DANUBE NAVIGATION IN AUSTRIA

ANNUAL REPORT 12

KEY DATA ON DANUBE NAVIGATION 2012

Changes from 2011 are given as percentages in brackets

TRANSPORT VOLUME

10.7 million tons (+7.8%)

Import: 5.4 million tons (-2.3%)
Export: 1.6 million tons (+5.0%)
Transit: 2.4 million tons (+6.3%)
Domestic: 1.3 million tons (+119.4%)

TRANSPORT PERFORMANCE

10.5 billion tkm (+9.8%)
9,481 loaded journeys (-8.2%)

Within Austria: 2.2 billion tkm (+3.2%)
Outside Austria: 8.3 billion tkm (+11.7%)

WATER TRANSHIPMENT AT AUSTRIAN PORTS AND TRANSHIPMENT SITES

9.5 million tons (+15.8%)

Ores and metal waste: 2.9 million tons (+0.2%)
Petroleum products: 2.4 million tons (+3.9%)
Crude and manufactured minerals, building materials: 1.7 million tons (+316.4%)
Fertilisers: 0.7 million tons (-8.5%)
Agricultural and forestry products: 0.5 million tons (-19.8%)
Other goods: 1.3 million tons (+26.3%)

VESSEL UNITS LOCKED THROUGH AUSTRIAN DANUBE LOCKS

93,016 vessel units* (-5.1%)

*Convoys and individual vessels

Freight transport: 59,443 units (-6.8%)
Passenger transport: 33,573 units (-2.0%)

PASSENGER TRANSPORT (INCL. ESTIMATION)

1.1 million passengers (-6.9%)

Liner services: 670,000 passengers (-4.3%)
River cruises: 290,000 passengers (-12.1%)
Non-scheduled services: 120,000 passengers (-7.7%)

ACCIDENTS

19 traffic accidents with damage

Personal injuries: 0 dead, 7 slightly injured
Damage to property: 2 vessel-vessel, 2 grounding incidents,
15 incidents with damage to bank and facilities

AVAILABILITY OF THE WATERWAY

348 days
15-year average: 357 days

Closures due to high water: 1 day
Closures due to ice: 17 days

Source: Statistics Austria; Supreme Navigation Authority at the Federal Ministry for Transport, Innovation and Technology; Federal Office of Transport; diverse companies active in passenger transport

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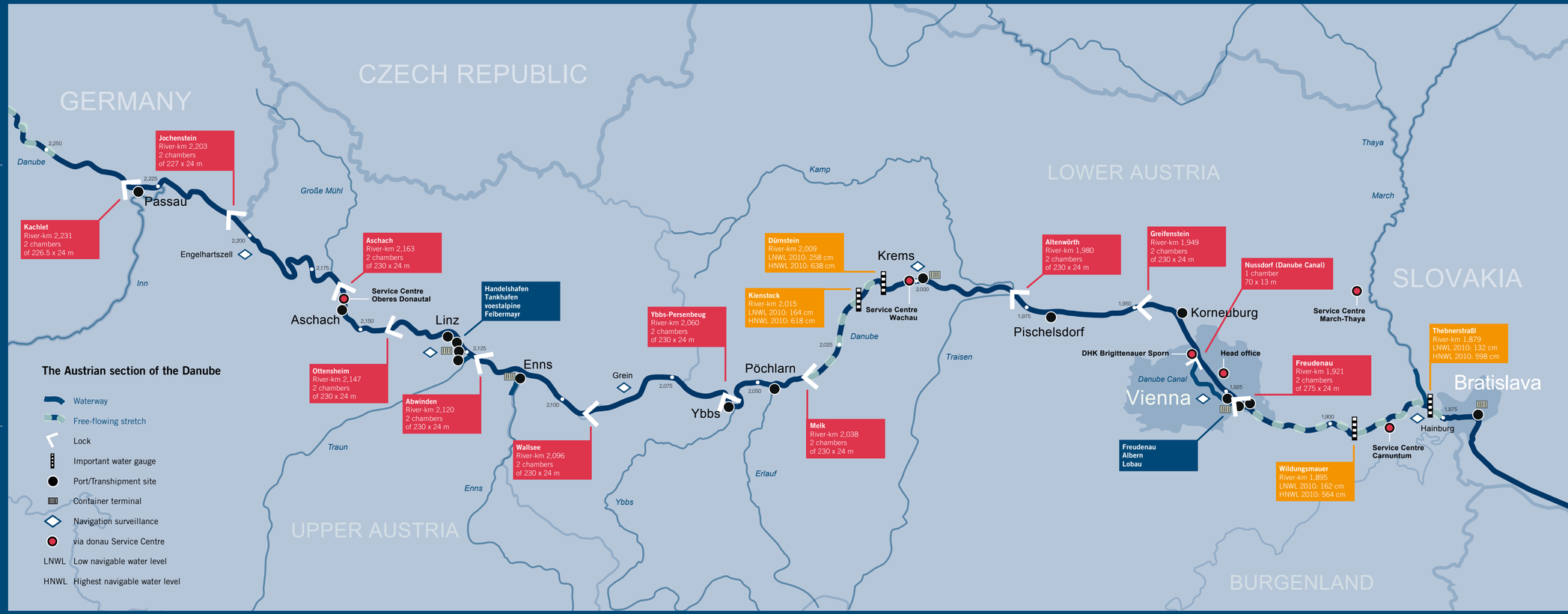


NEW IMPETUS FOR INLAND WATERWAYS
CONSERVATION AND DEVELOPMENT

One of the important tasks of via donau is to provide political and economic decision-makers, interested experts along with the interested public with up to date information about the Danube waterway. Our aim is to identify the potentials of Danube navigation and broaden the knowledge of this mode of transport, in order to contribute to the maintenance and development of the Danube as an international waterway.
In addition to offering the latest statistics on Danube navigation in Austria, this sixth edition of the annual report provides information on Danube-related projects and activities revolving around the issues of transport function, infrastructure, environment, safety and economy.
A milestone of the previous year was the launch of the Bad Deutsch-Altenburg pilot project on the free-flowing section of the Danube to the east of Vienna in March 2012. What makes this project unique is its special riverbed stabilisation technology which is being tested for the first time anywhere in the world and which is intended to halt the progressive degradation of the Danube on this stretch of the river. The annual report reflects the integrated and holistic approach pursued by via donau, attaching equal importance to the dimensions of environment, flood control and economy.

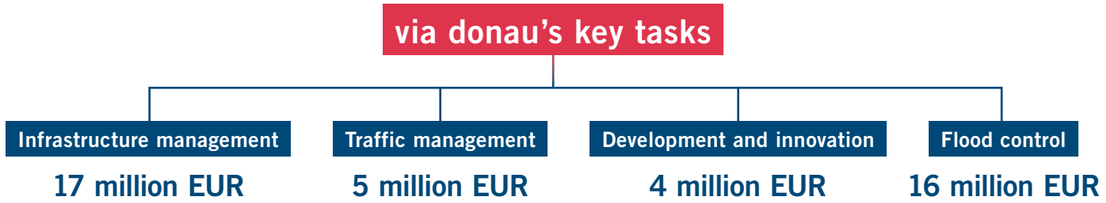
HANS-PETER HASENBICHLER
Managing Director
of via donau

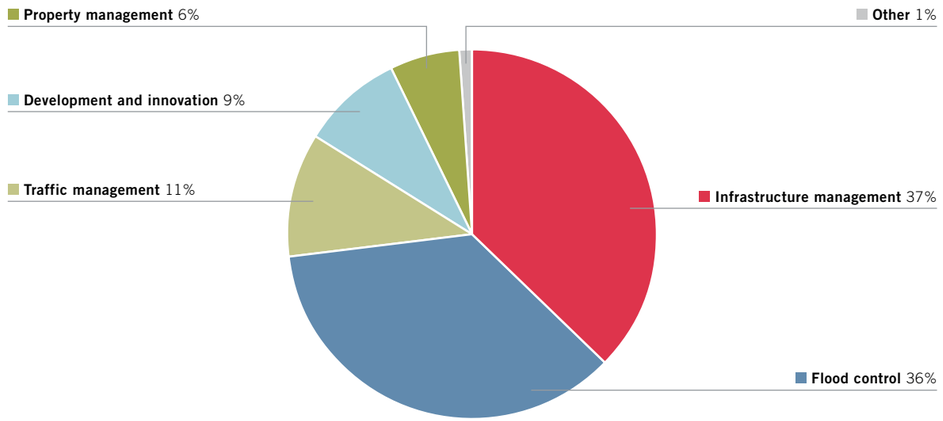
DISCOVERING NEW POTENTIALS
INCREASED USE OF DANUBE TRANSPORT

The development and promotion of the Danube waterway and an increased use of inland waterway transport are important elements of a future-oriented and sustainable transport policy. In 2012, the Austrian Federal Ministry for Transport, Innovation and Technology published the new Transport Master Plan for Austria in which the goals and strategies of a comprehensive transport policy up until 2025 are defined. Forming one of the priority areas of the EU Strategy for the Danube Region, waterway transport on the Danube will play an important role in this respect.
As an environmentally-friendly and efficient transport mode, waterway transport is an excellent complement to rail and road transport. Many businesses along the Danube have already come to appreciate the resource-friendly and cost-efficient alternative that inland navigation provides for the transportation of their goods. We intend to further raise both commercial and public awareness to the advantages and opportunities presented by inland waterway transport. Together with via donau, my ministry is working towards the further enhancement of the usability of waterways as a mode of transport.
The following annual report is intended to provide you with an overview of facts, figures and initiatives in the field of Danube navigation. It also illustrates the enormous economic relevance of inland waterway transport and the ever increasing importance of the role that intelligent transport systems will play in the future.

DORIS BURES
Federal Minister for
Transport, Innovation
and Technology

COSTS FOR KEY TASKS 2012





SOME INTERESTING FIGURES

The Austrian waterway operator via donau ...

- maintains 350 km of waterways
- ensures the maintenance of 500 km of towpaths
- manages 200 km of flood protection dams
- maintains 800 km of river banks
- manages about 600 properties
- handles about 100,000 vessels passing through the Danube locks per year
- operates the DoRIS (Donau River Information Services) navigation information system on the Austrian Danube, consisting of 23 base stations and one control centre

VIA DONAU

OUR COMPANY
INNOVATION AND MAINTENANCE

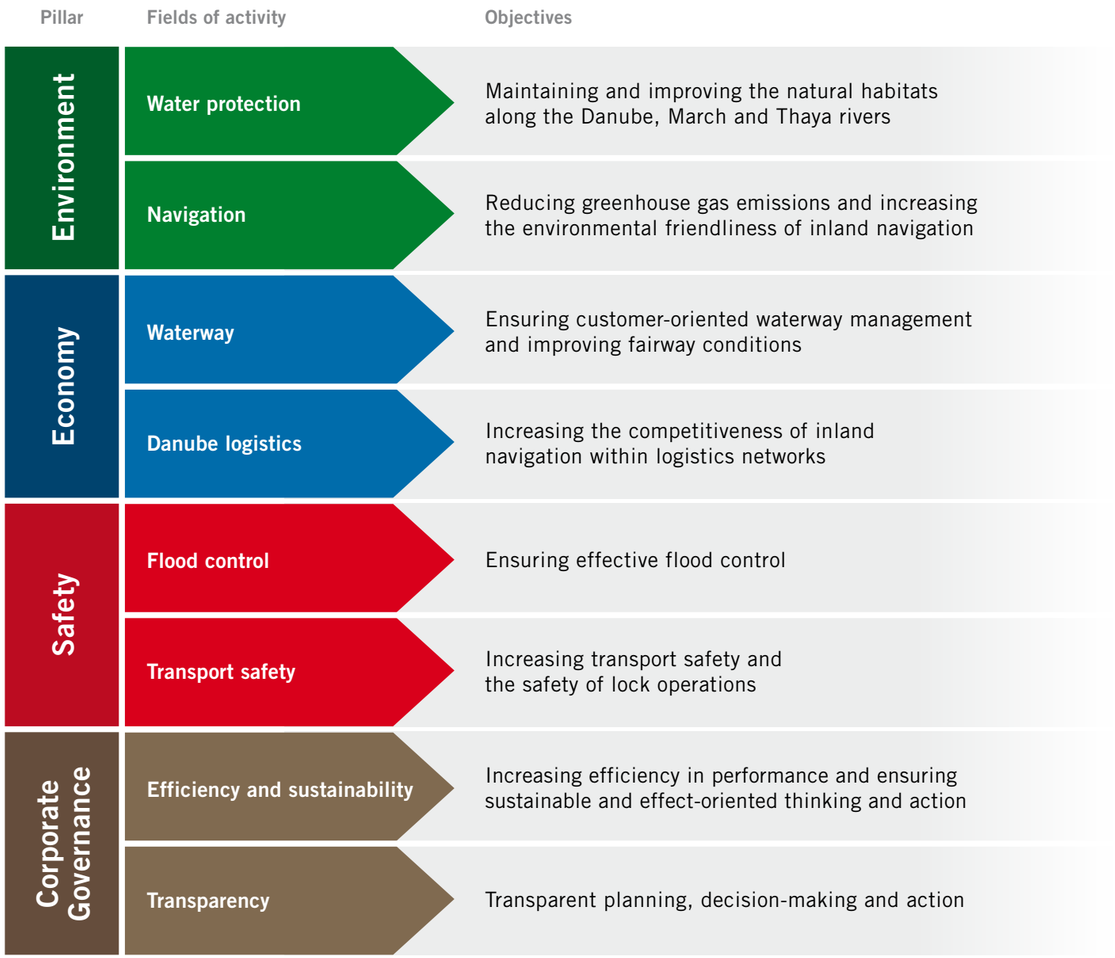
via donau – Österreichische Wasserstraßen-Gesellschaft mbH was established in 2005 by the Austrian Federal Ministry for Transport, Innovation and Technology (BMVIT) and was tasked with the **maintenance and development of the Danube waterway**. Today, it is the internationally leading waterway operator in the Danube region.
Building on its employees' expert knowledge in the fields of infrastructure management, navigation, electronic information and navigation systems, logistics, flood control and ecological river engineering, via donau provides services to public authorities, businesses, recreation seekers and residents living along the Danube.
In rendering these services, the main emphasis is placed on the sustainable development of the Danube region as both a living space and an economic area. The **environment, safety** and the **economy** are considered by via donau to be inter-communicating systems which ensure Austria's quality of life as well as its role as a location for business, thereby making the Danube region a secure place to live for both people and nature, not only today but also in the future.
The realisation of this ambitious and future-oriented vision for the Danube region is based on modern corporate structures, performance-enhancing working conditions and a responsible perception of the company and its activities. This is also reflected in via donau's **corporate values**:

- Responsibility for people and the environment
- Innovation and leadership in the Danube region
- Efficient performance
- Transparent planning, decision-making and reliable action
- Personal initiative and entrepreneurial thinking and action
- Respect and appreciation for others

VIA DONAU

Owner: Federal Ministry for Transport, Innovation and Technology (BMVIT)
Tasks: Maintenance and development of the Danube waterway, as defined in the 2004 Waterway Act (Federal Law Gazette 177/2004 of 30 December 2004)

Head office: Tech Gate Vienna (1220 Vienna)
via donau Service Centres: Oberes Donautal (4082 Aschach), Wachau (3500 Krems), Carnuntum (2405 Bad Deutsch-Altenburg), March-Thaya (2261 Angern), DHK Brigittenauer Sporn (1200 Vienna)
Web: www.via-donau.org



VIA DONAU

STRATEGY 2020
FOUR PILLARS OF SUSTAINABILITY

In order to lead the company into a sustainable and successful future, via donau has developed a strategy paper which will facilitate strategic corporate management up until 2020.

