



KEY DATA ON DANUBE NAVIGATION 2008

Changes over 2007 are given as percentages in brackets

TRANSPORT VOLUME

11.2 million tons (-7.4%)	Import: 5.7 million tons (-8.5%)
	Export: 2.2 million tons (+40.0%)
	Transit: 2.8 million tons (-15.5%)
	Domestic: 0.5 million tons (-48.3%)

TRANSPORT PERFORMANCE

11.8 billion tkm (-6.3%)	Within Austria: 2.4 billion tkm (-9.2%)
11,741 loaded journeys (-4.9%)	Outside Austria: 9.4 billion tkm (-5.5%)

WATER TRANSHIPMENT AT AUSTRIAN PORTS AND TRANSHIPMENT SITES

8.9 million tons (-6.4%)	Ores and metal waste: 3.3 million tons (-4.9%)
	Petroleum products: 2.3 million tons (-14.3%)
	Metal products: 1.0 million tons (+37.0%)
	Fertilisers: 0.8 million tons (+14.4%)
	Stones, earths and building materials: 0.5 million tons (-37.4%)
	Other goods: 1.0 million tons (-10.3%)

VESSEL UNITS LOCKED THROUGH AT AUSTRIAN DANUBE LOCKS

99,445 vessel units* (-4.4%)	Freight transport: 68,388 units (-7.3%)
	Passenger transport: 31,057 units (+2.6%)

\*Convoys and individual vessels

PASSENGER TRANSPORT (ESTIMATION)

1.1 million passengers	Liner services: 700,000 passengers
	River cruises: 198,000 passengers
	Non-scheduled services: 150,000 passengers

ACCIDENTS

24 traffic accidents with damage	Personal injuries: 0 dead, 0 injured
	Damage to property: 7 vessel-vessel, 4 grounding incidents,
	13 incidents with damage to bank and facilities

AVAILABILITY OF THE WATERWAY

366 days	Closure due to high water: 0 days
15-year average: 360 days	Closure due to ice: 0 days

Source: Statistics Austria; Supreme Navigation Authority at the Federal Ministry for Transport, Innovation and Technology; Federal Office of Transport; Danube Tourist Commission; Viennese Danube Space Land and Shores Operating and Development Company

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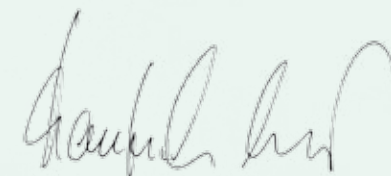
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## CONCISE FACTS, FIGURES AND CURRENT DEVELOPMENTS



via donau – Österreichische Wasserstraßen-Gesellschaft mbH considers it an important task to highlight the potentials of Danube navigation and to further disseminate knowledge about this mode of transport. In this context, via donau has already published several publications and manuals dealing with navigation on the Danube. The current annual report on «Danube navigation in Austria» is intended to provide experts as well as political and economic decision-makers with annually updated information and data on Danube navigation focusing on the Austrian section of the Danube. In order to ensure the topicality of the information, the data used in the report are continually updated and closely checked for their consistency. As far as its contents are concerned, the annual report is subdivided into two sections. On the one hand, it offers concise facts and figures on issues such as transport volumes, port transshipment, modal split, availability of the Danube waterway, fairway conditions, locked-through vessel units and passenger transport. On the other hand, it provides a summary of current developments which constitute the



**Manfred Seitz**  
Managing director of via donau – waterway transport division

basic conditions for Danube navigation in Austria. This information is complemented by a brief outline of key data for hurried readers and by useful waterway maps. In geographical terms, the annual report focuses on the Austrian section of the Danube. However, to take account of the international character of Danube navigation, relevant parts of the report will also take a look beyond Austria's national borders.

