the previous year. As a result, the other ports and transhipment sites again came in 2nd in the ranking.

In 2021, the Port of Enns recorded the second largest increase in the volume handled on the waterside, at 28.6%, reaching a total of around 1.2 million tons. This corresponds to 15.1% of the total volume.

The Port of Vienna, which includes the ports of Freudenau, Lobau and Albern as well as the Lagerhaus and Zwischenbrücken transhipment sites, increased the volume of transhipment by 30.6%. In this port group, a total of around 1.2 million tons were handled on the waterside, which represents the strongest increase in the comparison of ports. However, this does not change the ranking: as in the previous year, the Port of Vienna ranked 4th, narrowly trailing the Port of Enns.

The ports of Linz AG (commercial and oil port) registered a slight decrease of 0.1% compared to the previous year. The volume handled amounted to around 0.8 million tons.

The Port of Krems recorded the largest decrease in the volume handled, at minus 29.1%. A total of around 0.3 million tons were handled on the waterside.

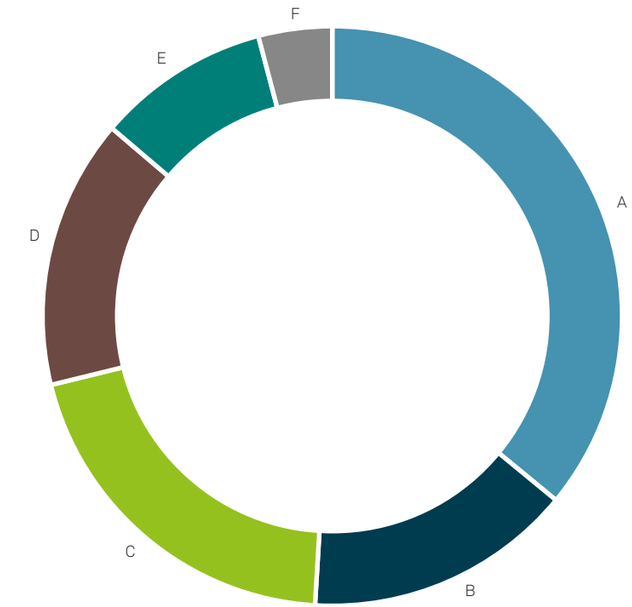
FIGURES DATA FACTS

Waterside transhipment at Austrian Danube ports and transhipment sites 2021

F
Krems
4.1%
323,553 tons
(–29.1%)

E
Linz AG[4]
9.7%
759,432 tons
(–0.1%)

D
Port of Vienna[3]
15.0%
1,179,580 tons
(+30.6%)



A
Linz voestalpine[1]
36.0%
2,829,075 tons
(+6.1%)

B
Other[2]
20.2%
1,591,396 tons
(+3.9%)

C
Enns
15.1%
1,184,527 tons
(+28.6%)

[1] Including waterside transhipment at the facilities of Industrie Logistik Linz GmbH.
[2] Other ports and transhipment sites include: Aschach, Schwerlasthafen Linz, Pöchlarn, Pischelsdorf, Korneuburg and a transhipment site in Linz (the latter is connected to the infrastructural building work in Linz).
[3] The three ports of Freudenau, Albern and Lobau (oil port) and the two transhipment sites Lagerhaus and Zwischenbrücken have been grouped to compile the total turnover figures for the Port of Vienna.
[4] Data from both the commercial port and the oil port in Linz have been grouped to compile the total turnover figures for the Port of Linz.

Source: Statistics Austria, adapted by viadonau

FIGURES DATA FACTS

Transport volumes by commodity groups on the Austrian Danube 2021

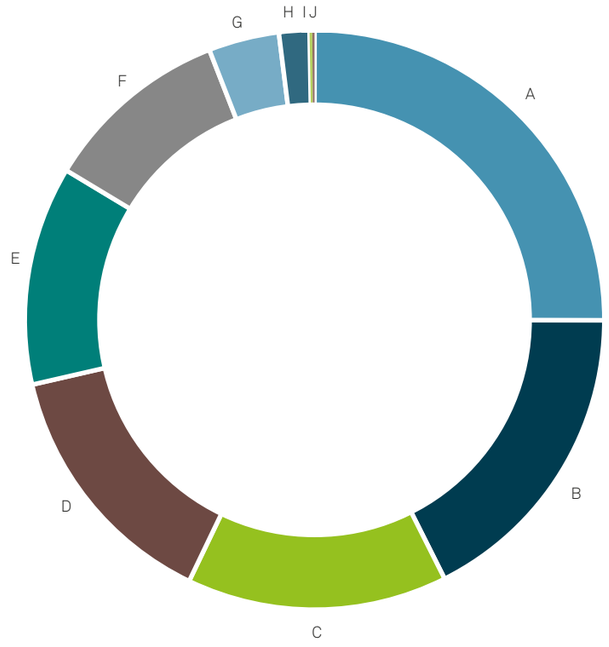
J
Solid fuels
0.1%

I
Chemical products
0.2%

H
Machinery, vehicles, and other articles
1.7%

G
Foodstuffs and animal fodder
3.9%

F
Fertilisers
10.5%



A
Ores and metal waste
25.0%

B
Agricultural and forestry products
17.6%

C
Petroleum products
14.5%

D
Crude and manufactured minerals
14.3%

E
Metal products
12.2%

in tons

Goods classification according to NST/R*	Domestic	Import	Export	Transit	Total 2021	Change
Agricultural and forestry products	23,485	812,302	136,708	479,905	1,452,400	–21.5%
Foodstuffs and animal fodder	3,634	167,508	97,680	57,384	326,207	+21.6%
Solid fuels	–	2,503	–	7,757	10,261	–61.3%
Petroleum products	198,583	307,411	696,229	–	1,202,223	–2.2%
Ores and metal waste	–	2,052,420	5,592	12,040	2,070,052	–0.5%
Metal products	–	195,385	581,174	234,023	1,010,583	+22.8%
Crude and manufactured minerals, building materials	527,656	257,474	248,862	147,459	1,181,451	+15.1%
Fertilisers	2,426	112,998	632,621	116,944	864,989	+14.3%
Chemical products	–	–	–	12,505	12,505	–57.1%
Machinery, vehicles and other articles	175	22,860	25,918	91,252	140,206	–10.1%
Total	**755,959**	**3,930,863**	**2,424,785**	**1,159,269**	8,270,876	+0.3%

* NNST/R = Standard Goods Classification for Transport Statistics/revised.

Source: Statistics Austria, adapted by viadonau

COMMODITY GROUPS

Minor changes compared to 2020
Largest growth in metal products

- Slight increase in total volume
- No change in the commodity group ranking compared to the previous year

Just under 8.3 million tons were transported on the Austrian Danube in 2021, similar to the previous year. This corresponds to a slight increase of 0.3% in transport volume. Compared to the previous year, the commodity group ranking also remained unchanged in terms of total transport volume.

At 2,070,052 tons, ore and metal waste is still the highest-yielding commodity group, which is usually due to heavy import traffic. It represents 25.0% of the total volume transported on the Austrian Danube, which corresponds to a slight decrease of 0.5% compared to the previous year.
In second place in the ranking, with 1,452,400 tons, are once again agricultural and forestry products. However, compared to the previous year, the commodity group recorded a decrease of 21.5% or 398,768 tons in transport volume.

Petroleum products account for 1,202,223 tons (–2.2% compared to 2020) of the transport volume on the Austrian Danube and remain in third place in the commodity group ranking.
Just behind petroleum products is the commodity group of mineral raw materials. In total, 1,181,451 tons were transported in 2021, which corresponds to an increase of 15.1% or 155,365 tons.

The largest increase, at 22.8%, was recorded in metal products. The transport volume in this category is equivalent to 1,010,583 tons and is due to the increased traffic in imports, exports and transit. The commodity group remains in fifth place in the ranking.
The fertiliser commodity group also experienced a 14.3% increase in transport volume. With 864,989 tons transported on the Austrian Danube, it is in sixth place in the comparison of commodity groups.

In 2021, 326,207 tons of foodstuffs and animal fodder were transported, which also represents an increase of 21.6% compared to the previous year.

The transport volume of machinery, vehicles and other goods fell by 10.1% to 140,206 tons in 2021, putting this commodity group in eighth place.
As in the previous year, chemical products were transported only in transit traffic and recorded the second-largest drop in the comparison of goods, falling 57.1% to 12,505 tons.
Like last year, solid fuels suffered the strongest decline. At 10,261 tons (–61.3%), these have the lowest transport volume in the commodity comparison.

PASSENGER TRANSPORT

Slight recovery of passenger transport
Non-scheduled services increase by 200%

- 80.0% more passengers on river cruises
- Increases of 55.0% for liner services and 200.0% for non-scheduled services
- Two new cruise ships in operation on the Danube

In 2021, passenger transport was again influenced by the pandemic and the strict conditions attached to it. Around 290,000 passengers were carried on the Austrian stretches of the Danube, which is equivalent to an increase of 75.8% in comparison to 2020. However, this figure is still 79.0% below the 2019 figures.