ENVIRONMENT

Water protection: via donau is a leading force in near-natural river engineering and innovative water protection practices on waterways and other bodies of flowing water in Europe. Activities in this field are, above all, based on the European Water Framework Directive, national water management plans and the National Action Plan for Danube Navigation and are integrated into an environmental management system and a broad network of cooperation partners.

Navigation: via donau is introducing the specific requirements of the Danube region into European research on nautical/technical innovations and climate change and is involved in initiating and developing projects on waste prevention and its disposal in the navigation sector.

ECONOMY

Waterway: via donau ensures active and customer-oriented waterway infrastructure management in Austria. In doing so, via donau is able to facilitate the planning of freight transport operations which contributes to an increased use of the waterway, thereby enhancing the creation of wealth in the region. At an international level, via donau is making a significant contribution to the development of European strategies, programmes and guidelines for inland navigation.

Danube logistics: via donau actively supports the sustainable integration of the Danube waterway into the overall transport system along with the integration of Danube navigation in multimodal logistics chains, thereby contributing to the strengthening and safeguarding of Austria's role as a location for business.

SAFETY

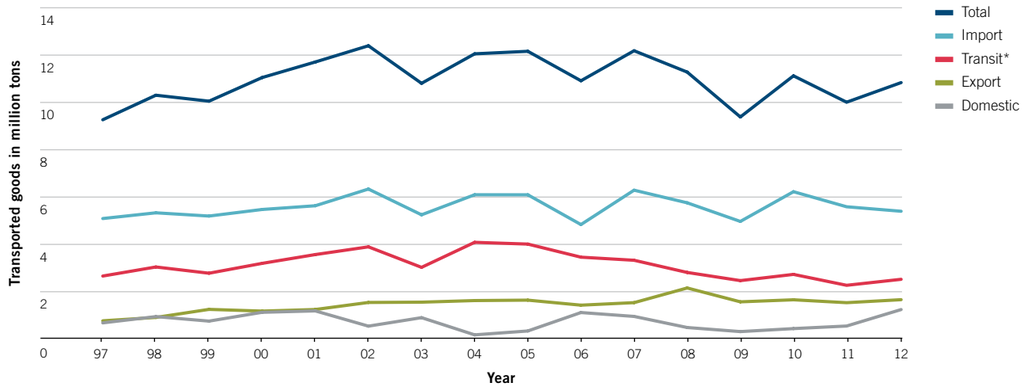
Flood control: via donau supports water rights authorities and flood protection associations with the protection of the population, buildings and infrastructure along the Danube, March and Thaya rivers from the effects of flood events.

Transport safety: In its capacity as the operator of the Danube's locks and River Information Services (RIS), via donau ensures predictive traffic management in line with the requirements of waterway users and in doing so helps to enhance traffic safety and transport efficiency on the Danube.

CORPORATE GOVERNANCE

Efficiency and sustainability: By applying an integrated approach to the performance of its key tasks, via donau is setting new standards in terms of sustainability and efficiency. All activities performed by via donau are optimally integrated and coordinated through the use of modern management systems.

Transparency: As a public enterprise, via donau attaches particular importance to reliable transparency of its actions and open communication.



TRANSPORT VOLUME (TONS)	Import	Export	Transit*)	Domestic	Total
2012	5,438,844	1,623,701	2,411,351	1,240,111	10,714,007
2011	5,564,222	1,545,722	2,268,157	565,187	9,943,288
2010	6,199,870	1,667,805	2,727,772	456,632	11,052,080
2009	4,945,292	1,581,387	2,465,668	329,463	9,321,810
2008	5,730,621	2,166,354	2,809,508	502,228	11,208,711

*) Due to a lack of statutory resources, there are no complete records for transit data for the years 2004 and 2005. Since 2005 figures have been extrapolated by Statistics Austria.

Source: Statistics Austria; chart and table created by via donau

TRANSPORT VOLUME

GROWTH IN ALL SEGMENTS EXCEPT IMPORTS
7.8% INCREASE IN GOODS TRANSPORTED

Transport volumes on the Austrian section of the Danube recorded a slight increase in all transport segments (with the exception of imports) from that of 2011. In 2012, approximately 10.7 million tons of goods were transported on the Austrian Danube, corresponding to an increase of 7.8% or 0.8 million tons in comparison to 2011. This figure is 14.9% or 1.4 million tons higher than the results achieved in the crisis year of 2009.

Accordingly, **transport performance** (transport volume multiplied by distance) within Austria's borders rose by 3.2% to 2.2 billion ton-kilometres. Total transport performance increased by 9.8% to 10.5 billion ton-kilometres. The number of loaded journeys undertaken on the Austrian section of the Danube, however, fell by 8.2% from 10,325 to 9,481, which can be taken as a clear sign of a higher level of vessel capacity utilisation.

The **average transport distance per ton** was 1,024 kilometres for imports, 811 kilometres for exports, 1,474 kilometres for transit transport and 81 kilometres for domestic transport.

As far as **exports** were concerned, 1.6 million tons of goods were transported by inland vessels in 2012, corresponding to a rise of 5.0% or 77,979 tons over 2011. In this transport segment, 53% of the goods crossed the eastern border and 47% crossed the western border of the Austrian territory. Within this segment, the highest increase in the volume of transported goods was in petroleum products (+99,713 tons) and agricultural and forestry products (+21,623 tons).

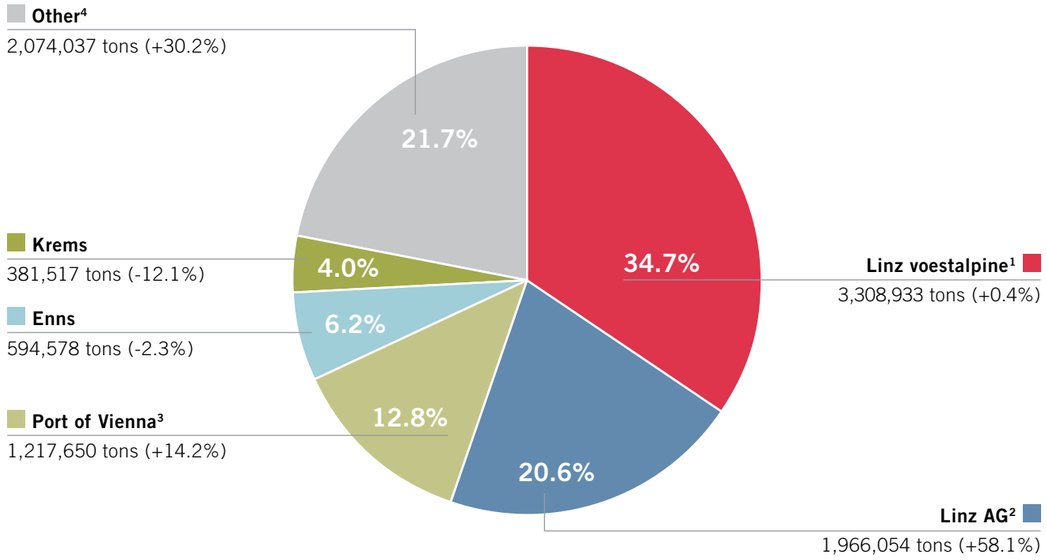
With regard to **imports**, however, transport volumes decreased by 2.3% or 125,378 tons to 5.4 million tons from that of 2011, with 77% of goods entering Austrian territory from the east. The largest quantitative drop in imported goods volumes was observed in the commodity groups of agricultural and forestry products (-164,501 tons) and petroleum products (-83,760 tons).

In 2012, the strongest growth in cross-border transport volumes on the Austrian Danube was seen in **transit transport**. In this segment, the quantity of transported goods rose by 6.3% or 143,194 tons to 2.4 million tons, with 83% of the goods being carried upstream and 17% downstream. The transport volume reported for transit journeys represents an extrapolated figure due to the fact that Statistics Austria uses an estimation model to compensate for the current underreporting of transit transport.

Finally, **domestic transport** on the Austrian section of the Danube waterway increased by a staggering 119.4% or 674,924 tons to 1.2 million tons. However, this rise can be fully attributed to the waterway transport of raw materials used as landfill for the three port basins at the port of Linz to reclaim land for the construction of a logistic park.

The **share of the individual transport segments** in total waterway freight transport in 2012 are as follows (changes over 2011 are indicated as percentages in brackets): 50.8% imports (-5.2%), 22.5% transit transport (-0.3%), 15.2% exports (-0.3%) and 11.6% domestic transport (+5.9%).

DISTRIBUTION OF WATER TRANSHIPMENT AT AUSTRIAN DANUBE PORTS AND TRANSHIPMENT SITES 2012



TOTAL: 9,542,769 tons

Source: Statistics Austria; chart created by via donau

1) Including water transhipment at the transhipment facility of Industrie Logistik Linz GmbH
2) The figures for the Linz site combine the transhipment volumes of the commercial port and the oil port.
3) The figures for the Vienna site combine the transhipment volumes of the three ports of Freudenau, Albern and the Lobau oil port.
4) Other ports and transhipment sites: Aschach, Wilhering, Linz heavy cargo port, Mauthausen, Wallsee, Ardagger, Ybbs, Pöchlarn, Pischelsdorf, Korneuburg, Bad Deutsch-Altenburg

PORT TRANSHIPMENT

GROWTH OF NEARLY 16%
INCREASED WATER TRANSHIPMENT

The ports and transhipment sites on the Austrian section of the Danube recorded an increase in the water transhipment of goods in 2012, with a total of more than **9.5 million tons of goods** being transhipped at waterside loading and unloading facilities. This is equivalent to an increase of 15.8% or 1.3 million tons in comparison to 2011.

Handling a volume of **3.3 million tons** – which marks a rise of 0.4% or 13,602 tons over 2011 – the **industrial port of voestalpine in Linz** once again reported the highest water transhipment figures in 2012. The port therefore boasts a share of nearly 35% of all water transhipment activities of all ports and transhipment sites located on the Austrian stretch of the Danube.

The most prominent increase over 2011 was recorded at the **port of Linz AG**, where a growth of 58.1% or 722,486 tons was recorded. The volume of goods transhipped at waterside facilities in the port amounted to approximately **2.0 million tons**. This strong growth can be attributed almost entirely to the additional quantities of gravel and sand (more than 650,000 tons) transported from Wilhering to Linz to be used as landfill for the port basins of Linz AG.

The **other ports and transhipment sites** (including Aschach, the Linz heavy cargo port, Mauthausen, Wallsee, Ardagger, Ybbs, Pöchlarn, Pischelsdorf, Korneuburg, Bad Deutsch-Altenburg and the transhipment site at Wilhering mentioned above) were able to increase their water transhipment volumes by 30.2% or 481,514 tons. The resulting total transhipment volume of about **2.1 million tons** significantly exceeded the results achieved in 2009 and 2010. A more detailed description of the water transhipment activities of these Austrian ports and transhipment sites is not possible due to data protection regulations.

The **port of Vienna** also recorded a clear increase to **1.2 million tons**, handling an additional 14.2% or 151,047 tons of goods at its waterside facilities in comparison to 2011. This marks the best result ever recorded by the port, especially when compared to the figures of 2009 and 2010.

The **port of Krems** witnessed a decline of 12.1% or 52,512 tons over 2011, with waterside transhipment levels amounting to **381,517 tons** of goods.