## ENHANCING KNOWLEDGE ABOUT DANUBE NAVIGATION



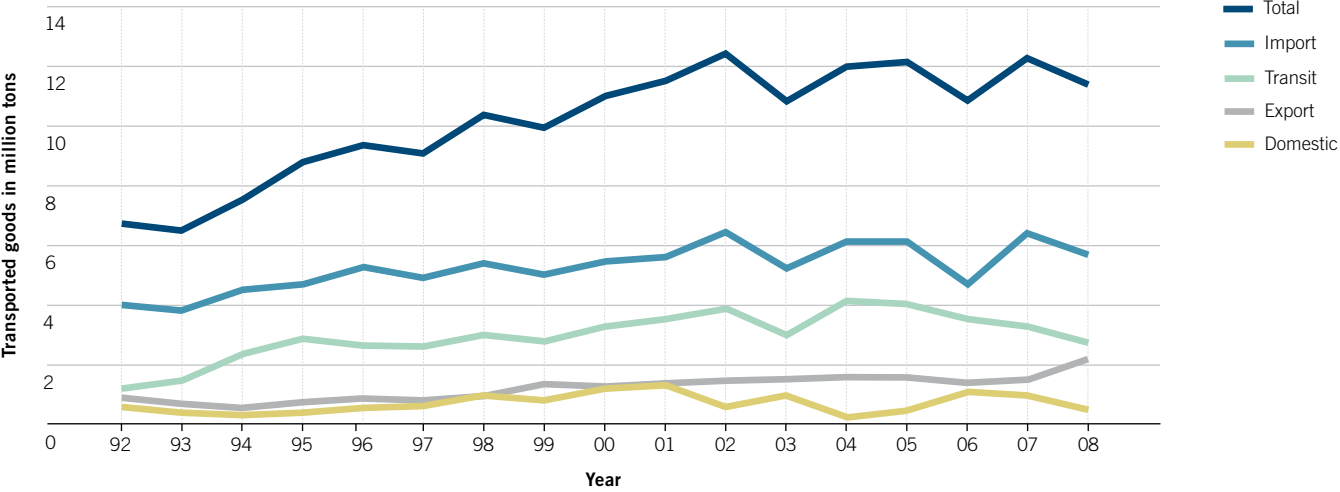
The political change in the Danube countries has led to intensive economic integration along the Danube axis. However, the gradual integration of the Danube countries into the European Union not only involves increasing security and prosperity but also entails an enormous growth in transport volumes and related problems such as noise, air pollution, congestion and accidents. In the past 15 years, the volume of freight transport in the Austrian Danube corridor increased by more than 150%, whereby the highest growth rate was recorded by road-based freight transport: The number of lorries operating on East-West transport routes has more than tripled, while the volume of transit transport has risen more than sixfold. Located in the centre of the Danube region, Austria is particularly called upon to contribute to the creation of an efficient and simultaneously ecological transport system. Therefore, the Federal Ministry for Transport, Innovation and Technology and via donau have developed a comprehensive strategy for the further development of the Danube waterway, the National Action Plan Danube Navigation (NAP).

The collection and processing of facts and figures on Danube navigation in Austria in the form of this annual report is intended to enhance knowledge about Danube navigation among experts, opinion leaders and policy-makers, but also among all other parties interested in the subject. In this way it will be easier to recognise the large potentials of the waterway as a mode of transport and to respond to current developments and changed basic conditions. In addition to the «Manual on Danube Navigation» published by via donau, which is directed particularly to those readers who want to obtain in-depth information about inland navigation, the annual report with its concise facts and figures and information on new developments provides an up-to-date overview of Danube navigation in Austria.



**Doris Bures**  
Federal Minister for Transport, Innovation and Technology

FREIGHT TRANSPORT ON THE AUSTRIAN DANUBE 1992–2008



TRANSPORT VOLUME (TONS)	Import	Export	Transit <sup>*)</sup>	Domestic	Total
2008	5,730,621	2,166,354	2,809,508	502,228	11,208,711
2007	6,264,069	1,547,234	3,323,081	972,156	12,106,540
2006	4,813,237	1,440,795	3,453,555	1,136,577	10,844,164
2005	6,069,543	1,652,988	4,005,412	355,631	12,083,574
2004	6,071,646	1,635,154	4,079,440	191,396	11,977,636

\*) As a result of the lacking legal foundation, transit transport data for 2004 and 2005 were not completely covered. Since June 2005, transit transport has been uncovered; the figures for 2004 to 2008 have been extrapolated by Statistics Austria.

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

TRANSPORT VOLUME

DECLINE AFTER RECORD YEAR BUT GROWTH IN EXPORTS

Although Danube navigation was not faced by any transport impediments or disruptions caused by high water and ice in 2008, the fourth quarter of the year was dominated by low water levels and the onset of the economic crisis. These conditions are reflected in the **volume of goods transported** in this year: Thus, about 11.2 million tons of goods were carried on the Austrian section of the Danube in 2008. This is equivalent to a decrease of 7.4% over 2007, which was a very favourable year for navigation. In consequence, overall **transport performance** on the Austrian Danube also declined by 9.2% to 2.4 billion ton-kilometres.