With around 45,000 passengers transported (+200.0%), non-scheduled services achieved the biggest increase in 2021 compared to the previous year, and are now only 57.1% below the 2019 figures. DDSG Blue Danube Schiffahrt GmbH carried 24,000 passengers (+224.3%) on theme, special and charter cruises, and 4,750 passengers took the non-scheduled services of the MS Stadt Wien operated by MS Stadt Wien Schifffahrts GmbH. Donauschiffahrt Ardagger GmbH reported 3,157 passengers (+190.4%), and 2,605 persons (+92.3%) travelled with the 1. Wiener Bootstaxi (1st Vienna Boat Taxi). Finally, Nostalgie Tours, Video & Consulting GesmbH reported 1,800 passengers (+85.0%) on the MS Mariandl, Fähre Dürnstein GmbH & Co KG reported 1,504 passengers (+40.3%) on the Danube taxis in the Wachau and Ahoi Reichl Geith OG reported 1,100 passengers in non-scheduled services.

River cruises recorded around 90,000 passengers carried in 2021 (+80.0% compared to 2020), but are still 83.2% below the 2019 figures. The number of cabin vessels operating on the Austrian section increased again to 113 ships (+91.5%) in 2021, of which two were new vessels. In total, 1,826 journeys (+81.3%) were completed. 15 Danube cruise ships moved their services westwards in 2021. 58 of the ships that were taken out of service in 2020 due to the pandemic and its repercussions were back in operation in 2021. The transportation capacity of the river cruises was 18,890 passenger places – on average 167 passenger places per ship.

Liner services carried around 155,000 passengers (+55.0%) in 2021, which is 79.1% below the 2019 figures. DDSG Blue Danube Schiffahrt GmbH reported a total of 83,000 passengers (+68.4%) on its liner services in the Wachau region and Vienna. The two Twin City Liners carried 14,000 passengers (+2.8%) between Vienna and Bratislava, and Fähre Dürnstein GmbH & Co. KG reported 19,977 passengers (+4.9%) on its Danube Taxis in the Wachau region. Another 2,086 people (+24.2%) used the services of Donauschiffahrt Ardagger GmbH, travelling on the MS Donaunixe and the MS Maria.

Passenger numbers are not reported separately for companies that carried fewer than 2,000 passengers on liner services or non-scheduled services in 2021. No statistics are available for other companies operating liner and non-scheduled services on the Austrian section of the Danube during the reporting period.

FIGURES DATA FACTS

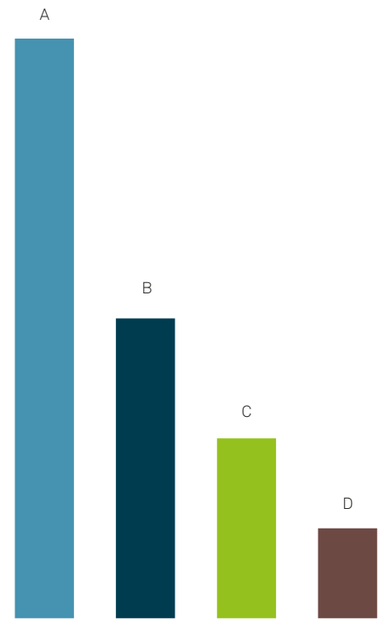
Passengers on the Austrian Danube 2021*

A
Total
290,000

B
Liner services
155,000

C
River cruises
90,000

D
Non-scheduled services
45,000

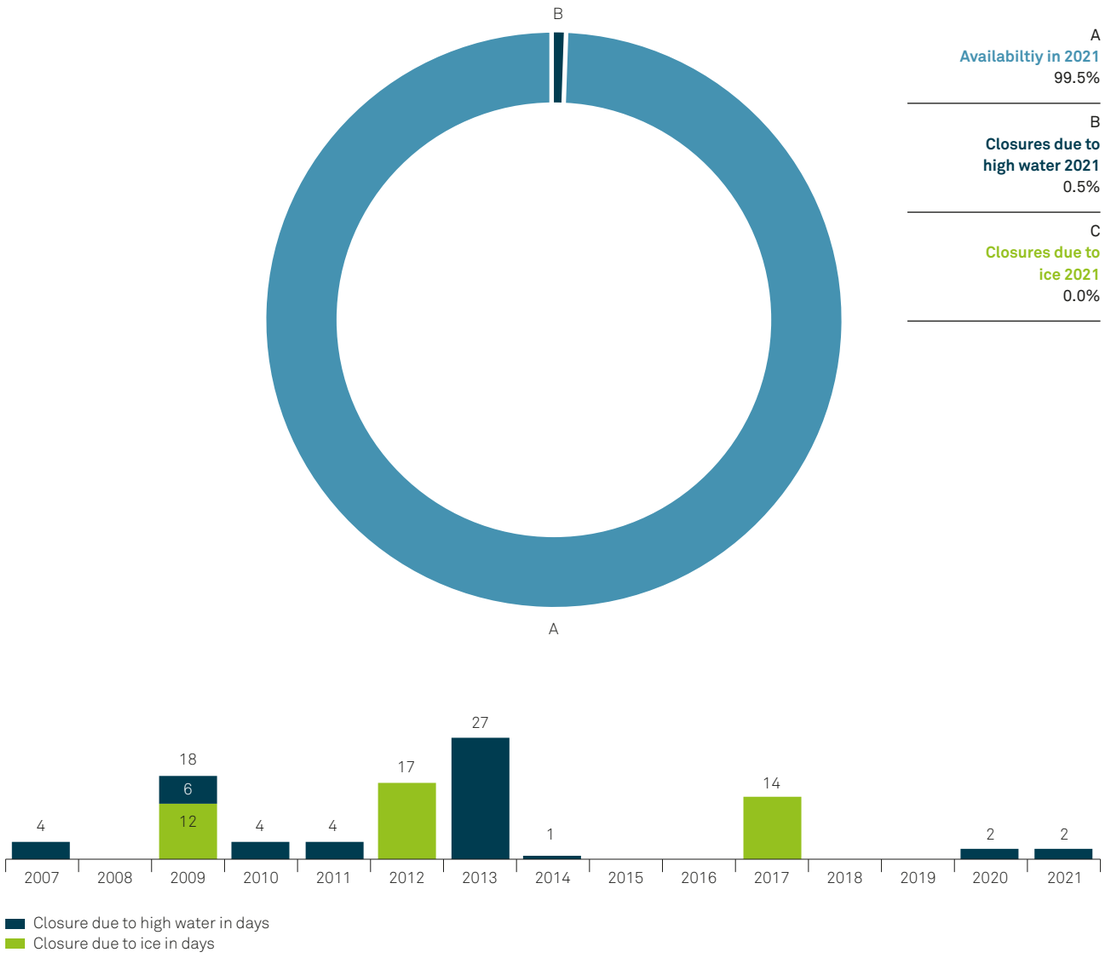


* Due to the fact that passenger transport on the Danube ceased to be statistically compiled in Austria in 2003 (because of a change in legal basis), the above figures include additional estimates in passenger numbers on liner services and non-scheduled traffic, based on an assumed average capacity utilisation of 40% on passenger ships. The calculation of the total number of passengers on cabin vessels is based on the number of trips these ships made through the locks at Aschach and Freudenau, with an assumed average capacity utilisation of 75%, whereby a deduction of 30% for double counting has been estimated. However, the strict corona restrictions mean that a capacity utilisation of just 40% is assumed for 2020 and 2021.

Sources: 1. Wiener Bootstaxi , Ahoi Wachau – Ahoi Reichl Geith OG, Central Danube Region Marketing & Develop-ment GmbH, DDSG Blue Danube Schiffahrt GmbH, Donauschiffahrt Ardagger GmbH, Donau-Taxi Wachau – Fähre Dürnstein GmbH & Co KG, Event-Schifffahrt Haider e. U., Motoryacht Wachau, MS Stadt Wien Schifffahrts GmbH, Naufahrt Wolfgang Speckner, Nostalgie Tours, Video & Consulting GesmbH, viadonau, WGD Donau Oberösterreich Tourismus GmbH

FIGURES DATA FACTS

Navigational closures due to high water and ice 2007–2021



Sources: Supreme Navigation Authority within the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, viadonau.

AVAILABILITY OF WATERWAY

Danube navigable on 363 days
Two-day closure due to high water

- Long-term availability of the Danube at 98.3%
- 2.5-day closure due to high water in July 2021

Over a 15-year annual average from 2007 to 2021, the availability of the Austrian section of the Danube waterway was 98.3%, or approximately 359 days per year. During this period, three closures due to ice were recorded with an average duration of just under 14 days, while the waterway had to be closed in eight of these years due to high water with an average duration of around six days respectively.