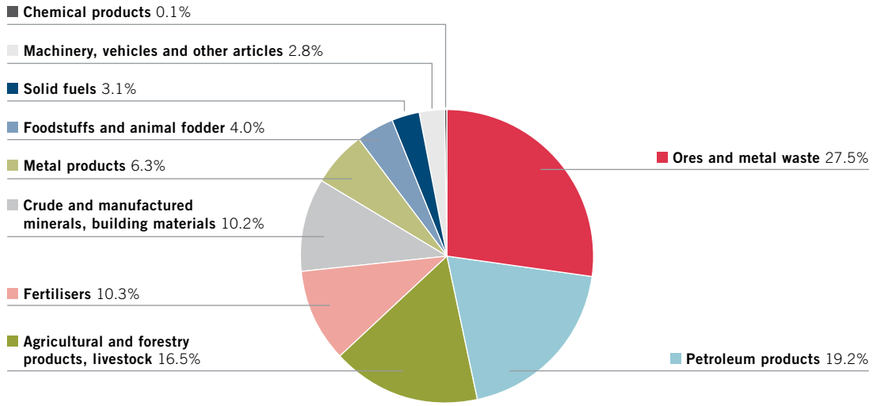
A slight decrease in transhipment volumes of 2.3% or 13,687 tons to a total of **594,578 tons** was recorded at the **port of Enns**.

The **four public Danube ports** in Linz, Enns, Krems and Vienna were able to raise their share of the total volume of goods transhipped at Austrian waterside facilities to 44%.

The quantitative shares in the total water transhipment volume recorded by Austrian Danube ports and transhipment sites are as follows: 34.7% at the industrial port of voestalpine in Linz, 21.7% at other ports and transhipment sites, 20.6% at the port of Linz AG, 12.8% at the port of Vienna, 6.2% at the port of Enns and 4.0% at the port of Krems.

TRANSPORT VOLUME BY COMMODITY GROUPS ON THE AUSTRIAN DANUBE IN 2012

Classification of commodities by NST/R*	Domestic	Import	Export	Transit	Total 2012	Change over 2011
			Transport volume in tons			
0 Agricultural and forestry products, livestock	15,341	393,137	116,544	1,245,667	1,770,689	+7.8%
1 Foodstuffs and animal fodder	2,016	278,447	39,395	113,483	433,341	+11.7%
2 Solid fuels	–	307,600	–	22,507	330,107	+80.3%
3 Petroleum products	467,794	913,547	502,899	177,068	2,061,308	+3.3%
4 Ores and metal waste	320	2,941,376	–	–	2,941,696	+0.2%
5 Metal products	23,926	166,866	300,753	179,602	671,147	-23.5%
6 Crude and manufactured minerals, building materials	728,967	233,359	22,291	104,339	1,088,956	+175.0%
7 Fertilisers	1,393	143,800	598,495	363,477	1,107,165	-6.5%
8 Chemical products	–	1,561	3,942	1,790	7,293	-86.0%
9 Machinery, vehicles and other articles	354	59,150	39,382	203,419	302,305	+4.4%
Total	**1,240,111**	**5,438,843**	**1,623,701**	**2,411,352**	**10,714,007**	**+7.8%**



*) NST/R = Standard Goods Classification for Transport Statistics/Revised

Source: Statistics Austria, table and diagram created by via donau

TRANSPORT VOLUME BY COMMODITY GROUPS

SOLID FUELS ON THE RISE
ORES AND PETROLEUM PRODUCTS STABLE

2012 witnessed a positive trend in transport volumes, showing increased figures in nearly all the NST/R groups of commodities carried on the Austrian stretch of the Danube (NST/R = Standard Goods Classification for Transport Statistics/Revised).

As in previous years, the highest volume was again accounted for by the group **ores and metal waste** in 2012, which achieved a growth of 0.2% over 2011 and hence remained relatively stable. A total of 2.9 million tons of ores and metal waste was transported on the Austrian Danube in 2012, nearly all of which was shipped to Linz. This is equivalent to a share of more than 27% of the total volume of goods transported on the Austrian section of the Danube.

The NST/R group of **petroleum products** recorded an increase of 3.3% or 66,196 tons compared to 2011. With a share of about 20% in the total transport volume, this commodity group is the second most important group carried on the Austrian Danube, whereby the bulk of these goods was imported into Austria.

The volume of **agricultural and forestry products** transported on the Danube in 2012 rose by 7.8% or 128,450 tons and increased to nearly 1.8 million tons. With approximately 1.2 million tons, the majority of these products were carried in transit transport through Austria. When compared to previous years, this commodity group almost reached the levels achieved in 2010.

The largest relative increase in transport volume was accounted for by the group **crude minerals**, which witnessed a rise of 175.0% or 693,029 tons. This increase was mainly due to the waterway delivery of gravel and sand carried as domestic transport to be used as landfill in the port basins of Linz AG.

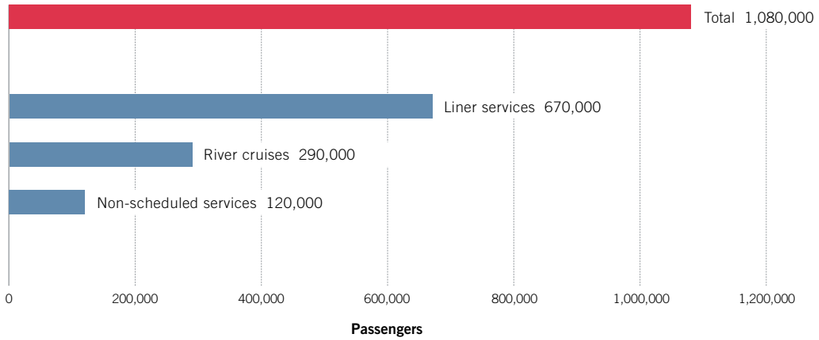
A relatively high growth rate of 80.3% was also witnessed by the commodity group **solid fuels**. These goods accounted for a share of 3.1% of the total transport volume in 2012, which is equivalent to a volume of about 330,000 tons in absolute figures.

The NST/R group of **foodstuffs and animal fodder** recorded an increase of 11.7%, corresponding to a total transport volume of about 430,000 tons in absolute figures and accounting for 4.0% of all transport activities on the Austrian Danube.

The volume of transported goods belonging to the group of **machinery, vehicles and other articles** rose by 4.4% or 12,697 tons compared to 2011. Nevertheless, declines were recorded by the NST/R groups of fertilisers, metal products and chemical products. Despite a decrease of 6.5% or 77,104 tons from that of 2011, **fertilisers** accounted for the fourth largest share of the overall transport volume on the Danube, with a total of about 1.2 million tons of goods carried in 2012.

Metal products, nearly 50% of which were transported for export, also witnessed a lower transport volume compared to 2011. The decline amounted to 23.5% or 206,544 tons.

In relative terms, the 86.0% decline in the group of **chemical products** marked the largest drop in transport volume in 2012, although in absolute terms this only corresponded to a moderate decrease of 44,879 tons over 2011.



NUMBER OF LANDINGS AND PASSENGERS AT VIENNA PASSENGER PORT*	Vessel landings	% over previous year	Passengers handled	% over previous year
2012	**3,477**	**-3.0**	**362,316**	**+0.2**
2011	3,585	-1.5	361,565	-0.3
2010	3,641	-9.1	362,655	+2.8
2009	4,007	-9.6	352,793	-7.3
2008	4,434	+1.4	380,529	+24.8

*) Landing stages at Handelskai, Nussdorf and the Danube Canal, including cabin vessels and the Twin City Liners

Source: DDSG Blue Danube Schiffahrt GmbH, Donauschiffahrt Ardagger GmbH, Donauschiffahrt Wurm + Köck GmbH & Co. OHG, MAHART PassNave Shipping Ltd., Schifffahrtsunternehmen Wilhelm Stift GesmbH, Nostalgie Tours Wachau, schiffART MS Helene, Slovak Shipping and Ports – Passenger Shipping JSC (SPaP-LOD, a.s.), via donau, WGD Tourismus GmbH, Wiener Donauraum Länden und Ufer Betriebs- und Entwicklungs GmbH

PASSENGER TRANSPORT

FIRST SLIGHT DECLINE IN YEARS **ABOUT 1 MILLION PASSENGERS**

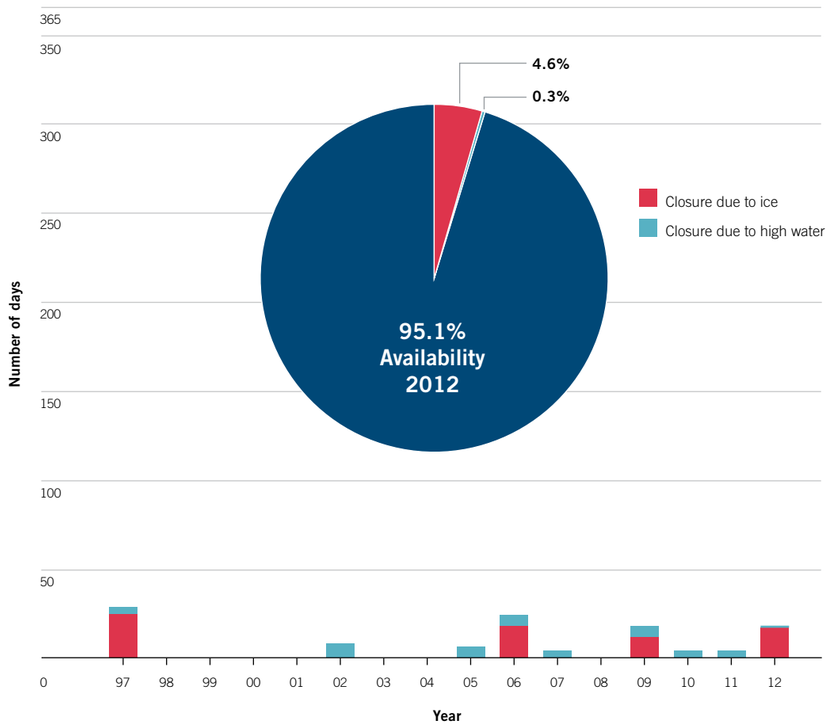
In total, about **1.1 million passengers** travelled on the Austrian Danube in 2012, corresponding to a decrease of 6.9% or approximately 81,000 passengers compared to 2011. The largest group was made up of about 670,000 passengers carried on liner services (-4.3% over 2011). Cabin vessels carried about 290,000 cruise passengers, marking a considerable decline by 12.1% in this segment when compared to 2011. Some 120,000 casual passengers enjoyed theme voyages, special trips and charter voyages (-7.7%).

In 2012, a total of **124 cabin vessels**, with an overall capacity of 19,980 passengers, operated on the Austrian section of the Danube, meaning that the total number of cruise vessels travelling on the Danube remained unchanged compared to the previous year. However, 13 newly built vessels were put into service in 2012, while 16 cabin vessels which were operating on the Austrian Danube in 2011 were transferred to other European waterways, mainly in Western Europe. River cruises accounted for 3,191 journeys (-12.2% over 2011) carrying a total of about 290,000 passengers (-12.1%) on the Austrian section of the Danube in 2012. This figure is based on the number of passages made by cabin vessels through the Aschach and Freudenau locks, whereby the number of passengers was estimated by assuming a rate of vessel capacity utilisation of 75% and deducting 30% to allow for double counting.

In 2012, **liner services** on the Austrian Danube constituted a total of 26 vessels with an overall capacity of 8,400 passengers. DDSG Blue Danube reported 210,000 passengers (-5.8% compared to 2011) travelling on its liner services in the Wachau region and in Vienna. The two Twin City Liners carried 132,949 passengers (-4.4%) on the route between Vienna and Bratislava. Slovakian and Hungarian hydrofoils operating on the Bratislava-Vienna-Bratislava and Budapest-Vienna-Budapest routes recorded 33,077 passengers (-6.6%), while the Bavarian operator Wurm + Köck carried a total of 29,255 passengers (-5.6%) on its liner services on the Linz-Schlögen-Linz and Linz-Vienna-Linz routes in 2012.

Non-scheduled services were operated by 41 passenger vessels (including vessels primarily operating on liner services) with a total capacity of about 12,000 passengers. DDSG Blue Danube transported 60,000 passengers (-10.4%) on non-scheduled voyages. Other operators of non-scheduled voyages included Donauschiffahrt Ardagger with 10,480 passengers, schiffART MS Helene (Linz) with 8,000 passengers, the steamer Schönbrunn with approximately 7,400 passengers, the MS Stadt Wien (Tulln) with 2,500 passengers and Nostalgie Tours Wachau (Krems) with 2,399 passengers. Finally, Slovakian and Hungarian hydrofoils recorded 2,224 passengers travelling on non-scheduled voyages on the Austrian Danube in 2012.

Other companies operating liner services or organising non-scheduled voyages on the Austrian Danube have not submitted any figures for the period under review. Due to a change in legislation, passenger transport data on the Austrian stretch of the Danube has not been statistically recorded since 2003. As a result, the figures for liner and non-scheduled services given above also include estimates based on an average capacity utilisation of 40% on passenger vessel journeys.



Source: Supreme Navigation Authority at the Federal Ministry for Transport, Innovation and Technology; Federal Water and Navigation Administration (Germany); via donau

AVAILABILITY OF THE WATERWAY

348 NAVIGABLE DAYS IN 2012
AVAILABILITY OF 95.1%

In times of extreme weather conditions such as **high water** or extensive **ice formation** on the Danube, all river navigation may be shut down by the authorities. High water conditions mostly arise in early spring as a result of rapid snow melts or due to heavy rainfall in midsummer. Extensive ice formation may occur due to long periods of low temperatures that are well below freezing point. As a rule, obstructions caused by ice formation arise in the months of January and/or February.