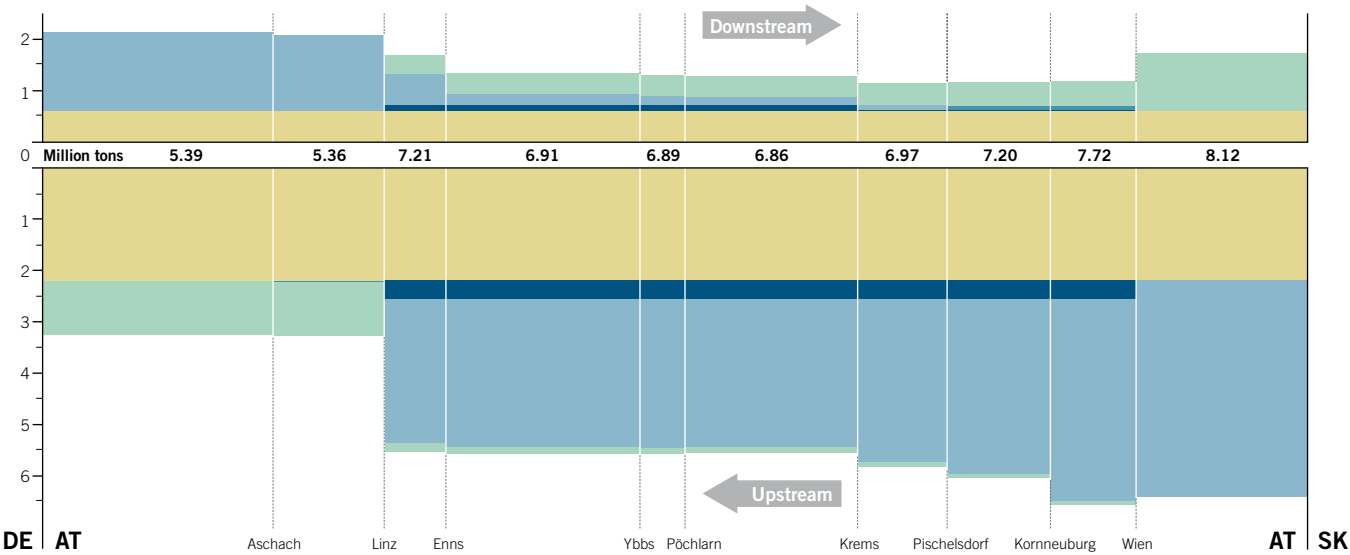
Regarding **imports**, the transport volume fell by 8.5% or 533,448 tons to 5.7 million tons compared to 2007, whereby more than 73% of the tonnage entered Austria from the east. **Exports**, on the other hand, recorded an increase compared to the previous year: The volume of export goods carried by inland vessels increased by remarkable 40% or 619,120 tons to nearly 2.2 million tons. Thus, the volume of goods transported in this transport domain exceeded the 2-million-ton mark for the first time in long-term comparison. 52% of the exported goods crossed the eastern border and 48% crossed the western border of Austria.

However, the volume of **transit transport** decreased by 15.5% or 513,573 tons to 2.8 million tons. This is an extrapolated figure, since Statistics Austria uses an estimation model to compensate for the existing undercoverage of transit traffic.

The **commodity groups** most frequently transported on the Danube recorded both decreases and increases in volume when compared to the previous year. In the group of «ores and metal waste», the transported volume amounted to slightly less than 3.3 million tons of goods, which is equivalent to a decrease of 4.9% over 2007. The 2.2 million tons of transported petroleum products constitute a decline of 7.6%. With 1.5 million tons – and an increase of 13.8% compared to 2007 –, metal products accounted for the third-largest transport volume on the Austrian Danube in 2008. The volume of agricultural and forestry products transported on the Austrian Danube amounted to 1.2 million tons (-12.2% over 2007), followed by fertilisers with slightly less than 1 million tons (+6.4% over 2007).



FREIGHT TRANSPORT INTENSITY ON THE AUSTRIAN DANUBE 2008



SEGMENT	Length km	Import		Export		Domestic		Transit		Total		Total
		Up-stream	Down-stream	Up-stream	Down-stream	Up-stream	Down-stream	Up-stream	Down-stream	Up-stream	Down-stream	
Border DE/AT - Aschach	63.21	0.00	1.54	1.05	0.00	0.00	0.00	2.19	0.61	3.24	2.15	5.39
Aschach - Linz	31.30	0.03	1.48	1.04	0.00	0.00	0.00	2.19	0.61	3.26	2.10	5.36
Linz - Enns	16.87	2.80	0.59	0.17	0.37	0.36	0.12	2.19	0.61	5.52	1.69	7.21
Enns - Ybbs	54.16	2.89	0.21	0.13	0.40	0.36	0.12	2.19	0.61	5.57	1.34	6.91
Ybbs - Pöchlarn	12.67	2.89	0.18	0.13	0.40	0.36	0.12	2.19	0.61	5.58	1.31	6.89
Pöchlarn - Krems	47.00	2.90	0.15	0.13	0.40	0.36	0.12	2.19	0.61	5.58	1.28	6.86
Krems - Pischelsdorf	26.00	3.18	0.09	0.10	0.41	0.36	0.02	2.19	0.61	5.83	1.13	6.97
Pischelsdorf - Korneuburg	29.50	3.41	0.07	0.08	0.45	0.36	0.01	2.19	0.61	6.05	1.15	7.20
Korneuburg - Vienna	24.04	3.93	0.07	0.07	0.47	0.36	0.01	2.19	0.61	6.56	1.16	7.72
Vienna - Border AT/SK	45.76	4.20	0.00	0.00	1.12	0.00	0.00	2.19	0.61	6.39	1.73	8.12