Hydrologically, a high water wave occurred on the Danube in mid-July in 2021 (exceeding the highest navigable water level 2010). For almost two and a half days, the entire Austrian Danube section had to be closed to navigation. By contrast, it was not necessary to officially close the waterway due to ice in 2021. This means that the Danube waterway was available on 363 days or for 99.5% of the year.

Weather-related closures can be implemented by the relevant authorities on the Austrian section of the Danube waterway in extreme situations, such as high water or ice. While closures due to ice are normally confined to the winter months of January and February, high water tends to occur during the spring or summer months.

Apart from closures due to high water and ice, official closures of the waterway can also occur due to traffic accidents, lock malfunctions, water pollution, construction work or events. In 2021, the total duration of these closures was four days and 22 hours. Total lock closures (the parallel closure of both lock chambers) accounted for a duration of approximately 2.5 days in 2021 (in addition to the closure due to high water in July already mentioned) and affected four of the ten lock facilities on the Austrian Danube section. In this respect, the closure of the Wallsee lock due to an accident in the second half of March accounted for the largest share (approximately two days). In addition, on two days in February and in March, navigational closures had to be implemented in the Linz area with an average duration of around 13 hours due to the inundation of bridge elements of the New Danube Bridge Linz.

LOAD FACTOR

Load factor increases to 60.7% 7,986 transportations in total

- Unusually favourable fairway conditions in February
- Highest water level in July
- Highest load factor of 68.2% in July

Apart from the months of February to April, flow conditions in 2021 were comparatively typical. Seasonal high rainfall in summer and low rainfall in autumn resulted in correspondingly high and low water levels.

The lowest water level was recorded at 130 cm in January, the highest water level at 669 cm in July (both Wildungsmauer water gauge). The average daily mean value was 254 cm, a slight increase of 2 cm compared to the previous year.

The actual load factor, based on monthly averages, ranged from 47.8% in November to 68.2% in July. The annual average was 60.7%, an increase of 3.6 percentage points compared to 2020.

It was thanks to unusually favourable fairway conditions in February that the second highest load factor of the year was reached here, at 67.3%. However, due to unusually low water levels for the spring months of March and April, only average load factors were reached in 2021, at 58.6% and 62.6% respectively.

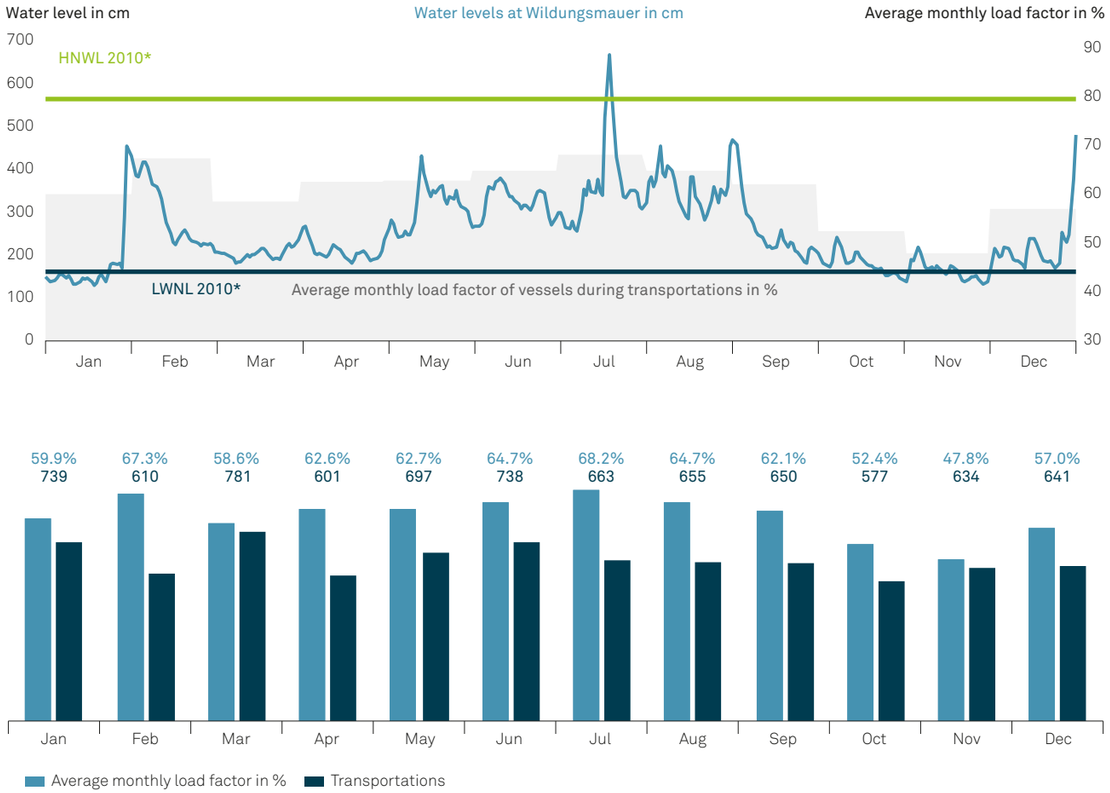
The total transport volume of 8.3 million tons generated in 2021 was shipped with a total of 7,986 transportations. On average, 0.7 million tons of goods per month were transported via the waterway.

The month with the highest transport volume was June. Favourable fairway conditions enabled a high load factor of 64.7%, so that 0.9 million tons could be shipped with 738 transportations.

The lowest transport volume was in October. Typically unfavourable fairway conditions in the autumn allowed only a low load factor of 52.4%, which required 577 transportations to ship 0.5 million tons of goods via the Austrian Danube.

FIGURES DATA FACTS

Water levels and resulting load factors of cargo vessels in 2021 using the Wildungsmauer gauge of reference

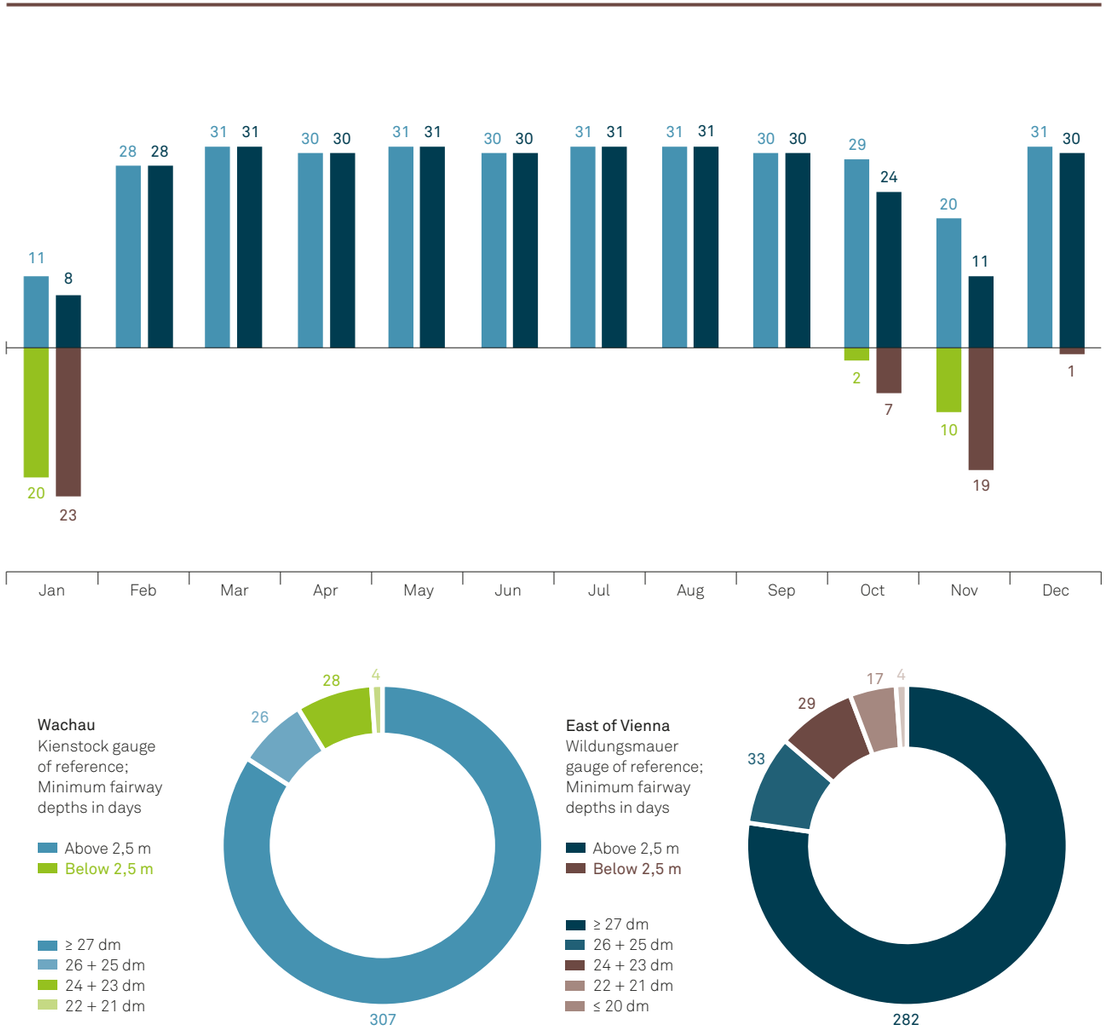


* LNWL 2010 (low navigable water level): This water level exceeded on 94.0% of days in a year during ice-free periods with reference to a 30-year observation period (1981–2010). The current LNWL value for the water gauge Wildungsmauer is 162 cm.
HNWL 2010 (highest navigable water level): This value represents the water level corresponding to the discharge exceeded on 1.0% of days in a year with reference to a 30-year observation period (1981–2010). At Wildungsmauer, the highest navigable water level is currently 564 cm.