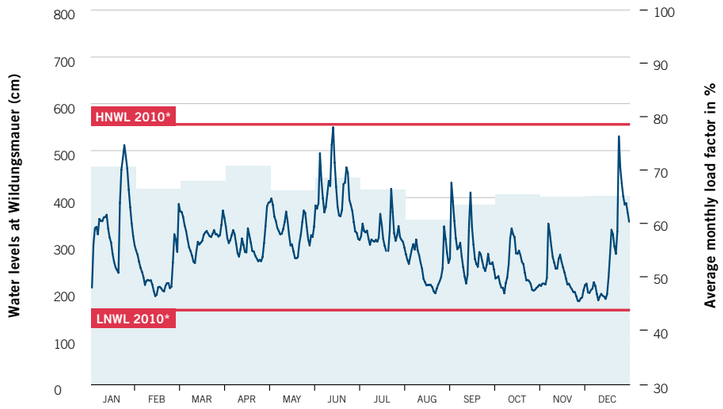
During such **official weather-related closures**, navigation on the Danube is prohibited on affected sections of the Austrian Danube waterway. There are no closures due to **low-water conditions**. However, cargo vessels can sometimes only use the waterway to a very limited degree in terms of economic efficiency during such periods. The relationship between the potential capacity utilisation of cargo vessels and available fairway depths is described in greater detail in the following chapter entitled «Fairway Conditions».

In the **15 year period** between 1997 and 2012, **average navigability** on the Austrian section of the Danube waterway was **97.9% of days** or **357 days per year**. In four years within this period, the Danube was closed to navigation for an average of 20 days due to ice, while in nine years the waterway had to be closed for an average of about five days due to high water levels.

In **2012**, the Danube was closed to navigation for a total of 17 days due to critical ice formation in February, whereas it only had to be closed for one day due to **high water levels**. Consequently, the Austrian Danube was navigable on **348 days** or **95.1% in 2012**.

Transport to and from the west is not only dependant on the Austrian and German sections of the Danube waterway but also relies heavily on the navigability of the **Main-Danube Canal** linking the Danube with the Main and the Rhine waterways. In 2012 the canal was navigable for **87.9% of the year** or **322 days**. In February 2012, the Main-Danube Canal had to be closed for 22 days due to ice. Additionally, maintenance work was carried out in April 2012, forcing the authorities to close the canal for 22 days.

2012 FAIRWAY CONDITIONS AND RESULTING LOAD FACTORS OF CARGO VESSELS USING THE WILDUNGSMAUER GAUGE OF REFERENCE

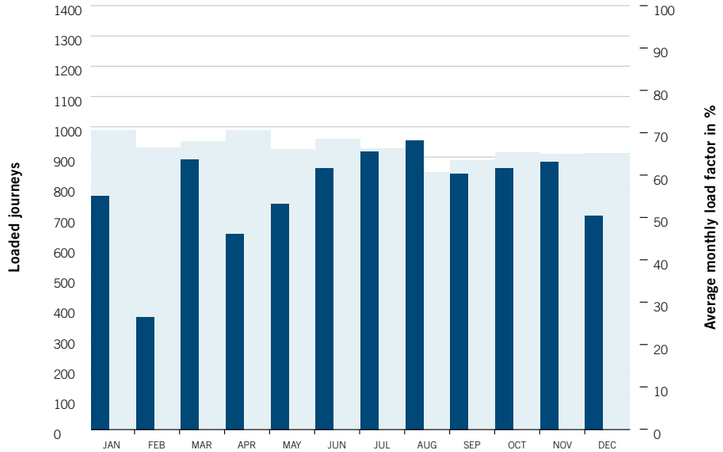


Water levels

Actual average load factor of vessels on loaded journeys

*) **LNWL 2010** (low navigable water level): This value represents the water level exceeded on 94% of days/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% of days/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, chart created by via donau



Loaded journeys

Actual average load factor of vessels on loaded journeys

Source: Statistics Austria, chart created by via donau

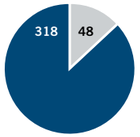
FAIRWAY CONDITIONS

EXCELLENT CONDITIONS
VESSEL LOAD FACTOR AT 66.3 %

2012 witnessed excellent **fairway conditions along the free-flowing stretches** of the Austrian Danube (Wachau and east of Vienna).
In the **winter months** of January, February and December, a period usually characterised by low water levels from a statistical point of view, water levels at the Wildungsmauer gauge (reference gauge for the river stretch east of Vienna) did not fall below low navigable water level (LNWL 2010) on any day of the year 2012. Favourable fairway conditions were also witnessed in the **autumn months** of September to November with their usually low water levels. Over the entire year of 2012, water levels exceeded the average water level (AWL 2010 = 293 cm Wildungsmauer gauge) on 51% of all days, in comparison to only 30% of all days in 2011.
Looking at the year 2012 as a whole, the **average monthly load factor** achieved for cargo vessels was **66.3%** and was therefore higher than in previous years (2011: 59.6%; 2010: 64.2%; 2009: 60.0%; 2008: 61.3%). The average load factor did not fall below 60% in any given month of the year 2012, reflecting excellent average water levels on the Danube in this year. With regard to transport direction, the actual average vessel load factor was 67.7% for upstream journeys (+5.3% compared to 2011) and 62.5% (+10.2%) for downstream journeys.
As far as freight transport is concerned, it is mostly the available fairway depth which determines the **loaded draught** of a vessel and hence the quantity of goods which can be loaded. Larger freight volumes per vessel or convoy also improve the relation between freight revenues and costs and thus the overall **competitiveness** of Danube navigation. When loading their vessels, ship operators often have to estimate available fairway depths at critical river stretches days in advance before passing through them by means of so-called reference gauges. The **Wildungsmauer gauge** shown in the top chart is the decisive indicator for fairway conditions in the free-flowing stretch of the Austrian Danube between Vienna and Bratislava. This means that there is a direct relationship between fairway conditions and the **load factor of vessels**. The general rule is that if relatively large loaded draughts can be achieved, the average load factor of vessels increases and vessel operators require fewer trips to transport the same volume of goods. This correlation can be clearly seen from the bottom chart: In January 2012, for example, the average load factor was favourable at 70.5%, with 774 journeys being required to convey some 771,000 tons of goods. In August, on the other hand, the average load factor per vessel was only 60.6%; in this month, a total of 957 journeys were made to transport approximately 979,000 tons of goods.
Compared with 2011, the number of loaded journeys declined in 2012 (-8.2% or 844 loaded journeys), despite larger transport volumes and a higher transport performance. This can be attributed to the higher average vessel load factor (+6.7%) and the increased transport distance per ton (+1.9%) in 2012.

MINIMUM CONTINUOUSLY* NAVIGABLE FAIRWAY DEPTHS ON THE FREE-FLOWING STRETCHES OF THE DANUBE IN 2012 IN DAYS

Wachau
Kienstock gauge of reference
Minimum fairway depths in days:
above 2.50 m
below 2.50 m



East of Vienna
Wildungsmauer gauge of reference
Minimum fairway depths in days:
above 2.50 m
below 2.50 m

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

Source: via donau

FAIRWAY DEPTHS

2.50 METRES DURING 87% OF THE YEAR **WACHAU STRETCH SHOWED 100%**

For both free-flowing stretches of the Austrian Danube (Wachau and to the east of Vienna) the lowest fairway depths were calculated in 2012, based on all **hydrographical measurements of the riverbed**. For this purpose, figures for the periods between measurement dates were interpolated and evaluated in combination with the respective gauge hydrographs (mean daily water levels at the Kienstock and Wildungsmauer gauges of reference). The reference for these calculations was a **deep channel** located inside the fairway representing the required fairway width for a four-unit pushed convoy travelling downstream without encountering other vessels, whereby the width of the fairway depends on the river bend radii involved.

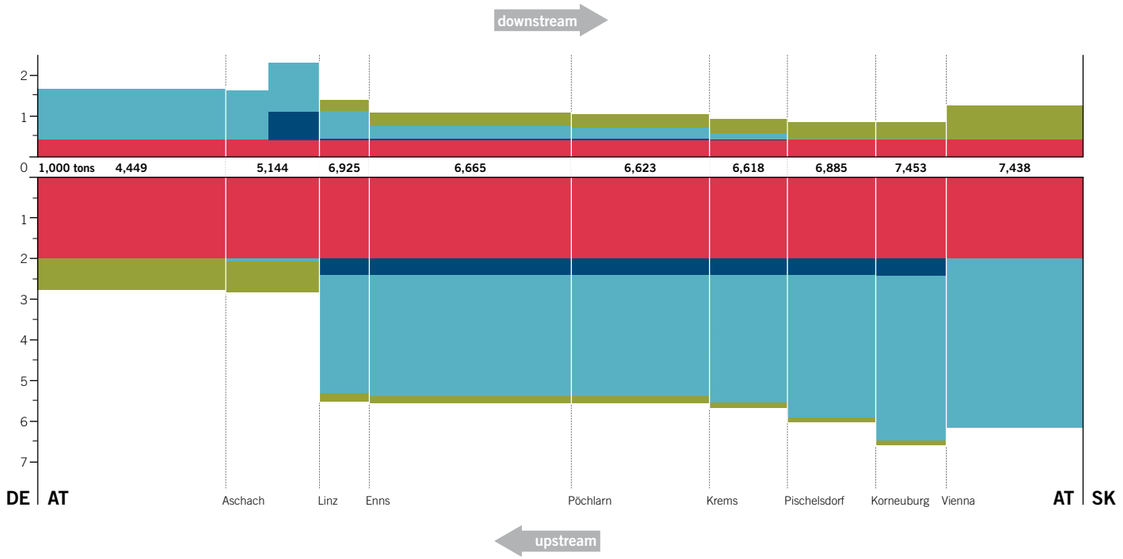
Neither in the Wachau stretch (Kienstock gauge), nor on the Danube stretch east of Vienna (Wildungsmauer gauge), did water levels fall below the low navigable water level (LNWL 2010) or exceed the highest navigable water level (HNWL 2010) on any given day in 2012. There were no prolonged low water periods during the winter months in 2012.

Seen from the perspective of the entire year of 2012, a minimum fairway depth of 2.50 m was achieved in the deep channel in the **Wachau** stretch (between river kilometres 1,998 and 2,038) on all 366 days of the year. The Kienstock gauge at river kilometre 2,015.21 is used as the gauge of reference for this free-flowing stretch of the Danube.

In the river stretch to the **east of Vienna** (i.e. between river kilometres 1,872.70 and 1,921), a minimum fairway depth of 2.50 m was recorded in the deep channel on 318 days or 87% of the year. On 48 days, fairway depths of less than 2.50 m in the deep channel prevailed in this free-flowing stretch of the Danube. On six of these 48 days, fairway depths were calculated with a range of between 2.45 m and 2.50 m. The Wildungsmauer gauge at river kilometre 1,894.72 is used as the gauge of reference for the free-flowing section located downstream of Vienna.

In February (19 days) and in August (14 days), the lowest fairway depths were found at the «Wendeplatz Theben» (river kilometre 1,879.10 to 1,879.80) and the «Käsmacher» (river kilometre 1,875.10 to 1,875.70) **fords**, both located along the border stretch shared with Slovakia, as well as at Regelsbrunn (river kilometre 1,898.00 to 1,898.80). In November (7 days) and in December (4 days) the lowest fairway depths were recorded at the «Wendeplatz Theben» ford.

The **dredging barge** that had sunk in May 2011 within the fairway limits at river kilometre 1,898.30 was successfully salvaged in October 2012. This accident had made it necessary to relocate the fairway route at Regelsbrunn. Another relocation of the fairway after the barge had been salvaged was accompanied by dredging operations in the fairway. This successfully improved fairway depths along this section of the river.



SEGMENT	Length in km	Import		Export		Domestic		Transit		Total		In sum
		upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	upstr.	d'str.	
DE/AT border–Aschach	63.21	0	1,269	768	0	0	0	2,000	412	2,768	1,681	**4,449**
Aschach–Linz	31.30	62	1,216	768	0	0	686	2,000	412	2,830	2,314	**5,144**
Linz–Enns	16.87	2,915	700	206	264	404	24	2,000	412	5,525	1,400	**6,925**
Enns–Pöchlarn	67.63	3,004	320	157	327	407	38	2,000	412	5,568	1,097	**6,665**
Pöchlarn–Krems	46.20	3,009	276	157	327	404	38	2,000	412	5,570	1,053	**6,623**
Krems–Pischelsdorf	26.30	3,153	152	131	351	405	14	2,000	412	5,689	929	**6,618**
Pischelsdorf–Korneuburg	29.60	3,529	43	102	391	408	0	2,000	412	6,039	846	**6,885**
Korneuburg–Vienna	23.64	4,078	43	102	397	421	0	2,000	412	6,601	852	**7,453**
Vienna–AT/SK border	45.76	4,170	0	0	856	0	0	2,000	412	6,170	1,268	**7,438**

Transport quantities in 1,000 tons

Source: Statistics Austria; chart and table created by via donau

TRANSPORT DENSITY

350 KILOMETRES OF WATERWAY
MORE THAN 10 MILLION TONS OF GOODS

In 2012, a total of 10.7 million tons of goods were carried on the 350.51 km long Austrian section of the Danube waterway. **Total transport volumes by segment** ranged from 4.4 million tons (+4.2% more than in 2011) in the Upper Austrian segment between the German-Austrian border and Aschach to 7.4 million tons (+1.0%) in the free-flowing stretch between Korneuburg and the Austrian-Slovakian border.

Due to the fact that it is by far the largest water transhipment location on the Austrian Danube, the industrial port of the voestalpine steelworks in Linz stands out amongst all other ports and transhipment sites with regard to the quantity of goods handled at its facilities. **Import** statistics reveal that voestalpine obtained 2.4 million tons of ores from Eastern Europe in 2012, mainly from Slovakia (port of Bratislava) and the Ukraine (ports of Izmail and Reni). The largest quantities imported from Western Europe were recorded at the Linz voestalpine port with 0.5 million tons and at the port of Enns which received 0.4 million tons. As in previous years, the upstream section of the Danube running from Linz to the Austrian-German border showed a significantly lower freight traffic density than the downstream section between Linz and the Austrian-Slovakian border.