TRANSPORT INTENSITY

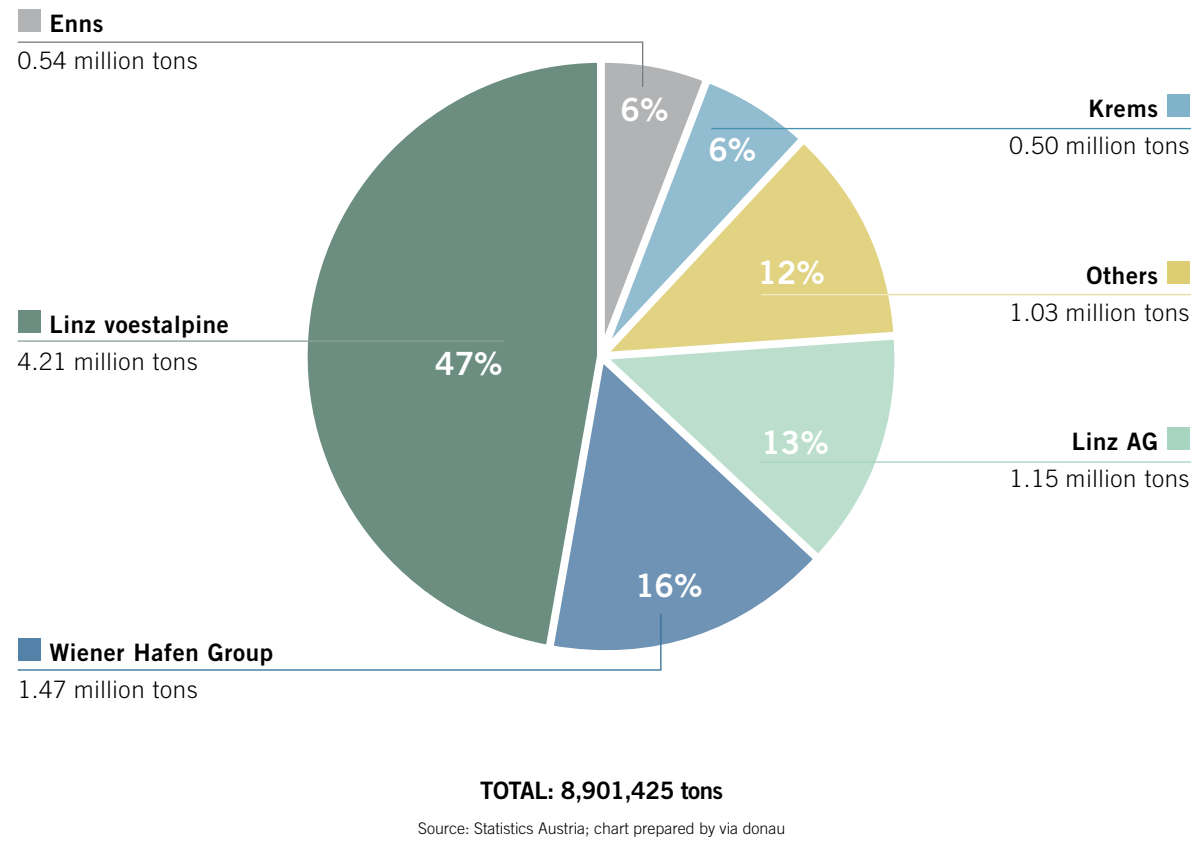
350 KILOMETRES  
MORE THAN 11 MILLION TONS OF GOODS

In 2008, a total of 11.2 million tons of goods was carried on the Austrian section of the Danube which has an overall length of 350.51 km. Total **transport volumes in the individual segments** range from 5.4 million tons in the segment between Aschach and Linz up to 8.1 million tons in the free-flowing section downstream from Vienna to the Austro-Slovakian border. As it has the by far largest water transshipment place on the Austrian Danube – the industrial port of the voestalpine steelworks – Linz stands out among other ports and transshipment sites with regard to the quantity of transported goods. Regarding **imports**, voestalpine obtained about 2.5 million tons of ores from Eastern Europe in 2008, mainly from Ukraine (port of Izmail) and Slovakia (port of Bratislava). Therefore the Danube section upstream from Linz to the Austro-German border has recorded significantly lower freight transport volumes than the section downstream from Linz to the Austro-Slovakian border.

**Exports** were again dominated by Linz with 0.9 million tons transported upstream on the one hand, while on the other hand 0.7 million tons of goods were transported from Vienna downstream. With regard to **transit transport**, the comparison of transport flows by transport direction shows a ratio of 3.6 to 1 (upstream/downstream). On the section from Linz to the Austro-German border, transit transport accounts for more than 50% of the overall transport volume. With reference to all cross-sections, the **volume of transported goods per day** amounted to 18,751 tons, which is equivalent to a load of about 1,000 lorries or 500 railway wagons. In the most heavily used cross-section of the free-flowing section east of Vienna an average of **22,190 tons of goods** was transported **per day** in 2008. In relation to the overall length of the Austrian section of the Danube, an average of **19,250 tons of goods** was carried **per kilometre** in 2008.