Source: Statistics Austria, adapted by viadonau

FIGURES DATA FACTS

Minimum continuously* available fairway depths in days on the free-flowing stretches of the Danube 2021



* Based on the fairway width required for a four-unit pushed convoy travelling downstream without encountering other vessels. Fairway width depends on the river bend radii involved.

Source: viadonau

FAIRWAY DEPTHS

2.5 m for nine continuous months
Availability above 86%

From a hydrological point of view, the Danube had good flow conditions in 2021 in the first half of February as well as from mid-May to mid-September, which fluctuated around or above mean water in these months (Wildungsmauer gauge of reference). By contrast, the month of January and the period from the end of October to the beginning of December were characterised by low water levels – below-average flow conditions for the year as a whole. Daily mean values below the 2010 low navigable water level were recorded on 23 days in January and on 24 days from the end of October to the end of November at the Wildungsmauer gauge. This means that low water was recorded on 47 days, or on 12.9% of days in the year, in 2021. Conversely, the highest navigable water level 2010 was exceeded on two days in mid-July, which led to an official closure for navigation for about 2.5 days.

In the two free-flowing stretches of the Austrian Danube, fairway depths of more than 2.5 m were consistently available in the deep channel in nine months (February to September as well as December) in 2021, with the exception of a single day. In total, minimum fairway depths of 2.5 m were available in the deep channel of the Wachau region on 333 days or 91.2% of the year (–5.8% compared to 2020). Minimum fairway depths of 2.5 m were guaranteed in the free-flowing stretch east of Vienna on 315 days or 86.3% of the year (–5.8%). On 25 days in 2021, fairway depths fell below 2.3 m in the crucial shallow sections in the Wachau area and east of Vienna. Conversely, fairway depths of at least 2.7 m were available for navigation on 282 days.

The minimum available fairway depths for the two free-flowing sections of the Austrian Danube (Wachau and east of Vienna) were determined using all hydrographic surveys of the riverbed published by viadonau in 2021. They were evaluated in combination with the respective gauge hydrographs (mean daily water levels at the Kienstock and Wildungsmauer gauges of reference). The reference was the continuous availability of a deep channel inside the fairway, representing the required fairway width for a four-unit pushed convoy travelling downstream without encountering other vessels.

“In 2021, the availability of the Danube waterway in Austria was at the top level. Through efficient, pro-active waterway management brand viadonau, the river was able to continue to fulfil its important backbone function as a transport route for essential goods and provide the optimal basis for the recovering Danube navigation.”

MICHAEL KALB
Technician Waterway Management

TRANSPORT DENSITY

351 kilometres of waterway
Average of 22,000 tons per kilometre

- 5.9 million tons transported in the section Vienna – eastern national border
- 3.6 million tons handled in Linz
- 21,094 tons shipped per day

In 2021, a total of 7.7 million tons* of goods were transported on the Austrian section of the Danube waterway, which has a total length of 350.5 km. The section-based total traffic quantities occupied a range of 2.8 million tons in the section between the German-Austrian border and Aschach and 5.9 million tons in the section between Vienna and the Austrian-Slovak border.

At 3.9 million tons, imports were once again by far the strongest traffic area and in 2021 even exceeded the total of the other traffic areas exports, transit and domestic (3.8 million tons). A consideration of the transport direction makes clear how important upstream transport, i.e. from east to west, is, especially for imports: at 3.1 million tons, upstream imports exceeded downstream imports (0.8 million tons) by almost four times.

However, the east relation also dominates in the case of exports, the second-strongest traffic area. At 1.6 million tons, shipments to the countries east of Austria exceeded those to the countries west of Austria (0.8 million tons) by double.

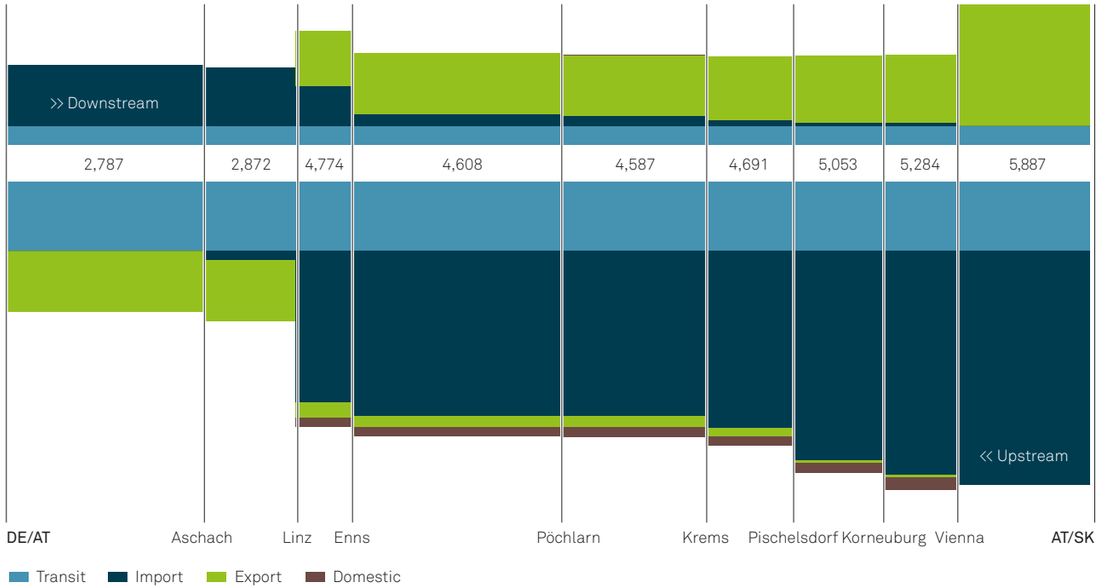
Linz represents a break in terms of the quantities of goods transported due to the by far largest waterside transhipment site on the Austrian Danube, essentially owing to the location of the voestalpine AG steel mill. Of a total of 3.6 million tons handled in Linz, 2.8 million tons (77.8%) were imported and exported in the port of voestalpine AG alone.

In 2021, the average freight volume transported per day was 21,094 tons, which is equivalent to 844 trucks (25 net tons each) or 527 rail wagons (40 net tons each). The average quantity shipped per Danube kilometre is 21,966 tons.

* Excluding transport of gravel and excavation material generated by conservation measures in the Danube and infrastructure works in Linz as well as transport within a port location.

FIGURES DATA FACTS

Density of freight traffic on the Austrian Danube 2021

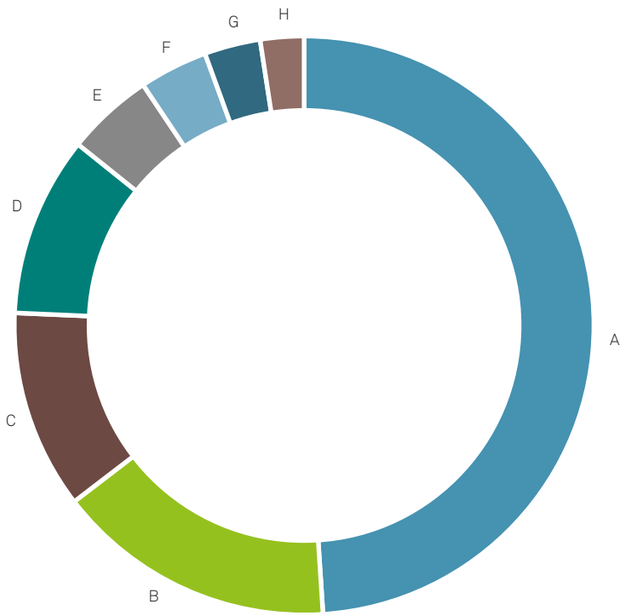


Section	Length	Import	Import	Export	Export	Domestic	Domestic	Transit	Transit	Total	Total	In sum
in 1,000 tons	in km	upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	
Border DE/AT–Aschach	63.21	0	815	813	0	0	0	916	243	1,729	1,058	**2,787**
Aschach–Linz	31.30	122	775	813	0	3	0	916	243	1,854	1,018	**2,872**
Linz–Enns	16.87	2,011	526	209	741	126	2	916	243	3,262	1,512	**4,774**
Enns–Pöchlarn	67.63	2,191	158	151	808	132	9	916	243	3,390	1,218	**4,608**
Pöchlarn–Krems	46.20	2,198	130	151	808	132	9	916	243	3,397	1,190	**4,587**
Krems–Pischelsdorf	26.30	2,353	76	115	849	130	9	916	243	3,514	1,177	**4,691**
Pischelsdorf–Korneuburg	29.60	2,784	45	36	895	134	0	916	243	3,870	1,183	**5,053**
Korneuburg–Vienna	23.64	2,982	45	33	898	167	0	916	243	4,098	1,186	**5,284**
Vienna–Border AT/SK	45.76	3,116	0	0	1,612	0	0	916	243	4,032	1,855	**5,887**