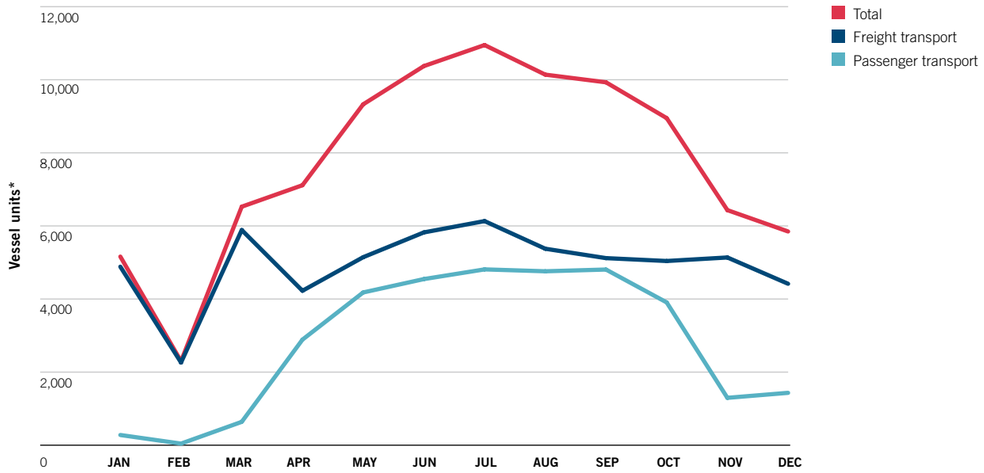
Exports were once again dominated by the ports of Linz (voestalpine and Linz AG, particularly at the oil port), with more than 0.5 million tons of goods being transported westwards and more than 0.2 million tons being carried eastwards. In contrast, more than 0.4 million tons of goods were carried from Vienna (mainly from the port of Lobau) downstream.

As far as **transit transports** were concerned, a comparison of transport flows by transport direction shows a ratio of 4.8 to 1 (upstream/downstream) in 2012. In 2011 this ratio amounted to 4.5 to 1, while in 2010 it amounted to 5.3 to 1 and was as high as 6.3 to 1 in 2009. On the stretch between Linz and the Austrian-German border, transit transport accounted for 47% of the overall transport volume (-6.0% over 2011).

The **volume of goods transported per day** amounted to 18,831 tons (+7.6% or 1,338 tons compared to 2011) for all cross sections. In the stretch between Korneuburg and Vienna, which was the most heavily used cross section of the Austrian stretch of the Danube in 2012, an average of **20,362 tons of goods** were transported **per day**, which is equivalent to 815 fully loaded lorries (25 net tons per vehicle) or 509 railway wagons (40 net tons per wagon) or close to 25 block trains.

Over the total length of the Austrian section of the Danube, an average of **17,908 tons of goods** were carried **per kilometre** in 2012 (+3.3% or 581 tons more over 2011).

VESSEL UNITS* IN FREIGHT AND PASSENGER TRANSPORT LOCKED THROUGH AUSTRIAN DANUBE LOCKS 2012



YEAR	Freight transport	% over previous year	Passenger transport	% over previous year	Total	% over previous year
2012	**59,443**	**-6.8**	**33,573**	**-2.0**	**93,016**	**-5.1**
2011	63,792	-4.9	34,244	+6.5	98,036	-1.2
2010	67,114	+4.5	32,153	+1.3	99,267	+3.5
2009	64,220	-6.1	31,728	+2.2	95,948	-3.5
2008	68,388	-7.3	31,057	+2.6	99,445	-4.4

*) 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). Passenger vessels include day-trip vessels and cabin vessels.

Source: via donau

LOCKED-THROUGH VESSEL UNITS

93,000 UNITS LOCKED THROUGH **DECLINE IN GOODS AND PASSENGERS**

In 2012, a total of **93,016 cargo and passenger vessel units** travelling upstream and downstream were locked through the nine Austrian Danube locks (excluding the Jochenstein power station on the Austro-German border). 40,131 of these units were motor cargo vessels and motor tankers (-6.3% compared to 2011), 19,312 were pushers (-7.0%) and 33,573 were passenger vessels (-2.0%). 45,712 cargo and tank lighters or barges (-10.7%) were locked through as part of convoys. When taking into consideration all types of vessels and convoys, the total number of locked-through vessel units in freight and passenger transport suffered a decrease of 5.1% compared to 2011.

The number of cargo and passenger vessel units that passed through the locks on the Austrian section of the Danube declined compared to 2011. The number of **cargo vessel units** decreased by 6.8%, while the number of **passenger vessels** fell by 2.0%. However, the number of locked-through passenger vessels has steadily increased over the last ten years (2003–2012), which means that a substantial increase of about 46% or nearly 11,000 locked-through vessels was recorded compared to 2003. Freight transport accounted for 63.9% (-1.2% over 2011) and passenger transport for 36.1% (-1.2%) of the total vessel volume in 2012.

The lower number of journeys in **February** can be attributed to a 17-day suspension of navigation due to critical ice formation on the Danube. Moreover, in **April** traffic to and from the Main and Rhine had to be suspended for 22 days due to maintenance work in the Main-Danube Canal.

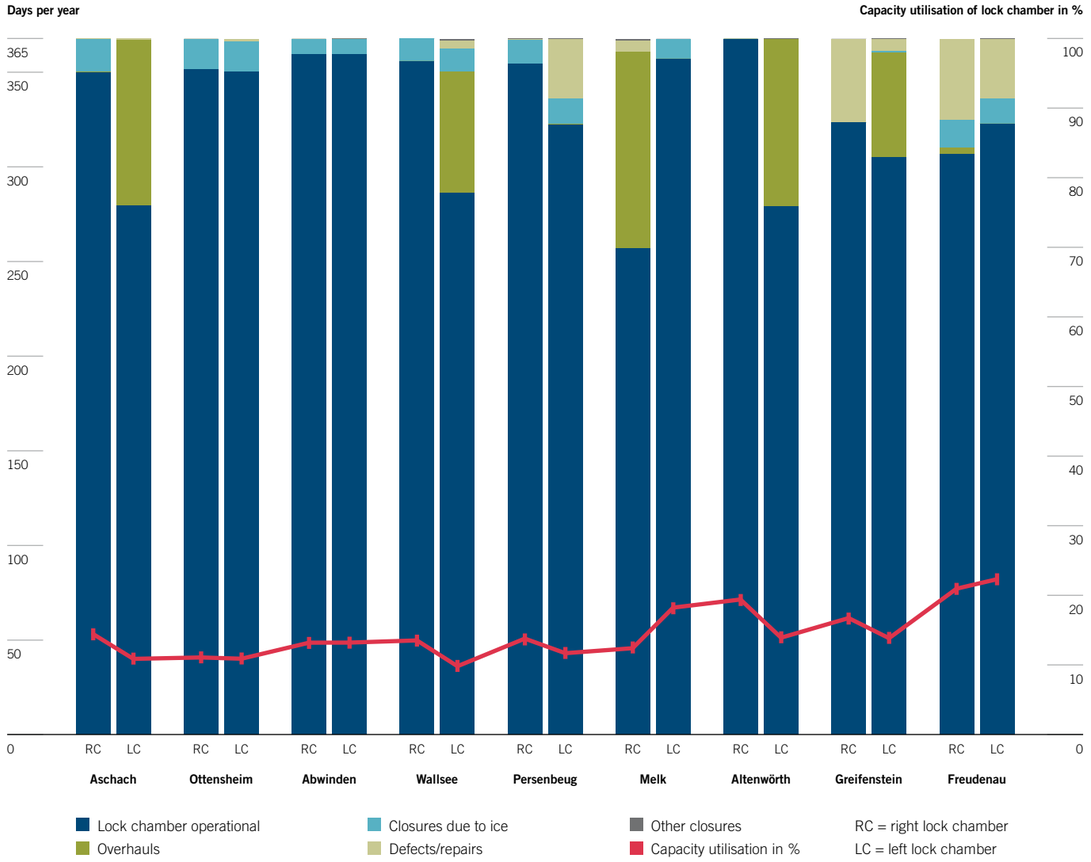
Over the whole of 2012, the **average volume of vessels** passing through Austrian Danube locks amounted to 10,335 convoys and individual vessels (a decline of 558 vessel units compared to 2011). This is equivalent to 861 (-47) vessel movements per month and an average of 28 locked-through units per day per lock.

The **highest vessel volume** in 2012 was again recorded at the Freudenau lock in Vienna with 13,141 vessel units passing through (-5.0% over 2011), followed by the Greifenstein lock with 10,668 and the Abwinden lock with 10,599 units. The lowest volume, i.e. 8,892 vessel units (-7.8%), was again reported at the Aschach lock, the westernmost Danube lock in Austria.

As far as **vessel configurations** were concerned, freight transport passing through the Freudenau lock, the Austrian lock with the largest number of vessels locked through, showed a ratio of 51% to 49% between individual vessels and convoys in 2012 (3,930 and 3,722 journeys respectively). Thus, for the first time in years the share of individual vessels in the total transport volume was higher than that of convoys.

The majority of locked-through **pushed convoys** (pusher + lighters) were two-unit convoys (72% or 2,044 journeys); 16% of the pushed convoys included one lighter (448 journeys), 10% were comprised of four lighters (275 journeys) and only 2% consisted of three lighters (70 journeys).

The figures for **coupled formations** (motor cargo vessel or motor tanker + lighters) show that 95% travelled with one lighter, 3% with two lighters and 2% with three lighters (839, 28 and 18 journeys respectively).



Source: via donau

AVAILABILITY OF LOCK CHAMBERS

LONGER CLOSING PERIODS ONLY IN WINTER
AVERAGE CAPACITY UTILISATION AT 14%

As the nine Austrian Danube locks are large-scale 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 approximately 75% of all closure days of the 18 lock chambers in 2012, whereby overhauls took an average of about 145 days per lock chamber. Since 2008, the overhaul of locks on the Austrian Danube has only been performed during the low-traffic season between November and March, in order to prevent long waiting times at locks during the high-traffic summer months.

Other causes for lock closures include **in-year short-term repairs** of technical defects or damage to facilities caused by vessels, which accounted for a total of 3% of all closure days in 2012. Additionally, 21% of all closure days were attributed to ice in February 2012, while the remaining 1% of the total number of closure days was the result of renovation and maintenance works, fairway maintenance dredging etc.

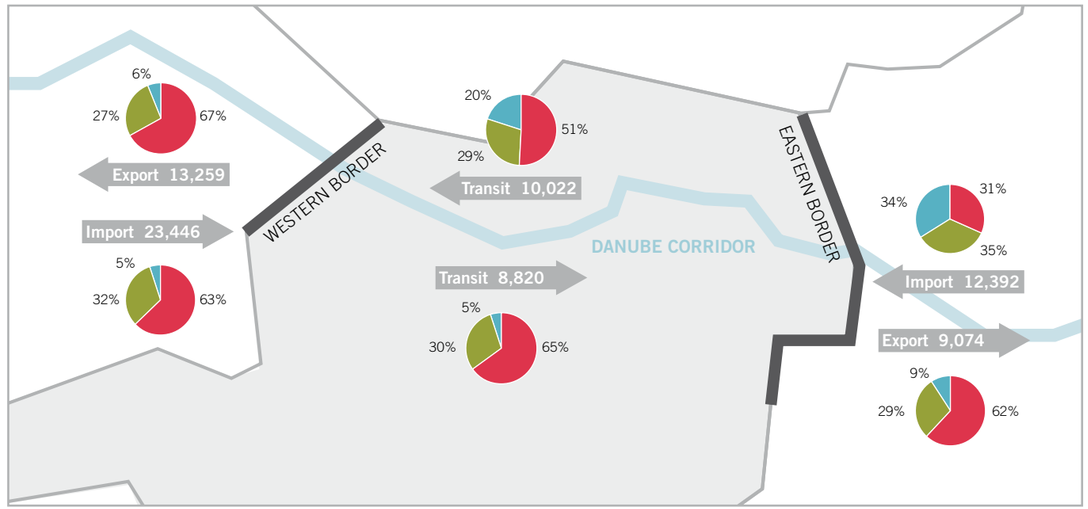
In the **months between April and October**, a time when river traffic is at its busiest due to passenger, sports and leisure navigation, all 18 lock chambers of the Austrian Danube locks were continuously available with very few exceptions. In general, these closures only affected individual chambers and only lasted for short periods, mainly due to technical defects, maintenance work and dredging. In 91% of all cases, chambers were closed for less than one day and for an average of only 4.5 hours.

An average of four lock chambers were inoperable simultaneously in the low-traffic **winter months between November and March**, mostly due to overhauls and large-scale repairs. Overhauls were carried out on individual chambers at the locks at Aschach, Wallsee, Melk, Altenwörth and Greifenstein. In February 2012, ice formation on the Danube required individual lock chambers to be closed for a period ranging from 8 to 17 days.

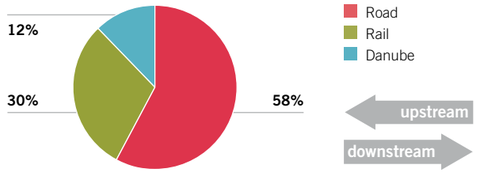
On average, only slightly more than 8% of all ships experienced **waiting times at locks**, whereby the average waiting period amounted to 36 minutes. In periods when individual lock chambers were closed, 22% of all vessels were faced with waiting times averaging 43 minutes. In periods when all lock facilities were fully available (including short-term closings), 95% of all ships did not have to wait at the locks. The remaining 5% had to interrupt their journey for an average of 34 minutes.