Transport volumes in million tons  
Source: Statistics Austria; chart and table prepared by via donau

DISTRIBUTION OF WATER TRANSHIPMENT AT AUSTRIAN DANUBE PORTS AND TRANSHIPMENT SITES 2008



PORT TRANSHIPMENT

# SLIGHT DECLINE TRANSHIPMENT TOTALS 9 MILLION TONS

Austria's Danube ports and transshipment sites were not able to repeat the record result achieved in the previous year. In 2008, the overall level of **water transshipment** stayed slightly below the 9-million-ton mark and thus decreased by 6.4%. Only the industrial port of the Austrian steel manufacturer **voestalpine** in Linz recorded an increase of about 6%. The level of water transshipment at the **public port of Linz** declined by 9% compared to 2007. A reduction in the volume of goods transhipped by water was also witnessed by the **port of Vienna**, which recorded a decline of 11%. This decline can be mainly attributed to lower transshipment levels for petroleum products and solid fuels.

The ports of **Enns-Ennsdorf** and **Mierka Donauhafen Krems** recorded a significant decrease in Danube transshipment volumes by about 30%. At Enns the commodity groups affected by this decrease were wood and crude minerals, while Mierka Donauhafen mainly witnessed a decline in the transshipment of gravel. The water transshipment volume of the **other Austrian ports and transshipment sites**, such as Korneuburg, Ybbs, Pischelsdorf, Aschach and Pöchlarn, amounted to more than 1 million tons of goods in 2008.

WATER TRANSHIPMENT VOLUMES BY COMMODITY GROUPS  
AT AUSTRIAN DANUBE PORTS AND TRANSHIPMENT SITES 2008

CLASSIFICATION OF COMMODITIES BY NST/R*	Vienna <sup>1)</sup>	Linz <sup>2)</sup>	Krems	Enns- Ennsdorf	voestalpine industrial port <sup>3)</sup>	Others <sup>4)</sup>	Total	Share in total transhipment volume
Total transhipment volume in tons								
0 Agricultural and forestry products	44,957	0	31,268	101,649	0	107,864	285,738	3.2%
1 Foodstuffs and animal fodder	48,306	0	38,231	218,465	0	106,717	411,719	4.6%
2 Solid fuels	0	5,294	0	369	117,878	123,296	246,837	2.8%
3 Petroleum products	1,174,291	643,293	0	0	3,342	519,757	2,340,683	26.3%
4 Ores and metal waste	0	2,941	0	34,876	3,228,098	2,240	3,268,155	36.7%
5 Metal products	127,148	5,526	259,454	43,717	568,048	8,453	1,012,346	11.4%
6 Crude and manufactured minerals, building materials	60,122	15,301	23,880	111,836	293,621	1,003	505,763	5.7%
7 Fertilisers	8,533	479,390	112,973	7,459	0	144,395	752,750	8.5%
8 Chemical products	0	0	29,593	15,116	0	2,971	47,680	0.5%
9 Machinery, vehicles, other articles	3,072	1,433	5,077	5,228	150	14,794	29,754	0.3%
Total 2008	1,466,429	1,153,178	500,476	538,715	4,211,137	1,031,490	8,901,425	
2007	1,655,254	1,266,913	720,641	765,981	3,985,595	1,118,540	9,512,924	
2006	1,469,115	1,296,767	849,092	675,294	3,291,035	507,136	8,088,439	
2005	1,543,151	1,131,010	495,729	1,002,296	3,636,918	513,780	8,327,155	
2004	1,230,022	1,380,226	483,312	878,801	3,457,597	659,634	8,089,592	

1) The figures for Vienna combine the transhipment volumes of the three ports of Freudenau, Albern and Lobau oil port.  
2) The figures for Linz combine the transhipment volumes of the commercial and the oil port.  
3) Including water transhipment in the transhipment hall of Industrie Logistik Linz GmbH.  
4) This includes particularly the private port of Ybbs and the transhipment sites of Pischelsdorf, Aschach, Korneuburg and Pöchlarn.