Source: Statistics Austria, adapted by viadonau

FIGURES DATA FACTS

Overview of the Austrian Danube fleet* according to vehicle type 2021



H
Motor tankers and bunker boats
7 vehicles
2.4%

G
Other vehicles
9 vehicles
3.1%

F
Tank barges
11 vehicles
3.8%

E
Motor cargo vessels
14 vehicles
4.9%

A
Freight barges
141 vehicles
49.0%

B
Work vehicles
45 vehicles
15.6%

C
Passenger ships
32 vehicles
11.1%

D
Push boats
29 vehicles
10.1%

* The Austrian Danube fleet includes vehicles of category 1 according to Section 3 of the Vessel Technology Regulation (Schiffstechnikverordnung), which is defined as follows: "a vehicle whose length (L) is 20 m or more or whose product of length (L), breadth (B) and draught (D) is 100 m³ or more, or which is intended to carry more than 12 passengers (passenger vessels), a floating device or a tug or push boat which is intended to tow, push or tow coupled vessels of this kind."

Sources: Register of inland vessels, Vienna; Supreme Navigation Authority within the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology; viadonau.

AUSTRIAN DANUBE FLEET

Danube fleet grows
Freight barges strongest group

- In 2021, the Austrian Danube fleet comprises 288 vehicles with an average age of 43 years
- Freight barges the most frequent vehicle group with 49.0%
- Work vehicles come second, accounting for 15.6%, followed by passenger and day-trip vessels with 11.1% in third place

The Austrian Danube fleet comprised 288 vehicles in 2021 (plus 37 compared to the previous year), with an average age of 43 years. The increase of 14.7% compared to the previous year is mainly due to the re-flagging of the ships of First-DDSG Logistics Holding GmbH, Vienna. The Danube fleet includes approved vehicles in category 1 according to Section 3 of the Vessel Technology Regulation, which are registered in Austria. Vehicle categorisation takes place according to the vehicle types defined in UNECE Recommendation 28.

Slightly over half of the vehicles can be assigned to the category of non-motorised freight barges (141 vehicles or 49.0%). On average, their age is 40 years, their length 68.8 m, their breadth 10.1 m, their draught 2.5 m and their loading capacity is 1,443.7 tons.

Accounting for 45 units or 15.6%, the second largest category consists of work vehicles such as construction site vehicles and floating equipment with an average age of 44 years.

Third place went to passenger ships with 32 vehicles or 11.1% of the Austrian Danube fleet. These are mainly day-trip vessels. Only one cruise vessel with 164 passenger beds is registered in Austria. The passenger vessels have an average age of 47 years and a transport capacity of 267 persons.

In total, 29 push boats are registered in Austria (10.1% of all vehicles). On average, their age is 45 years, their length 31.0 m, their breadth 9.0 m, their draught 1.7 m and their engine power is 1,405 kW.

The Austrian Danube fleet also includes 14 motor cargo vessels (4.9%). On average, their age is 42 years, their length 92.1 m, their breadth 10.9 m, their draught 2.5 m, their loading capacity is 1,706.6 tons and their engine power is 1,063 kW.
In the group of tank barges, 11 units are registered in Austria (3.8%). On average, their age is 33 years, their length 78.1 m, their breadth 10.4 m, their draught 2.8 m and their loading capacity is 1,641.3 tons.

Another nine vehicles (3.1%) are grouped under the category "Other vehicles". Among them are sports boats over 20 m or ferries.

Finally, seven motor tankers or bunker boats are also registered in Austria. On average, their age is 61 years, their loading capacity is 414.7 tons and their engine power is 341 kW.

LOCKED-THROUGH VESSEL UNITS

57,000 units locked through
Passenger transport recovers only slowly

- Decline by 7.1% in locked-through freight vessels compared to last year
- 107% increase in passenger traffic compared to the previous year but still –70.3% compared to 2019

A total of 56,956 passenger and freight vessel units, travelling both upstream and downstream, were locked through the nine Austrian lock facilities in 2021 (excluding the Jochenstein power station on the Austrian-German border). Included in this number were 25,198 motor cargo vessels and motor tankers (–15.4% compared to 2020), 16,234 pushers (+9.6%) and 15,524 passenger vessels (+107.0%). A total of 34,050 cargo and tank lighters or barges (+1.3%) were also locked through as part of coupled and pushed convoys. Taking all types of vessels and convoys into consideration, the total number of locked-through vessel units in freight and passenger transport showed an increase of 9.4% compared to 2020.

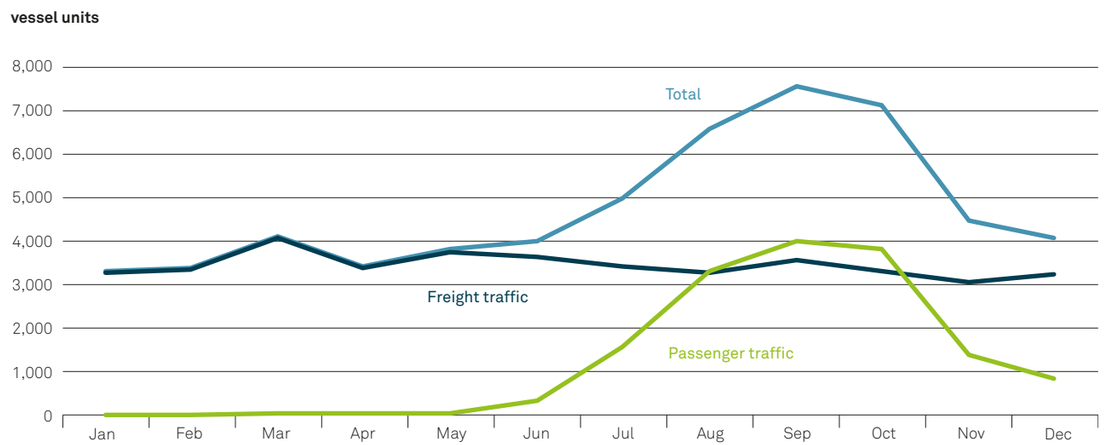
2021 was again marked by the Covid-19 pandemic, which presented itself in only a slight recovery of the locking numbers. Freight transport on the Austrian Danube again saw a moderate decline in locked-through vessel units (by 7.1% or 3,143 units fewer than 2020). In absolute terms, passenger traffic doubled compared to the previous year (by 107.0% or 8,023 vessel units). However, compared to 2019, this still represents a decrease of 70.3% or 36,795 vessel units. In 2021, freight transport had a share of 72.7% of total shipping volumes (–12.9 percentage points), with passenger traffic accounting for 27.3% (+12.9 percentage points).

In relation to 2021 as a whole, the average number of vessels passing through an individual Austrian Danube lock facility amounted to 6,328 convoys or individual vessels (an increase of 542 vessel units). This is equivalent to 527 vessel movements per month (+45) or 18 per day. As in previous years, the highest volume of vessels was once again recorded at the Freudenau lock (Vienna) with 7,936 vessels units (+8.7% compared to 2020), followed by the Abwinden lock with 7,413 units. Aschach lock recorded the smallest number of locked-through vessels with 5,075 units.

In addition to commercial freight and passenger vessel units, 9,408 small sports and leisure crafts also passed through lock facilities on the Austrian Danube in 2021 (–12.5%), together with a further 1,759 vessels, for instance public authority and rescue crafts.