In 2012, the average **capacity utilisation** of all 18 Austrian lock chambers was slightly above 14%. With about 22%, the Freudenau lock again achieved the highest average utilisation rate, while the lowest rate of slightly less than 11% was recorded at the Ottensheim lock. In this context, the capacity utilisation rate of a lock chamber refers to the time the chamber is occupied, i.e. the entire period between the first vessel jointly being locked through and the last jointly locked-through vessel exiting the chamber, always assuming a maximum lock chamber operability of 24 hours a day and seven days a week.

FREIGHT TRANSPORT IN 1,000 TONS/YEAR



Total: 77,013 (+2.5% against 2011)



Road
Rail
Danube

upstream
downstream

Western border

Danube: Passau
Road: Suben, Neuhaus, Simbach
Rail: Passau

Eastern border

Danube: Hainburg
Road: Berg, Kittsee, Nickelsdorf, Klingenbach, Deutschkreutz
Rail: Marchegg, Kittsee, Hegyeshalom, Sopron, Deutschkreutz

Source: Austrian Institute for Regional Studies and Spatial Planning (ÖIR); chart created by via donau

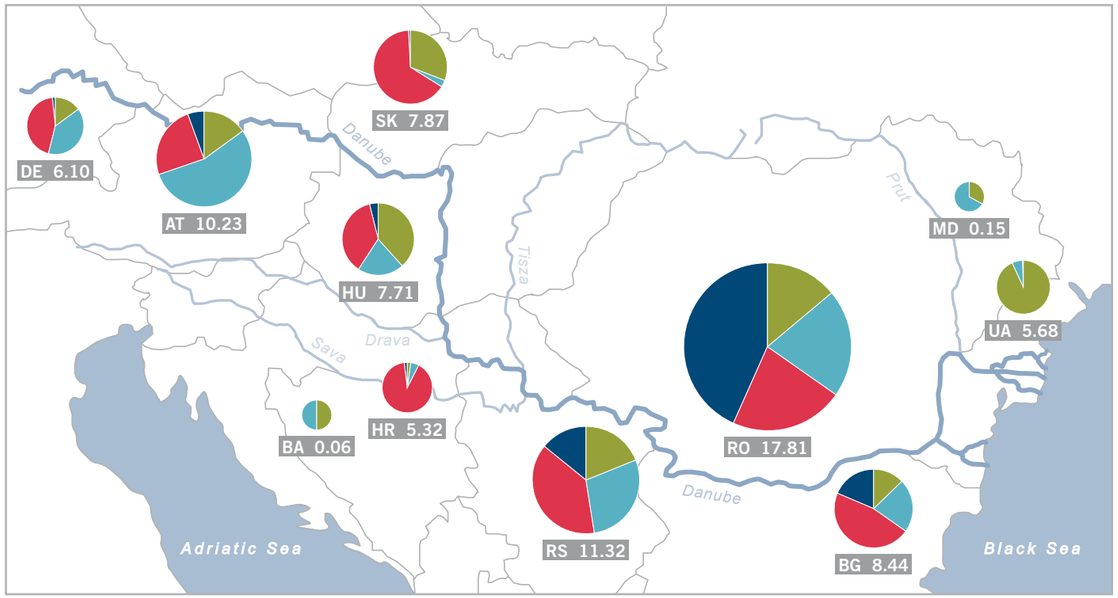
MODAL SPLIT

STRONG PREDOMINANCE OF ROAD TRANSPORT **SHARE OF DANUBE AT 12%**

Transport volumes in the **Austrian Danube corridor** have increased rapidly since the mid-1990s. In 2012, they amounted to 77.0 million tons, an amount which corresponds to a massive growth of 202% over the last 20 years (1993–2012). (Data on road transport for 2012 is based on estimates by the Austrian Institute for Regional Studies and Spatial Planning, as official data is still pending.) Compared to 2011, transport volumes in the corridor increased by 2.5% or 1.9 million tons in 2012 and, with a total amount of 77.0 million tons, fell only slightly short of the volume of goods transported in the pre-crisis year of 2008, which totalled 78.9 million tons.
The chart shows the **cross-border transport volume** (net tons) for the three transport modes of rail, road and waterway in the Austrian Danube corridor between Passau and Hainburg according to transport type (import, export and transit). A look at the figures for all transport modes reveals that the quantity of **goods transported to and from the west** was significantly higher than the volume of **goods crossing the eastern border** of Austria: In 2012, about 55.5 million tons of goods, including transit transport, passed through the western border of the Austrian Danube corridor (+2.6% or 1.4 million tons more than 2011) while on the eastern border approximately 39.7 million tons (+4.6% or 1.7 million tons) were recorded, corresponding to a ratio of 1.4 to 1.
With approximately 58.2 million tons, the level of **bilateral traffic** (western and eastern borders taken together) was considerably higher in 2012 than **transit transport** with 18.8 million tons. However, transit transport in particular has increased significantly over the last 20 years; today, its volume is 4.4 times higher than in 1993, with transit road transport having increased by a factor of 10.6.

Accordingly, **road transport** dominates the modal split in the Austrian Danube corridor with a share of 58%. This means that the quantity of goods transported by road is still higher than the volume of goods carried by the other two transport modes combined. Over the past 20 years, import volumes and, above all, export volumes at the eastern border of the corridor have shifted significantly from rail to road transport, whereas the modal-split share of Danube navigation has remained relatively stable, with figures fluctuating within a range of about five percentage points. Conversely, **rail transport** has been able to improve its modal-split share in exports to the west by approximately 15 percentage points at the expense of transport on the Danube over the past six years. Within this period, the share of **Danube navigation** in transit transport has decreased from a previous peak of nearly 20% by about 13 percentage points, again in favour of road transport.
Nevertheless, despite the dominant position of road transport, Danube navigation is still an important mode of transport in the corridor. Its significance is particularly reflected in **upstream transport** volumes, where Danube navigation held an impressive share of 34% in the import sector at the eastern border of the corridor and 20% in transit transport in 2012. This means that inland navigation and rail import volumes were equal in the upstream direction and still exceeded road transport by two percentage points. However, with particular regard to imports and exports at the western border and downstream transit transport, the importance of inland navigation is decreasing noticeably – clearly falling behind road transport which holds a modal-split share of more than 60% in each of these segments.

FREIGHT TRANSPORT IN MILLION TONS/YEAR



Million tons	DE	AT	SK	HU	HR	BA	RS	BG	RO	MD	UA
Export	0.92	1.55	2.43	2.96	0.12	0.03	2.14	1.08	2.49	0.05	5.30
Import	2.38	5.60	0.25	1.62	0.28	0.03	3.25	1.86	3.70	0.10	0.36
Transit	2.71	2.52	5.13	2.84	4.83	0.00	4.36	3.94	3.94	0.00	0.00
Domestic	0.09	0.56	0.06	0.29	0.09	0.00	1.57	1.56	7.68	0.00	0.02
Total	**6.10**	**10.23**	**7.87**	**7.71**	**5.32**	**0.06**	**11.32**	**8.44**	**17.81**	**0.15**	**5.68**

Source: Eurostat, national transport statistics, via donau; chart and table prepared by via donau

FREIGHT TRANSPORT ON THE ENTIRE DANUBE

DROP IN TRANSPORT VOLUMES **NEARLY 38 MILLION TONS IN 2011**

The most current available figures regarding total freight transport volumes on inland waterways in the Danube region date from **2011**. In total, slightly less than **38 million tons** of goods were carried on the Danube waterway and its tributaries that year, a considerable decline of 13.1% or about 5.7 million tons in comparison to 2010. The figures below and in the chart and table on the left refer to inland waterway transport on the Danube. River-sea transport on the maritime Danube as well as on the Romanian Danube-Black Sea Canal will be dealt with at the end of this chapter.

In 2011, the largest transport volume by far was again achieved by **Romania**, amounting to **17.8 million tons** (-17.3% over 2010), followed by Serbia with 11.3 million tons (-20.8%) and Austria with 10.2 million tons (-9.6%).

The **largest exporter** on the Danube in 2011 was once again the **Ukraine**, with a total of **5.3 million tons** shipped from this country (-22.2% compared to 2010). This figure includes about 1.3 million tons of goods exported to Austria, the major part of which was ore delivered to the voestalpine steelworks in Linz. With a transport volume of 3.0 million tons (-37.4%), Hungary was the second largest exporting country on the Danube in 2011, followed by Romania with 2.5 million tons (-10.3%). Along with Hungary, Slovakia suffered the sharpest decrease in exports by inland vessel, recording a decrease of 32.3%.

With **5.6 million tons** of goods (-10.4% compared to 2010), **Austria** accounted for the **largest import volume** of all Danube countries in 2011, the bulk of which came from Slovakia, the Ukraine, the Netherlands and Hungary. The second strongest importing country on the Danube was Romania taking delivery of 3.7 million tons of goods, whereby transport volumes in this transport segment plunged sharply by 47.9% compared to 2010. Serbia took third place with imports amounting to 3.2 million tons of goods (-20.3%).

The largest volume in **transit transport** on the Danube was recorded in **Slovakia (5.1 million tons)**, followed by Croatia with 4.8 million tons and Serbia with 4.4 million tons.

With **7.7 million tons** of goods conveyed, **Romania** was once again by far the most important country when it came to **domestic transport**. Serbia and Bulgaria shared second place with a volume of about 1.6 million tons each.

On the **Danube-Black Sea Canal**, along with its northern channel, **11.6 million tons** of goods were carried in 2011 (including river-sea transport amounting to approximately 0.4 million tons), representing a decrease of 6.0% or 0.7 million tons compared to 2010.

With regard to **transport to the Main-Danube Canal from the Danube and vice versa**, in 2011 the Kelheim lock recorded a total volume of **4.1 million tons** (-20.6% or 1.1 million tons over 2010), 2.2 million tons of which were carried downstream towards the Danube (-15.3%) and 1.9 million tons upstream towards the Rhine (-26.0%).

In 2011, **maritime transport** on the Danube, i.e. transport by river-sea ships or by sea-going vessels, accounted for a total of **4.6 million tons** (-6.5% or 0.3 million tons over 2010). Most of this volume (3.1 million tons) of transported goods was carried via the Romanian Sulina Canal, whereas 1.2 million tons were moved on the Ukrainian Bystroe and Kilia branches.

PROJECTS AND ACTIVITIES

▲ THE AUSTRIAN EU COMMISSIONER FOR REGIONAL POLICY, JOHANNES HAHN, ATTENDED THE THIRD MEETING OF THE STEERING GROUP FOR PRIORITY AREA 1A – INLAND WATERWAYS, WHICH WAS HELD IN BRATISLAVA IN MAY 2012

◀ THE DANUBE REGION STRATEGY IS INTENDED TO IMPROVE GENERAL CONDITIONS FOR DANUBE NAVIGATION BY ACCOMPLISHING FIVE SPECIFIC TARGETS

DANUBE STRATEGY

ONE YEAR OF IMPLEMENTATION
FIRST TANGIBLE RESULTS

The Strategy of the European Union for the Danube Region is a macro-regional strategy, which was adopted by the European Commission in December 2010 and launched in 2011. Austria and Romania are jointly coordinating Priority Area 1a of the strategy – **To improve mobility and multimodality: Inland waterways**. In Austria, the Federal Ministry for Transport, Innovation and Technology (BMVIT) is responsible for coordination, while the operational implementation falls within the mandate of the Joint Technical Secretariat run by via donau and the Romanian Ministry of Transport.

The **Action Plan** accompanying the strategy defines a total of 129 measures for the 11 Priority Areas of the Danube Strategy. The accomplishment of the individual measures is ensured by specific projects. The Action Plan is considered to be an essential guideline for the allocation of European funding (particularly regional funding) to specific projects in the upcoming EU financial programming period 2014 to 2020.

In the first year of the strategy's implementation, a **Steering Group** and five thematic **Working Groups** were established within Priority Area 1a and were tasked with managing and providing specialist support to the realisation of individual measures. The members of the Steering Group include representatives of the ministries responsible for inland waterways in the 14 Danube countries, the European Commission (three Directorate-Generals), the river commissions and other relevant organisations. Meetings of the Steering Group and the Working Groups are prepared, organised and convened by the Joint Technical Secretariat of the Coordinators twice a year.

The aim of the aforementioned meetings is to bring together the key players of Priority Area 1a to discuss the implementation of the strategy on the basis of specific measures and current issues. Subject-specific issues are discussed at expert level within the Working Groups. Four Working Group meetings and five Steering Group meetings have taken place to date.

At the core of the Danube Strategy are specific **projects** aimed at ensuring the accomplishment of the five targets defined for the area of inland waterways. So far, more than 90 projects have been reported to the Priority Area Coordinators or have been identified by them. To ensure the topicality of the project information, the relevant data sheets are updated by the Technical Secretariat on an ongoing basis and are published on the Priority Area website.

In the first half of 2012, the Technical Secretariat prepared a **first progress report** on the implementation of the Danube Strategy in Priority Area 1a, which the Coordinators submitted to the European Commission's Directorate-General for Regional Policy and Urban Development in June 2012.

Initiated by the inland navigation sector, the first joint meeting of the transport ministers of the Danube countries held in the context of the Danube Strategy took place in Luxemburg in June 2012, where the ministers signed a **Declaration on effective waterway infrastructure maintenance** on the Danube and its navigable tributaries. With the exception of Hungary and the Ukraine, all riparian countries have to date endorsed the declaration.