\* NST/R = Standard Goods Nomenclature for Transport Statistics, Revised

Source: Statistics Austria; table prepared by via donau

PORT TRANSHIPMENT BY COMMODITY GROUPS

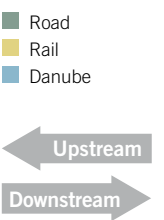
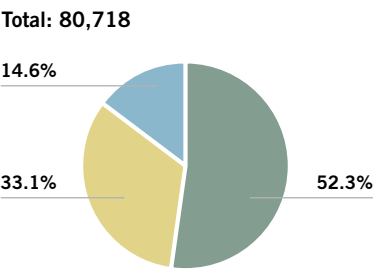
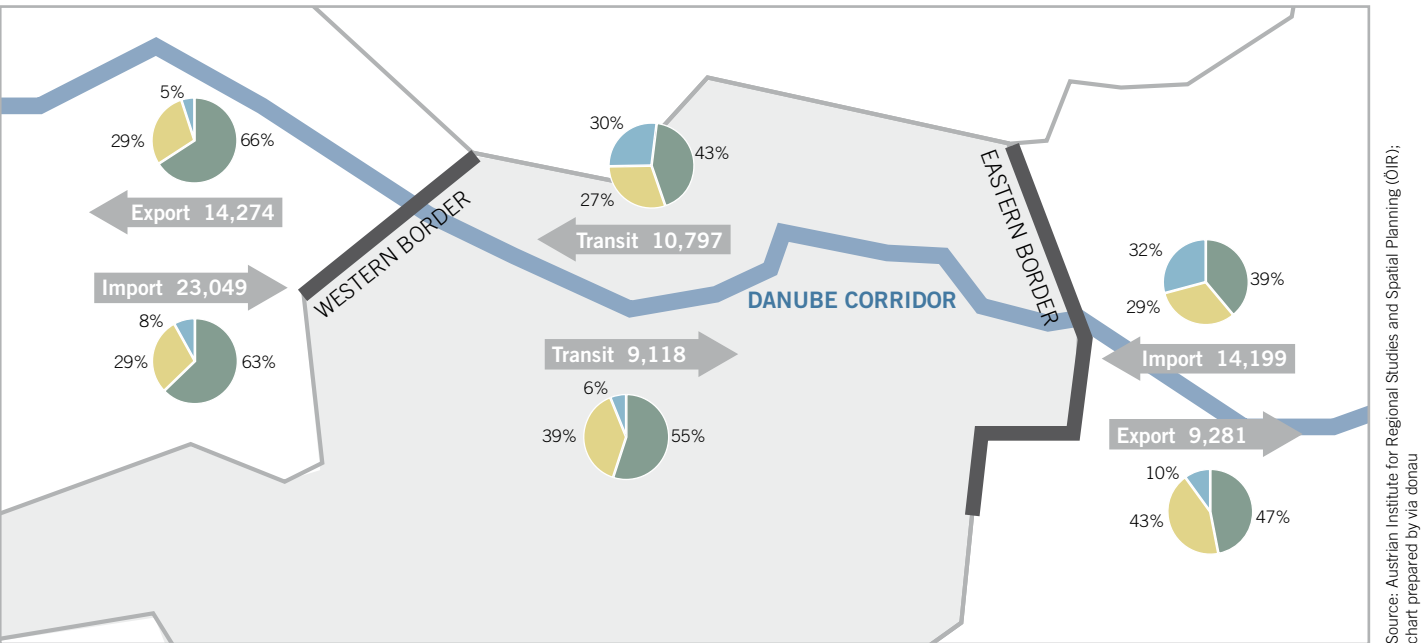
BULK GOODS DOMINATING  
ORES STILL IN THE LEAD

With 3.3 million tons, **ores and metal waste** again constituted the most important commodity group in 2008, the major part of which was bound for the voestalpine steelworks in Linz. Hence, these goods accounted for 36.7% of the overall transhipment volume in 2008. With 2.3 million tons or 26.3%, the group of **petroleum products** was the second most frequently transhipped commodity type at Austrian ports and transhipment sites. The major transhipment ports for these liquid goods transports are the oil port in Linz, Vienna’s port of Lobau and the transhipment site of MOL at Korneuburg. With 1.0 million tons and a share of 11.4% in the overall water transhipment level, **metal products** were the third most important commodity group in 2008.

**Other important commodity groups** for the Austrian Danube ports included fertilisers, crude minerals and building materials, agricultural and forestry products (e.g. wood), foodstuffs and animal fodder (e.g. grain) and solid fuels (e.g. coal, coke). Chemical products and machinery, vehicles and other articles together achieved a transport share of 0.8% in 2008. A favourable development was witnessed with regard to waterside **container transhipment** in Austria’s ports. In the member ports of the Austrian Association of Public Danube Ports (IGÖD) – Enns, Krems, Linz and Vienna – the volume of containers transhipped by water increased by 15% over the previous year. However, with a total of 6,000 TEU the Danube share (currently) remains at a very low level.

CROSS-BORDER FREIGHT TRANSPORT IN THE AUSTRIAN DANUBE CORRIDOR 2007

FREIGHT TRANSPORT IN 1,000 TONS/YEAR



Western border	Eastern border
<b>Danube:</b> Passau	<b>Danube:</b> Hainburg
<b>Road:</b> Suben, Neuhaus, Simbach	<b>Road:</b> Berg, Kittsee, Nickelsdorf, Klingenbach, Deutschkreutz
<b>Rail:</b> Passau	<b>Rail:</b> Marchegg, Kittsee, Hegyeshalom, Sopron, Deutschkreutz

MODAL SPLIT

# ROAD DOMINATING DANUBE STRONG AT EASTERN BORDER

The transport volume in the **Austrian Danube corridor** is rapidly increasing. In 2007, it was slightly less than 81 million tons, which is equivalent to a growth of 157% since 1994. The chart shows the cross-border **transport volumes** (net tons) for the three transport modes rail, road and waterway in the Danube corridor.