FIGURES DATA FACTS

Vessel units* in freight and passenger transport locked through Austrian Danube locks in 2021



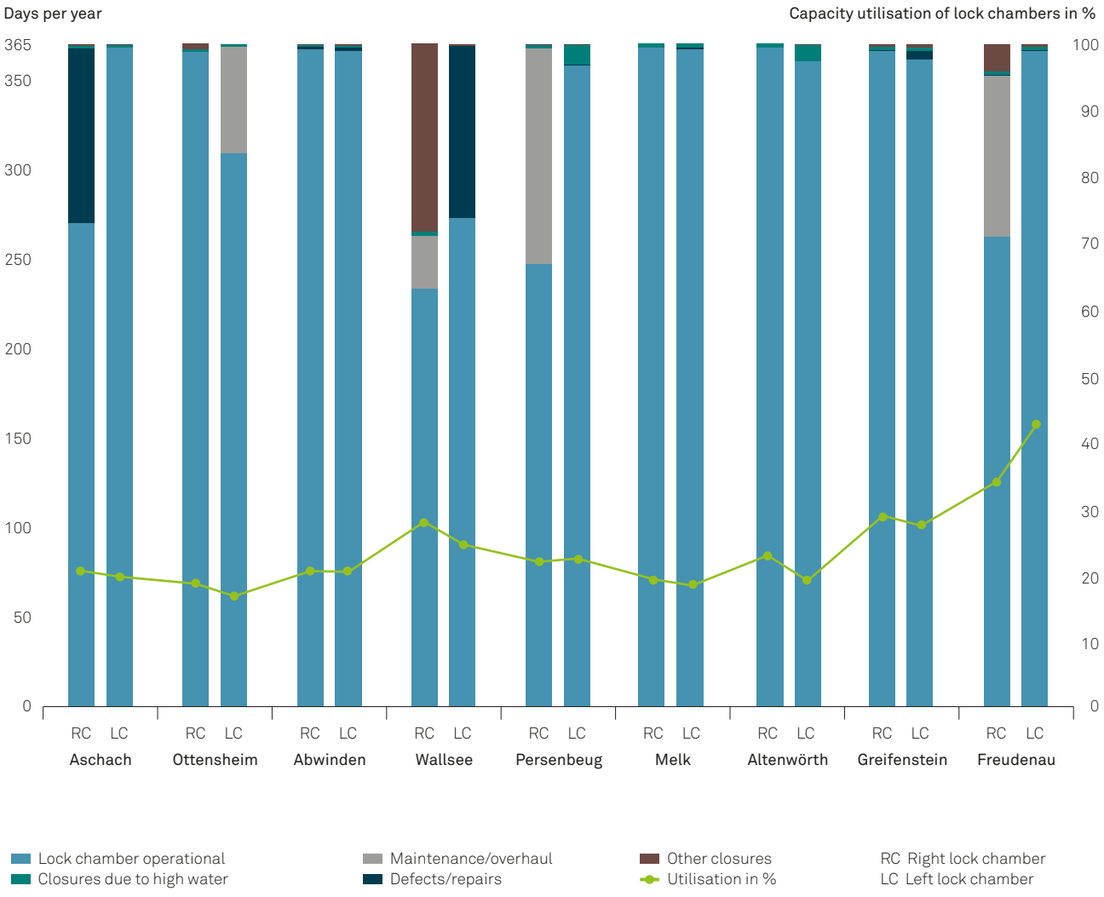
	Freight traffic	% to previous year	Passenger traffic	% to previous year	Total	% to previous year
2021	41,432	–7.1	15,524	+107.0	56,956	+9.4
2020	44,575	–2.9	7,501	–85.7	**52,076**	–47.0
2019	45,915	+7.8	52,319	+11.0	**98,234**	+9.5
2018	42,597	–16.7	47,147	+7.1	**89,744**	–5.7
2017	51,164	–0.9	44,020	+5.6	**95,184**	+2.0

* Vessel units in freight transport include convoys (pushers, motor cargo vessels or motor tankers with cargo and tank lighters or barges) and individual vessels (motor cargo vessels and motor tankers or individual pushers and tugs). The passenger vessels are day-trip vessels and cabin vessels.

Source: viadonau

FIGURES DATA FACTS

Availability of Austrian Danube locks 2021



Source: viadonau

AVAILABILITY OF LOCK CHAMBERS

98.7% continuous availability
Mean chamber utilisation around 24%

As the nine Austrian Danube locks are large-scale technical installations, they need to be serviced and maintained at regular intervals to ensure operational functionality and safety and thus also the capacity of waterway traffic flow. These so-called lock overhauls, along with necessary large-scale repairs, accounted for 59.2% of all closure days of the 18 lock chambers in 2021. The average duration of overhauls carried out in the winter half year 2020/21 and completed by the spring of 2021 was 199 days per chamber.

Other reasons for lock closures included repairs caused by technical defects during the year. They led to 14.8% of all closure days in total. In addition, 19.2% of closure days were attributed to scheduled modification or maintenance work, dredging in and around lock facilities, surveying, water pollution and accidents. Last year, the right chamber of the Wallsee lock was particularly affected, which had to be closed for 103 days due to an accident and the resulting repair work. A brief weather-related closure at the majority of the lock facilities was also recorded in 2021 due to high water. This natural event accounted for a total of around 6.7% of the closure days.

The 18 lock chambers on the Austrian Danube were continuously available on almost 360 days (98.7%) in 2021. In the months of April to October, which are the busiest for passenger, sports and leisure navigation, a large part of the Danube locks were completely closed for about 56 hours – in mid-July – due to a brief high water event. In the low-traffic months of November to March only three lock chambers were out of operation simultaneously. This was due to urgently needed work and repair measures and an accident while the second lock chamber was undergoing an overhaul. The work lasted ten hours on average.

Capacity utilisation of the individual lock chambers averaged at around 24% in 2021. The distribution of utilisation differs quite widely from a geographical perspective. As in previous years, the Freudenau lock reported the highest average utilisation of about 38%, while the Ottensheim lock recorded the lowest utilisation of around 18%. In this regard, the degree of lock chamber utilisation corresponds to its “occupancy time”, i.e. the entire period from the entry of the first to the exit of the last jointly locked-through vessel, assuming 24/7 availability of the lock chambers and taking into account the lock closures.

- 98.7% continuous availability of the Austrian locks in 2021
- Lock overhauls are carried out during the low-traffic period from November to March in order to avoid waiting times

WAITING TIMES AT LOCKS

Waiting times for only 4.8% of vessels Average waiting time 35 minutes

“Thanks to an efficient COVID-19 concept and precise training, our lock professionals were a reliable support for Danube navigation in 2021 with the usual high service quality and a guarantee for safe traffic regulation on the river.”

CHRISTIAN SCHACHENHOFER
Deputy Lock Manager

In 2021, an average of 4.8% of all vessel units (commercial freight and passenger vessels) on the Austrian section of the Danube were required to wait at the nine lock facilities; the mean waiting time for these 4.8% was 35 minutes over the entire year.

Lock availability and traffic volumes are the principal factors that influence waiting times. Around 84% of the waiting times incurred can be attributed to the unavailability of lock chambers due to overhauls, repairs/disruptions and necessary repairs after accidents. The remaining roughly 16% are primarily caused by traffic circumstances, unusual events and regular operations. Adjusted for the impact of lock overhauls, unplanned repairs and increased traffic, only 1% of vessels had to accept an average waiting time of around 15 minutes.

A detailed consideration of the evaluation reveals the following situation. About one third (34.7%) of the waiting times were caused by accidents in the lock area and the resulting repair measures at the lock facilities in Wallsee, Ottensheim and Freudenau. Another 26.5% of the waiting times resulted from repairs/disruptions and closures due to dredging or surveying during the year. A percentage of 23.1% was due to overhauls of the lock chambers in Ottensheim, Wallsee, Persenbeug and Freudenau. Due to the still dominant COVID-19 pandemic situation in 2021, only 13.1% of the waiting times were due to an increased traffic volume. This includes situations in which more vessels are waiting at a lock than can be accommodated in one chamber. Accounting for 1.4% of the waiting times, a statistical survey on transit volumes had an impact on navigation, and only 1.3% of the waiting times fell within the lock supervisory staff’s direct sphere of influence.