FURTHER INFORMATION

↗ www.danube-navigation.eu
↗ www.danube-region.eu

▲ THE MANAGING DIRECTORS OF THE DANUBE WATERWAY MANAGEMENT AUTHORITIES MET IN OCTOBER 2012 IN VISEGRÁD, HUNGARY, FOR THE KICK-OFF OF THE NEWADA DUO PROJECT

◀ SHIP WASTE COLLECTION SYSTEM AT THE PERSENBEUG LOCK

DANUBE REGION

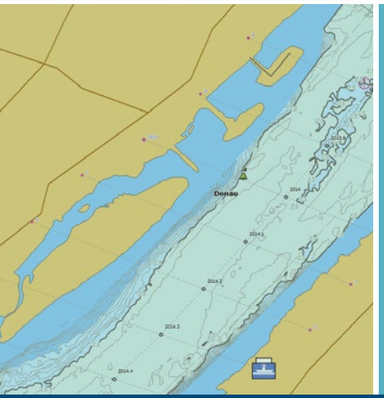
JOINING FORCES FOR THE DANUBE
COOPERATION WITHOUT BORDERS

In 2012, via donau was involved in a large number of EU-supported **transnational projects** that were realised in the Danube region.
The successful **cooperation between Danube waterway management authorities** continued with the launch of the NEWADA duo project in April 2012. The project primarily aims to establish a standardised level of service for the Danube waterway by enhancing the quality of waterway maintenance and related basic data, the implementation of a Danube web portal for fairway information services and the development of innovative waterway management tools.
In the field of **education and training in inland navigation**, the NELI project – which was completed in March 2012 – provided numerous visible results in the Danube region. In addition to the preparation of course and teaching materials, activities focused on the dissemination of the «INeS Danube» e-learning platform in the Danube countries and on the pilot operation of the four Danube Information and Training Centres established as part of the project. The HINT project launched in December 2012 will continue the work of NELI.
With regard to projects related to the **disposal of ship borne waste**, WANDA was successfully completed in March 2012. To implement the measures proposed within the project, the European Commission has approved a follow-up project entitled CO-WANDA, focusing on the further development of existing ship waste management systems along the Danube, on comprehensive pilot testing and on the development of an international convention including practicable rules and regulations for the management of ship waste.

The successful completion of **PLATINA** – the platform for the implementation of the European Action Programme for Inland Waterway Transport, NAIADES – marked a major European milestone. Activities in 2012 included the publication of a strategic research and innovation agenda for inland navigation. With regard to environmental protection, the project made significant contributions to the work of the European Commission's Expert Group on «Greening the Fleet» and to the revision of an EU directive defining new emission levels for inland vessels.
In the field of **River Information Services** (RIS), the IRIS Europe 3 project was launched to continue the coordinated implementation of RIS in Europe. The project will continue previous work and will place special emphasis on the functional and qualitative further development and the harmonised implementation of River Information Services. Moreover, the results of RISING, an EU project completed in 2012, were integrated to actively increase the availability of RIS for users from the logistics sector. An important tool for the accomplishment of this goal is the international exchange of RIS data, which will be launched in the second year of the project.

FURTHER INFORMATION

- www.newada-duo.eu
- www.neliproject.eu
- co-wandaproject.eu
- www.naiades.info/platina
- www.iris-europe.net
- www.rising.eu



▲ ENHANCED DISPLAY OF AVAILABLE FAIRWAY DEPTHS AT SHALLOW SECTIONS IN RELATION TO LOW NAVIGATION WATER LEVEL (LNWL 2010), TAKING THE WEISSENKIRCHEN FORD IN THE WACHAU VALLEY AS AN EXAMPLE

◀ THE WEISSENKIRCHEN FORD AREA AS SHOWN ON THE ELECTRONIC NAVIGATIONAL CHART

▶ INDICATOR FOR A W-LAN HOTSPOT AT THE FREUDENAU LOCK IN VIENNA WHICH WAS INSTALLED DURING THE EU FUNDED NEWADA PROJECT

WATERWAY

SERVICES FOR INLAND NAVIGATION
FOCUS ON CUSTOMER ORIENTATION

In 2012, via donau's **customer-oriented waterway management** – based on the pillars of monitoring, planning, implementation and informing – was integrated into the company's process map and several key services for inland navigation were revised and improved.

Since 2012, the **current shallow sections along the Austrian Danube** have been presented in an easily comprehensible way via the DoRIS website, using an updated map design on the basis of monthly surveys and a new modelling method. The most important change consists of a two-dimensional representation of depth figures, which allows users to gain a swift overview of the river sections with the lowest water depths in the fairway. A calculated contour line divides the two-dimensional images of the fairway depths into the categories of «more» and «less» than 2.50 metres in relation to low navigable water level (LNWL 2010). These two categories are shown in either blue (more than 2.50 m) or red (less than 2.50 m). By using two different colours to present this data on the map, information on water depths in the fairway is readily available to the user.

The **Electronic Navigational Charts** (the so-called Inland ENCs) published by via donau were again revised in 2012. The biannual depth data for the two free-flowing sections of the Austrian Danube were integrated into the charts, and depth data for several reservoirs for hydroelectric power stations were also updated. Many new objects and pieces of information such as water gauge locations, gauges at bridges or berthing areas, were integrated into the topographical data and river bank lines were adjusted according to the latest aerial photographs. In addition, waterway police information contained in the charts was also continuously updated.

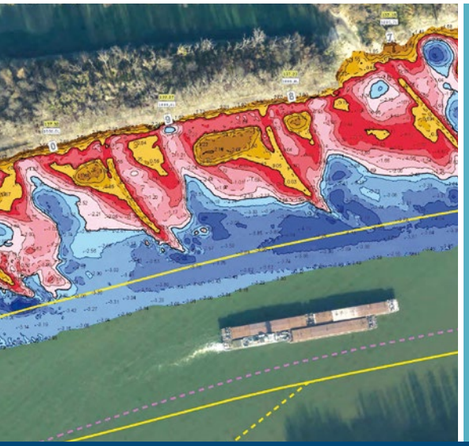
To facilitate waterway users' access to current infrastructure data, **W-LAN hotspots** at the Freudenau and Abwinden locks were made available.

Furthermore, the development of a smartphone application was launched, which will comfortably display all infrastructure data such as water levels, Notices to Skippers, closed sections, closures due to ice and the operating status of locks.

In 2012, the Austrian **Notices to Skippers** website, which advises vessel operators of closures, traffic limitations, delays and other events relevant to navigation, was linked with the German and Slovakian NtS servers so that notices from these two neighbouring countries can be directly and conveniently retrieved via the standard DoRIS search mask. Notices published by other countries in Europe can be accessed via Internet links.

FURTHER INFORMATION

- www.doris.bmvit.gv.at/en/water_levels_low_sections/shallow_sections
- www.doris.bmvit.gv.at/en/inland_ecdis
- nts.doris.bmvit.gv.at



▲ REMOVAL OF OLD GROYNES IN THE AREA OPPOSITE HAINBURG

◀ MULTI-BEAM IMAGE OF NEWLY CONSTRUCTED CRESCENT-SHAPED AND DECLINING GROYNES ON THE LEFT BANK

▶ START OF EARTHWORKS AIMED AT THE RECONNECTION OF THE JOHLER SIDEARM: REMOVING THE LAYER OF FINE SEDIMENT

ENVIRONMENT

INTEGRATED IMPLEMENTATION
LAUNCH OF PILOT PROJECT EAST OF VIENNA

In February 2012, the **Bad Deutsch-Altenburg pilot project** was launched on a three kilometre long section of the Danube to the east of Vienna. The project will provide important findings which can be used for the development of future measures for the prevention of degradation of the Danube's riverbed. It will also improve ecological conditions in the Danube floodplains national park and improve fairway conditions for inland navigation. Scientific monitoring, a supervisory body focusing on the ecologically-friendly realisation of the project and an accompanying participation scheme involving the major stakeholders will ensure that the construction project is committed to the highest level of transparency.

The **planned measures** were developed in a process which lasted several years and involved ecologists as well as navigation and hydro-engineering experts. They include the restoration of river banks, the lowering of bank structures, the reconstruction of groynes, the reconnection of the Johler sidearm and measures to stabilise the Danube's riverbed. After the building site had been set up and the search and recovery of any war remnants that might still be buried in the building area, which was required for safety reasons, had been completed, the actual construction work started. The existing artificial structures in the Thurnhaufen area on the left bank were completely removed and reconstruction of the groynes commenced. Restoration work was also started in the Johler Haufen area on the right bank. Construction work is scheduled to be completed in the first half of 2014.

The progressive degradation of the Danube riverbed on the free-flowing section to the east of Vienna has a negative impact on the Danube floodplains national park. For this reason, the findings regarding the **stabilisation of the riverbed** will be one of the major results of the pilot project. This measure will involve the first ever testing of a procedure, whereby Danube gravel of a particular granular size will be applied to the riverbed by split-hopper barges using GPS control.

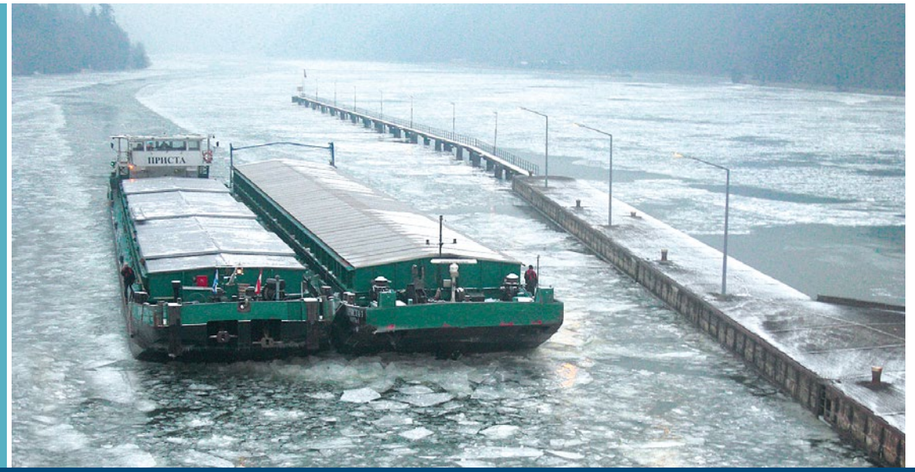
The removal of artificial bank structures and the reconnection of the Johler sidearm are crucial **renaturation measures** for the preservation and improvement of ecological conditions in the floodplains. These measures will also create new habitats for animals and plants. The groynes, which have been reconstructed to optimise low-water regulation for navigation, will be lowered near the banks, thereby simultaneously creating a protection zone for young fish, which will enable them to move between groyne fields.

The enlargement of the river cross-section, resulting from the restoration and lowering of the river banks, will also improve **flood protection** for the neighbouring municipalities.

In 2012, the **Christian Doppler Research Laboratory «Im Fluss»**, founded jointly by the Vienna University of Natural Resources and Life Sciences and via donau in summer 2010, focused on an analysis of the morphological effects of groyne construction in the area of the Witzelsdorf pilot project. In this area, the processes that reshape the riverbed have been significantly influenced by the lowering and reconstruction of the groynes. The findings of the Witzelsdorf pilot project will be used for the planning of similar river engineering projects in the future.

FURTHER INFORMATION

- lebendige-wasserstrasse.at/en
- cdlabor-imfluss.boku.ac.at
- www.donauauen.at



WHAT ARE THE EFFECTS OF CLIMATE CHANGE AND EXTREME WEATHER EVENTS ON INLAND NAVIGATION? IN ORDER TO ANSWER THIS QUESTION, VIA DONAU IS PARTICIPATING IN SEVERAL INTERNATIONAL RESEARCH PROJECTS

ENVIRONMENT

TARGETED ADAPTATION STRATEGIES
INLAND NAVIGATION RESEARCH

The ECCONET project investigated the **impact of climate change on inland navigation in Europe** with the emphasis on the Rhine-Main-Danube corridor. The investigation of appropriate adaptation measures covered, amongst other things, the fields of vessel operation, vessel technology, river engineering measures and methods for forecasting water conditions. The project results suggest that up to the middle of the 21st century the effects of climate change will be relatively minor. However, they also provide clear evidence that appropriate adaptation strategies and relevant measures need to be considered as part of a comprehensive, future-oriented inland navigation policy.

The EWENT project investigated the **consequences of extreme weather conditions for the EU's transport systems**. Its objectives were to identify potential weather-related risks and consequences for the transport sector and estimate their cost effects. Initial measures for the improved management of extreme weather events have already been developed along with recommendations for courses of action formulated for decision-makers in the fields of commerce, infrastructure operations and politics.

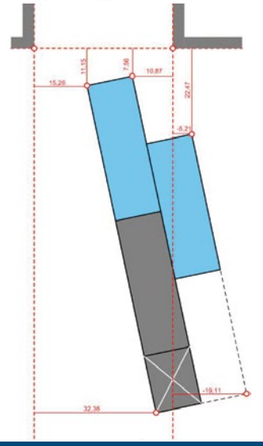
The purpose of the SUPERGREEN project was to analyse a number of representative European transport corridors in terms of **measures to improve the environmental friendliness of the European transport system**. After investigating CO_2 emission levels in relation to transport performance, inland navigation emerged as being clearly superior when compared to road transport. The project was concluded with an analysis of the application of «green» technologies within the selected transport corridors, whereby recommendations regarding further research and development were also formulated as measures for decision-makers from the world of politics.

The **LDS – LNG Propulsion Systems for Danube Inland Navigation** project, which was developed by via donau in cooperation with the Vienna University of Technology and Salzburg AG, and which received funding from the Austrian Climate and Energy Fund, showed that the use of liquefied natural gas (LNG) is, in principle, a feasible alternative to the gas oil currently used. In this context, the Central Commission for Navigation on the Rhine has set an important milestone by approving for the first time the use of LNG as a fuel for combustion engines in its recommendations for the operation of motor tankers.

As part of its policy of making inland navigation an integral part of Austria's climate policy, via donau has been actively participating in the development of a **national Climate Change Adaptation Strategy**, specialising in the area of transport infrastructure. Related recommendations for action were published in 2012.