A look at the figures for all transport modes reveals that the quantity of goods transported to and from the west is significantly higher than the volume of goods crossing the eastern border. With 61 million tons, the level of **bilateral transport** (western and eastern border taken together) in 2007 is still considerably higher than transit transport with 20 million tons. However, **transit transport** in particular recorded a massive increase in the past few years. Today, its volume is nearly 3.5 times higher than in 1994, whereby transit road transport has even increased by about 5.9 times.

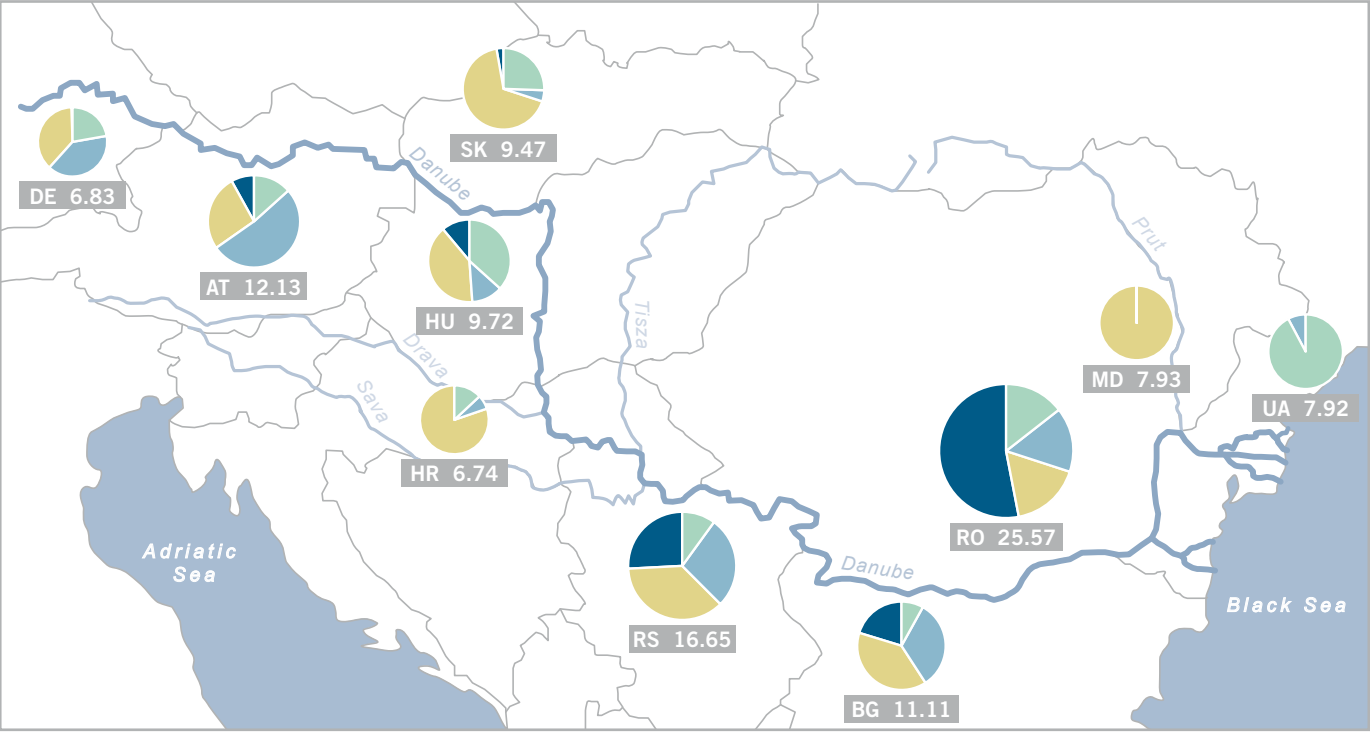
With 52.3%, road transport dominates the **modal split** in the Danube corridor. Thus the quantity of goods transported on the road is higher than the volume of goods carried jointly by the other two transport modes.

However, **Danube navigation** constitutes an important mode of transport in the corridor. Its significance is particularly reflected in upstream transport volumes: Both at the eastern border and in transit transport the Danube accounts for a share of slightly less than a third of the total transport volume. A decrease in the significance of waterway transport can be observed only in the import and export of goods at the western border, which is clearly dominated by road transport in both directions (upstream and downstream).