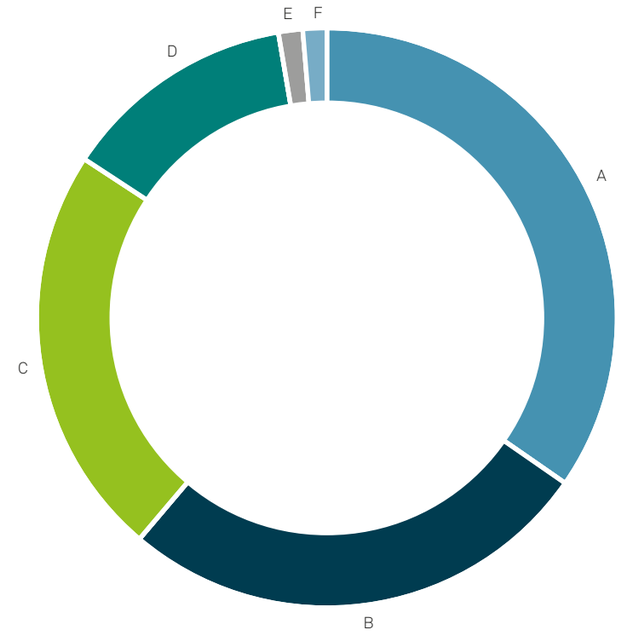
FIGURES DATA FACTS

Causes of waiting times at Austrian Danube locks 2021

F
Regular waiting times
1.3%

E
Unusual events
1.4%

D
Increased traffic volume
13.1%



A
Accidents
34.7%

B
Repairs/ disruptions
26.5%

C
Overhauls
23.1%

Source: viadonau

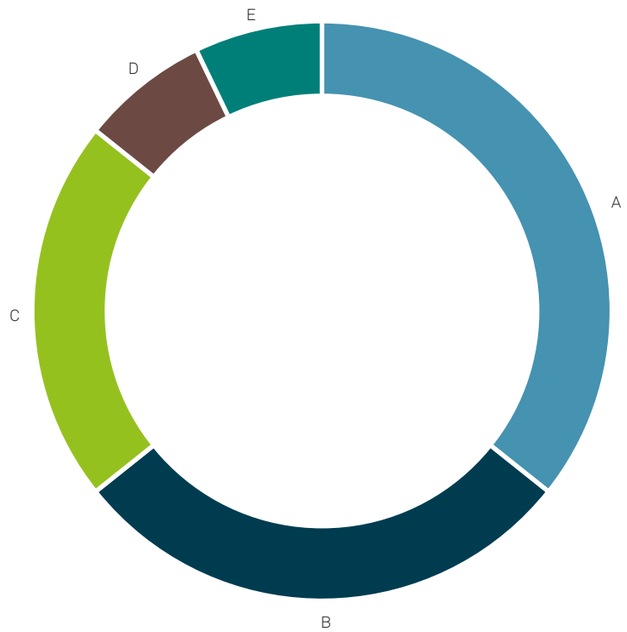
FIGURES DATA FACTS

Traffic accidents according to type of damage on the Austrian Danube 2021

E
1 collision of ships in service
7%

D
1 collision with structures (excluding lock facilities)
7%

C
3 groundings
21%



A
5 collisions with lock facilities
36%

B
4 riverbank collisions
29%

Source: Supreme Navigation Authority within the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology, adapted by viadonau

ACCIDENTS

Further drop in number of accidents
No personal damage

- Collisions with lock facilities were the most frequent types of accidents in 2021
- No personal damage
- Cargo vessels were involved in 11 accidents, a passenger vessel in one

In regard to accident statistics, Danube navigation continues to be an unbeatably safe transport mode, compared to land transportation by road or rail. A total of 12 accidents involving commercial passenger ships, freight vessels or convoys resulting in damage to property and/or personal injury occurred during the course of 2021 on the Austrian section of the Danube. 11 accidents with cargo vessels were recorded, while only one incident resulted in damage to a passenger ship. This was already the case in the previous year and is due to the reduced traffic volume of passenger ships due to the coronavirus pandemic.

Differentiated according to the type of accident, there were five collisions with lock facilities and four collisions with the riverbank. In a further three cases, there was a grounding (because of excessive draughts loaded, too low water levels or because of navigation outside the fairway). One incident respectively involved a collision with another facility and a collision of ships in service. One accident led to a collision with the riverbank, as well as a collision with a lock facility. In another accident, there was both a collision with the riverbank and a grounding.

No-one was injured during accidents in freight and passenger traffic on the Austrian Danube section in 2021. There were also no incidents of water pollution or leakage of cargo.

The majority of accidents in 2021 occurred within the vicinity of lock facilities (whilst being locked-through or in either the headwater or tailwater area of the lock). In total, five accidents were recorded here, all collisions with the lock itself. Four accidents occurred in 2021 on impounded sections, including two collisions with the riverbank, one collision of ships in service and one collision with a facility. Three more accidents were registered on the free-flowing stretches, two of them on the free-flowing stretch of the Danube between Melk and Krems (Wachau) and one on the free-flowing stretch of the Danube east of Vienna. They were all groundings, while in the case of one accident the riverbank was additionally collided with.

Sports and recreational boating, which is not included in the accidents described above (except in the case of collisions with commercial freight and passenger vessels), recorded one accident involving damage on the Austrian section of the Danube in 2021. This was a grounding.

MODAL SPLIT

91.5 million tons in the Danube corridor Danube share up to 25%

- Danube share of total modal split 8%
- Highest load volume in imports over the western border
- Highest share of the Danube in transport across the eastern border

In 2021, a total of 91.5 million tons of goods were transported across the border within the Austrian Danube corridor by road, rail and the river Danube. This represents an increase of 6.6 million tons or about 8% compared to the previous year.

In 2021, 66% of the modal split was made up of road, 26% of rail and 8% of inland waterway transport. Only road transport, which increased its share of the modal split by two percentage points compared to 2020, benefited from the increase in the total amount transported, while the rail and Danube modes reduced their share by one percentage point each.

At 25.4 million tons, the highest volume of goods was reached in imports over the western border, divided between the different traffic areas and traffic directions. Of this, 70% was executed by road, 27% by rail and 3% by inland waterway.

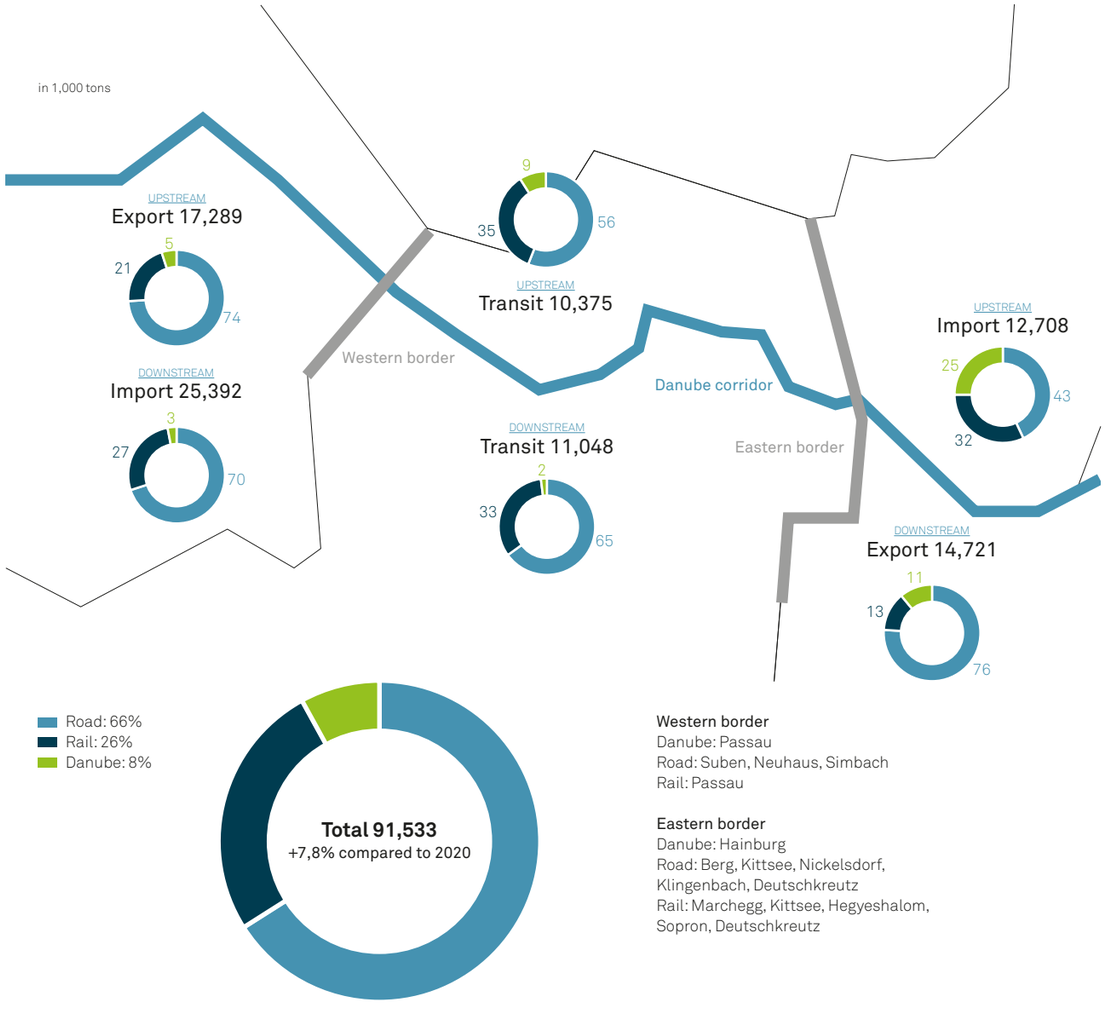
The biggest change in terms of volume compared to the previous year was recorded in exports over the western border. Here, transport volume increased by 29% to 17.3 million tons, with only a slight change in the modal split (road: +1 percentage point, rail: –1 percentage point, Danube: unchanged).

In 2021, the Danube's share of the modal split of the individual transport areas in combination with the traffic directions was within a corridor of 2% (downstream transit) and 25% (upstream import). With a share of 11% in the modal split, the Danube achieved its second-largest share in the export traffic travelling downstream.