FURTHER INFORMATION

- www.ecconet.eu
- ewent.vtt.fi
- www.supergreenproject.eu
- www.klimawandelanpassung.at



▲ SAFE, SILENT AND ENVIRONMENTALLY FRIENDLY TRANSPORT OF DANGEROUS GOODS VIA INLAND VESSEL

◀ NAVIGATION ASSISTANCE SYSTEM FOR VESSELS ENTERING LOCKS DEVELOPED IN THE NAVWAT II PROJECT

SAFETY

SAFEST TRANSPORT MODE
INNOVATIONS FOR NAVIGATION

Compared to other modes of inland transport, the **safety record** of inland navigation is unbeatable: In 2012, a mere 19 traffic accidents involving damage occurred on the Austrian section of the Danube. As in previous years, nobody was killed in accidents on the Danube. However, seven people were slightly injured in one accident involving a passenger vessel. 15 cases involved damage to cargo vessels and five involved passenger ships. When split into accident types, two incidents were vessel collisions while the remaining 17 cases involved damage to riverbanks or facilities (primarily at or around lock facilities) or vessels running aground.

With the aim of making a significant contribution to the **modernisation of the existing inland navigation fleet** and thus raising traffic safety on European inland waterways, the MoVe IT! project (Modernisation of Vessels for Inland Waterway Freight Transport) focuses, amongst other things, on the cost-effective adaptation of the existing inland navigation fleet to the regulatory requirements of dangerous goods transport. This goal can be achieved by measures including appropriate design and materials technology. The project also focuses on improving inland waterway transport in terms of vessel manoeuvrability, energy efficiency and the environmental friendliness of inland vessels. In addition, research also includes the use of alternative fuels instead of diesel and the development of new markets.

In the course of enhancing existing **River Information Services** (RIS), activities instigated to further increase waterway transport safety have been continued under the IRIS Europe 3 project. The pilot operation of the electronic system for the reporting of dangerous goods has been continued and initial feedback from users has been collected. Activities under IRIS Europe 3 also included preparations for the provision of improved information on the clearance height of critical bridges. In addition, the first steps have been taken to increase the accuracy of determining the positions of inland vessels in Austria.

This marks a first step towards the introduction of **navigation assistance systems**, which were tested in two projects in 2012. At a national level, the NAVWAT II project has successfully demonstrated the use of assistance systems for vessels entering locks. At a European level, the ARIADNA project has introduced a collision avoidance system using 3D modelling of vessel dimensions. The system calculates dynamic risk areas surrounding a vessel, depending on the vessel's movement and environment. If other ships, or fixed objects (bridges, piers etc.) or shallow sections come close to one of these risk areas, an alarm is sounded/displayed on the vessel. In the future, these kind of systems will contribute to further enhancing the high level of reliability and safety of inland navigation.

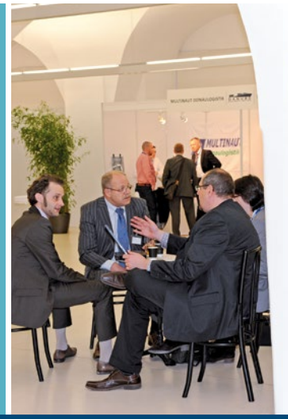
FURTHER INFORMATION

- www.iris-europe.net
- www.navwat.at
- www.ariadna-fp7.eu

▲ TRANSPORT OF OUTSIZED CARGO ON THE DANUBE: UNLOADING OF WIND TURBINES AT BAD DEUTSCH-ALTENBURG

◀ TRANSHIPMENT OF RENEWABLE RESOURCES AT THE PORT OF ENNS

▶ A NEUTRAL PLATFORM FOR DANUBE LOGISTICS – «DANUBE BUSINESS DATING»



Danube Business Dating

DANUBE BUSINESS DATING

COMMERCE

EXPLOITING TRENDS AND POTENTIALS
NEW MARKETS FOR DANUBE LOGISTICS

In 2012, via donau conducted a comprehensive **industry analysis** in order to identify sector-specific potentials for shifting transport to the Danube waterway. The analysis is intended to provide insights into the future markets of Danube navigation and is considered to be a special service to interested parties. In the context of working initiatives, particularly promising sectors of industry are to be investigated in detail by via donau in close coordination with its business partners.

2012 saw the conclusion of a two-year initiative on the **transport of heavy and outsized cargo** on the Danube. This initiative gave rise to a project to optimise the inland waterway transport of wind turbines from Germany to Austria. In 2012, concrete tower segments for about 30 wind turbines were handled at the transhipment site in Bad Deutsch-Altenburg, thereby saving more than 300 tons of CO_2. December 2012 marked the launch of a new initiative on the inland waterway **transport of renewable resources** as part of a kick-off workshop held in conjunction with representatives from the world of business.

In March 2012, the European inland navigation sector gathered at the **Barge to Business** conference in Vienna. The aim of the event was to improve cooperation between industry and inland navigation. At the «Danube Business Dating» forum, which was held simultaneously, business-to-business talks served to establish new contacts and find new business partners. via donau also participated in the follow-up event in Rotterdam in December 2012, where it shared a booth with logistics providers to represent the Danube logistics sector.

In November, Austria's Federal Ministry for Transport, Innovation and Technology and via donau attended two events in Istanbul, using them as an opportunity to promote Danube logistics and the Austrian inland navigation sector in Turkey: the **Logitrans International Transport Logistics Exhibition** and the **Danube Transport Seminar** initiated by the Turkish transport ministry. As the interest in waterway transport to and from Turkey on the Danube continues to grow in the sector, via donau will, in the future, increasingly focus on the potential existing in this growth market.

Multimodal transport and logistics chains require a large amount of information for the planning and realisation of services. **River Information Services** (RIS) also offer commercial advantages to enterprises active in the transport and logistics sector. Under the RISING project, Industrie-Logistik-Linz GmbH & Co KG has developed and tested new RIS in Austria, for example the tracking of goods carried on inland vessels, clearly a tool for the future.

June 2012 saw the conclusion of a cooperation agreement between Logistikum Steyr, the Logistics Competence Centre at the University of Applied Sciences Upper Austria, and via donau with the purpose to establish an education and research cell in the field of inland waterway logistics. In the future, the project entitled **REWWay – Research and Education in Inland Waterway Logistics** will offer course material and further training opportunities to firmly integrate navigation issues into logistics training programmes.

FURTHER INFORMATION

- www.via-donau.org/en/economy
- www.donauschifffahrt.info/en/transport/initiativen_donaulogistik
- www.bargetobusiness.eu
- www.logistikum.at/forschung/verkehrslogistik/rewway.html

DANUBE DAY 2012, 29 JUNE, LINZ: VIA DONAU HAS SUPPORTED THE DANUBE DAY FOR MANY YEARS – IN 2012, ITS ACTIVITIES TO CELEBRATE THE DAY INCLUDED THE EXHIBITION «DONAU ON TOUR» ON BOARD THE MS NEGRELLI AND A SPECIAL DANUBE DAY EVENT

BARGE TO BUSINESS, 14 AND 15 MARCH, VIENNA: IN MID-MARCH, THE EUROPEAN INLAND NAVIGATION SECTOR GATHERED AT THE «BARGE TO BUSINESS» CONFERENCE WHICH WAS HELD FOR THE FIRST TIME IN VIENNA – THE «DANUBE BUSINESS DATING» PLATFORM, GENERATED SPECIFICALLY TO OPTIMISE THE COORDINATION OF BUSINESS APPOINTMENTS, FACILITATED MORE THAN 200 BUSINESS CONTACTS

WANDA FINAL EVENT, 7 MARCH, VIENNA: CLOSING CEREMONY OF THE WANDA (WASTE MANAGEMENT FOR INLAND NAVIGATION ON THE DANUBE) PROJECT AT THE UNIVERSITY OF VIENNA

DAUGHTERS' DAY 2012, 26 APRIL, VIENNA: AS HAS BEEN THE TRADITION WITH VIA DONAU, INTERESTED GIRLS AGED BETWEEN 11 AND 15 ONCE AGAIN HAD THE OPPORTUNITY THIS YEAR TO GET TO KNOW THE COMPANY'S BROAD RANGE OF TASKS AND CAREER PROFILES

SEMINAR ÖVG, 8 MARCH, VIENNA: UNDER THE TITLE «SPECIAL CASES NEED SHARED SOLUTIONS», THE AUSTRIAN TRANSPORT RESEARCH SOCIETY (ÖVG) IN COOPERATION WITH VIA DONAU AND THE INDUSTRIALISTS' ASSOCIATION ORGANIZED A SEMINAR ON HIGH & HEAVY TRANSPORT

NATIONAL RIS DAY FOR TRANSPORT AND LOGISTICS, 16 MAY, ENNSHAFEN: THE RIS DAY PROVIDED AUSTRIAN BUSINESS ENTERPRISES ACTIVE IN THE INLAND NAVIGATION SECTOR WITH THE OPPORTUNITY TO LEARN MORE ABOUT RIVER INFORMATION SERVICES

EVENTS **2012**

NEWADA FINAL EVENT, 22 FEBRUARY, BUDAPEST: THE PROJECT TEAM, ITS PARTNERS AND STAKEHOLDERS MET IN BUDAPEST TO CELEBRATE THE SUCCESSFUL COMPLETION OF THE PROJECT

EVENTS **2012**

IRIS EUROPE 3 KICK-OFF EVENT, 6 SEPTEMBER, BUCHAREST: AT THE INVITATION OF THE ROMANIAN PROJECT PARTNER AFDJ, THE THIRD PROJECT OF THE IRIS EUROPE INITIATIVE WAS LAUNCHED IN BUCHAREST

CO-WANDA KICK-OFF EVENT, 10 OCTOBER, VIENNA: AFTER THE SUCCESS OF ITS PREDECESSOR WANDA, THE FOLLOW-UP PROJECT CO-WANDA WAS LAUNCHED AT A KICK-OFF EVENT IN VIENNA

NEWADA DUO KICK-OFF EVENT, 17 AND 18 OCTOBER, VISEGRÁD: BUILDING ON THE SUCCESS OF NEWADA, NEWADA DUO IS INTENDED TO IMPLEMENT FURTHER MEASURES TO IMPROVE THE COOPERATION AMONG WATERWAY MANAGEMENT AUTHORITIES IN THE DANUBE REGION; THE KICK-OFF EVENT TOOK PLACE IN THE HUNGARIAN CITY OF VISEGRÁD IN MID-OCTOBER

ITS WORLD CONGRESS, 22 TO 26 OCTOBER, TRADE FAIR CENTRE VIENNA: THE WORLD'S MAJOR EVENT ON INTELLIGENT TRANSPORT SYSTEMS WAS HOSTED BY VIENNA

20TH ANNIVERSARY OF LIFE+, 24 OCTOBER, MARCHEGG: ON THE OCCASION OF THE 20TH ANNIVERSARY OF LIFE NATURE PROJECTS IN LOWER AUSTRIA, THE FIRST OF A TOTAL OF TEN PLANNED NESTING AIDS FOR STORKS AND BIRDS OF PREY WAS INSTALLED AT MARCHEGG PALACE GARDENS AT THE END OF OCTOBER

GROUNDBREAKING CEREMONY SCHOENBUEHEL, 15 NOVEMBER: WITH THE CONNECTION OF THE SCHOENBUEHEL SIDE ARM, THE FINAL MILESTONE OF THE LIFE PROJECT «RIVER HABITAT MOST-VIERTEL-WACHAU» WAS INITIATED

LOGITRANS ISTANBUL, 15 TO 17 NOVEMBER: VIA DONAU MADE ITS DEBUT AT LOGITRANS, THE INTERNATIONAL TRANSPORT LOGISTICS EXHIBITION IN ISTANBUL

DONAU ON TOUR: 2012 WAS A FABULOUS YEAR FOR «DONAU ON TOUR», THE FLOATING EXHIBITION ON BOARD THE MS NEGRELLI


Danube waterway
UN/ECE Classes
VII
VIa, b, c
Va, b
IV
III
I, II
Lock
900 Chainage (river km)
Ports
Inland port
Seaport
Cities
Capital
Other
Countries
European Union
Other
National border
viadonau
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Dresden
Děčín
Ústí nad Labem
Mělník
Labe
Pardubice
PRAHA
Liberec
Chemnitz
Erfurt
Jena
Fulda
Hof
Plzeň
Vltava
Opole
Zabrze
Bytom
Sosnowiec
Katowice
Gliwice
Koźle
Kraków
Ostrava
Olomouc
Brno
Morava
Váh
České Budějovice
Frankfurt
Hanau
Aschaffenburg
Schweinfurt
Bamberg
Nürnberg
Würzburg
Karlstadt
Lengfurt
Main
Darmstadt
Gernsheim
Mannheim
Heidelberg
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MIX
Paper from responsible sources
FSC® C005108

Printed according to criteria documents of the austrian Eco-Label „printed products". gugler* print, Melk, UWZ-Nr. 609, www.gugler.at

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A company of the Federal Ministry for Transport, Innovation and Technology

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Nationaler Aktionsplan Donauschifffahrt

A project of the National Action Plan Danube Navigation (NAP)
Published by: via donau – Österreichische Wasserstraßen-Gesellschaft mbH, Donau-City-Straße 1, 1220 Vienna, Austria; phone: +43 (0)50 4321-1000, www.via-donau.org
Design and layout: Starmühler Agentur & Verlag, www.starmuehler.at; photos: via donau, Andi Bruckner, Andreas Dessl, EHG Ennshafen GmbH, Thomas Hartl, Christian Houdek, Chantal Lamarre, Alexander Paltram, Reinhard Reidinger, Peter Rigaud, Robert Tögel; Printing: gugler GmbH; printed on: Munken Lynx;