The two largest shares of the Danube in the upstream and downstream traffic over the eastern border of the Danube corridor illustrate the high importance of the eastern traffic for the Austrian Danube. As 57% of the Danube's transport volume consists of bulk goods imported from the east or exported to the east, the advantage of the bulk cargo capability of inland vessels (large cargo units over long distances) compared to other transport modes is most visible here.

FIGURES DATA FACTS

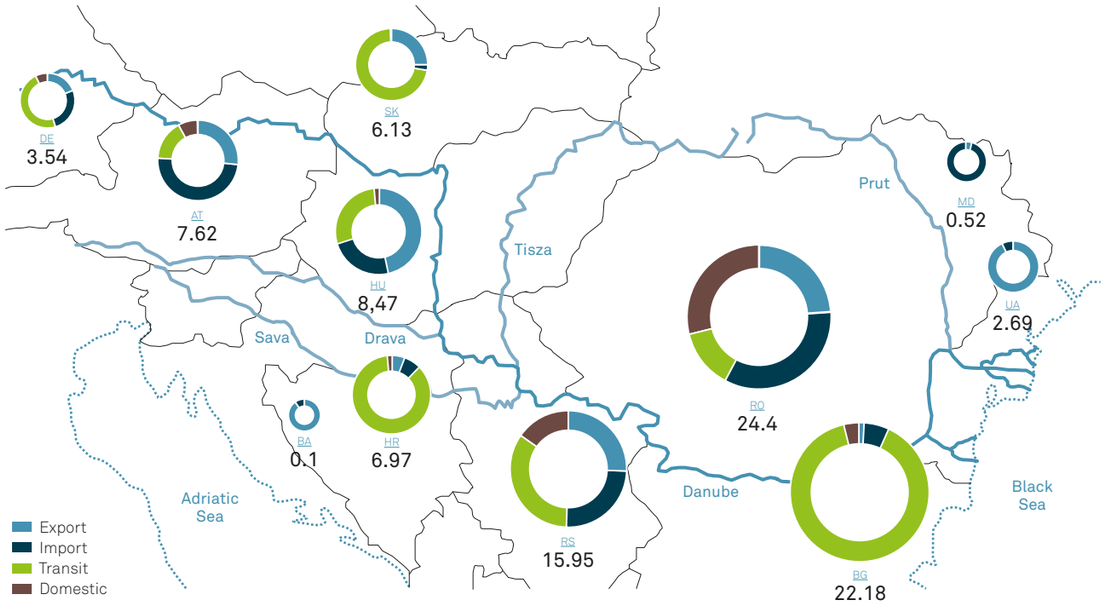
Cross-border freight traffic in the Austrian Danube corridor 2021



Source: Austrian Institute for Spatial Planning (ÖIR), adapted by viadonau

FIGURES DATA FACTS

Freight transport on the entire Danube 2020



In millions of tons	DE	AT	SK	HU	HR	BA	RS	RO	BG	MD	UA*
Export	0.67	2.04	1.54	3.97	0.41	0.09	4.09	5.86	0.22	0.02	2.50
Import	0.94	3.74	0.15	1.96	0.45	0.01	4.01	8.29	1.30	0.50	0.19
Transit	1.68	1.24	4.42	2.43	6.02	0.00	5.44	3.26	19.85	0.00	n.a.
Domestic	0.25	0.60	0.02	0.11	0.09	0.00	2.41	6.99	0.81	0.00	n.a.
Total	**3.54**	**7.62**	**6.13**	**8.47**	**6.97**	**0.10**	**15.95**	**24.40**	**22.18**	**0.52**	**2.69**

* Data on transit and domestic traffic on the Ukrainian section of the Danube is not available. Therefore, the sum total as stated only includes export and import volumes.

Sources: Eurostat, Danube Commission, national traffic statistics, adapted by viadonau

FREIGHT TRANSPORT ON THE ENTIRE DANUBE 2019

34 million tons in the Danube region
Slight decline compared to 2019

In 2020, a total of around 34.0 million tons of goods were transported on the entire navigable Danube between Kelheim and the Black Sea, its tributaries and the Danube-Black Sea Canal. This corresponds to a slight decrease of 2.2 million tons or 6.1% compared to 2019.

In terms of individual countries, the largest transport volumes were achieved by far in Romania with 24.4 million tons, Bulgaria with 22.2 million tons and Serbia with 16.0 million tons. Trailing behind were Hungary with 8.5 million tons, Austria with 7.6 million tons, Croatia with 7.0 million tons, Slovakia with 6.1 million tons, Germany (local government districts of the Upper Palatinate/Lower Bavaria) with 3.5 million tons, Ukraine with 2.7 million tons*, Moldova with 0.5 million tons and Bosnia-Herzegovina, which is connected indirectly to the Danube via the Sava, with 0.1 million tons.

These size ratios show that considerably higher transport volumes are achieved on the lower and middle Danube than on the upper Danube. For comparison: in 2020, more than three times the quantity generated in Austria was shipped in Romania.

The biggest change compared to 2019 was in Bosnia-Herzegovina, whose already low transport volume decreased by a further 42.1%. This is mainly due to a massive decrease of 71.7% in import volumes.

Major reductions were also recorded in Ukraine (–23.6%), Germany (–15.3%) and Slovakia (–14.0%). In contrast, larger increases were achieved in Bulgaria (+40.4%), Moldova (+22.2%) and Croatia (+10.4%).

If one considers the distribution of the transport volumes determined in the individual countries among the various traffic areas, the paramount importance of import traffic becomes clear in Moldova, which accounted for 96.2% in 2020. In contrast, export traffic in Ukraine and Bosnia-Herzegovina was similarly dominant (92.9% and 90.0% respectively).

In turn, transit traffic was by far the most important in Bulgaria (89.5%), Croatia (86.4%) and Slovakia (72.1%). In all the other countries of the Danube region, however, the size ratios of the individual traffic areas are more balanced.

- Highest transport volumes in Romania
- Major declines in Bosnia-Herzegovina, Ukraine, Germany and Slovakia
- Dominant position of transit transports in Bulgaria, Croatia and Slovakia

FAIRWAY CONDITIONS ALONG THE ENTIRE DANUBE

At the time of publication, not all current data was available for this article. As soon as these are available, the Annual Report on Danube Navigation in Austria 2021 will be updated.

Germany

Czech Republic

Upper Austria

Lower Austria

Vienna

Slovakia

Burgenland

Styria

Danube

Große Mühl

Kamp

Thaya

Morava

Inn

Traun

Enns

Ybbs

Erlauf

Donau

Traisen

Danube Canal

2,250

2,225

2,200

2,175

2,150

2,125

2,100

2,075

2,050

2,025

2,000

1,975

1,950

1,925

1,900

1,875

Jochenstein
River km 2,203
2 chambers
of 227 × 24 m

Kachlet
River km 2,231
2 chambers
of 226.5 × 24 m

Passau

Aschach
River km 2,163
2 chambers
of 230 × 24 m

Service Centre
Upper Danube Valley

Aschach

**Industrial port
Oil port
voestalpine
Felbermayr**

Linz

Ottensheim
River km 2,147
2 chambers
of 230 × 24 m

Abwinden
River km 2,120
2 chambers
of 230 × 24 m

Enns

Wallsee
River km 2,096
2 chambers
of 230 × 24 m

Grein

Ybbs-Persenbeug
River km 2,060
2 chambers
of 230 × 24 m

Ybbs

Pöchlarn

Melk
River km 2 038
2 chambers
of 230 × 24 m

Kienstock
River km 2,015
LNWL 2010: 164 cm
HNWL 2010: 618 cm

Dürnstein
River km 2,009
LNWL 2010: 258 cm
HNWL 2010: 638 cm

Krems

Service Centre
Wachau

Altenwörth
River km 1,980
2 chambers
of 230 × 24 m

Pischelsdorf

Greifenstein
River km 1,949
2 chambers
of 230 × 24 m

Korneuburg

Nussdorf (Danube Canal)
1 chamber
of 70 × 13 m

Head office

Freudenau
River km 1,921
2 chambers
of 275 × 24 m

**Freudenau
Albern
Lobau**

Service Centre
March-Thaya

Thebnerstraßl
River km 1,879
LNWL 2010: 132 cm
HNWL 2010: 598 cm

Hainburg

Bratislava

Service Centre
Carnuntum

Wildungsmauer
River km 1,895
LNWL 2010: 162 cm
HNWL 2010: 564 cm

The Austrian section of the Danube

- Waterway
- Free-flowing stretch
- Lock
- Important water gauge
- Port/transhipment site
- Navigation surveillance
- viadonau Service Centre
- LNWL Low navigable water level
- HNWL Highest navigable water level

Imprint

A project within the scope of the BMK Action Programme for the Danube until 2022

Publisher
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Photos
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Print
Wograndl Druck GmbH
www.wograndl.com

viadonau