TOTAL FREIGHT TRANSPORT ON THE DANUBE 2007

FREIGHT TRANSPORT IN MILLION TONS/YEAR



Source: Eurostat, national statistics, via donau

MILLION TONS	DE	AT	SK	HU	HR	RS	BG	RO	MD	UA
Export	1.53	1.63	2.43	3.57	0.89	1.69	0.90	3.71	0.00	7.32
Import	2.70	6.29	0.42	1.20	0.44	4.56	3.66	4.03	0.01	0.60
Transit	2.57	3.24	6.38	3.88	5.41	6.12	4.32	4.32	7.92	0.00
Domestic	0.03	0.97	0.24	1.07	0.00	4.28	2.23	13.51	0.00	0.00
Total	6.83	12.13	9.47	9.72	6.74	16.65	11.11	25.57	7.93	7.92

FREIGHT TRANSPORT ON THE ENTIRE DANUBE

FROM GERMANY TO ROMANIA  
WATERWAY FOR EUROPE

In its total navigable length of 2,414 km, from Kelheim in Germany to Sulina in the Romanian Danube delta, the Danube waterway connects ten Danube riparian states. In 2007, a total of about 49 million tons of goods were transported on the entire Danube. These and the following figures exclusively refer to transport by inland vessels and do not include river-sea transport on the maritime Danube up to the Romanian port of Brăila (river-km 170).

The by far largest transport volume for 2007 was achieved by Romania with 25.6 million tons, followed by Serbia with 16.7 million tons and Austria with 12.1 million tons.

Ukraine is clearly the largest exporter of goods on the Danube. Thus in 2007 a total of 7.3 million tons of goods were shipped from Ukraine to other countries. This figure includes 1.3 million tons of ores for the Austrian voestalpine steelworks in Linz. With 3.7 million tons of goods, Romania is the second-largest exporter on the Danube, closely followed by Hungary with 3.6 million tons.

With 6.3 million tons of goods, Austria recorded the highest level of imports of all Danube countries. Ores and metal waste constituted the largest commodity type of these imports with 3.4 million tons,

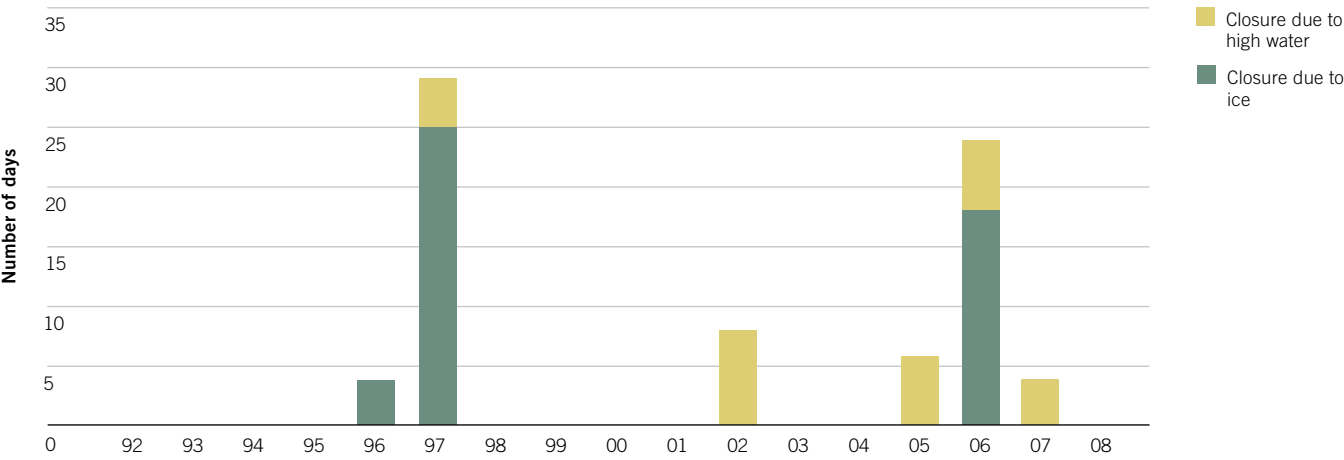
followed by slightly less than 1 million tons of petroleum products. The second-largest importer on the Danube waterway was Serbia with 4.7 million tons of goods.

In transit transport on the Danube, the largest transport volumes were recorded by Moldova with 7.9 million tons, however only along a distance of 550 m, followed by Slovakia with 6.4 million tons and Serbia with 6.1 million tons.

In the field of domestic transport, Romania achieved the by far highest volume with 13.5 million tons, followed by Serbia with 4.3 million tons. In 2007, 12.4 million tons of goods were transported on the Romanian Danube-Black Sea Canal (incl. northern side canal), which connects the Danube with the maritime port of Constanța.

With regard to transport between the Danube and the Main-Danube Canal, the lock at Kehlheim recorded a total volume of 5.5 million tons, with 2.8 million tons being carried (downstream) towards the Danube and 2.7 million tons being carried (upstream) towards the Rhine.

NAVIGATION CLOSURES DUE TO HIGH WATER AND ICE 1992–2008



Source: Danube Commission; Supreme Navigation Authority at the Federal Ministry for Transport, Innovation and Technology; via donau

AVAILABILITY OF THE WATERWAY

DANUBE ON 360 DAYS OPEN TO NAVIGATION  
CLOSED ONLY IN EXCEPTIONS

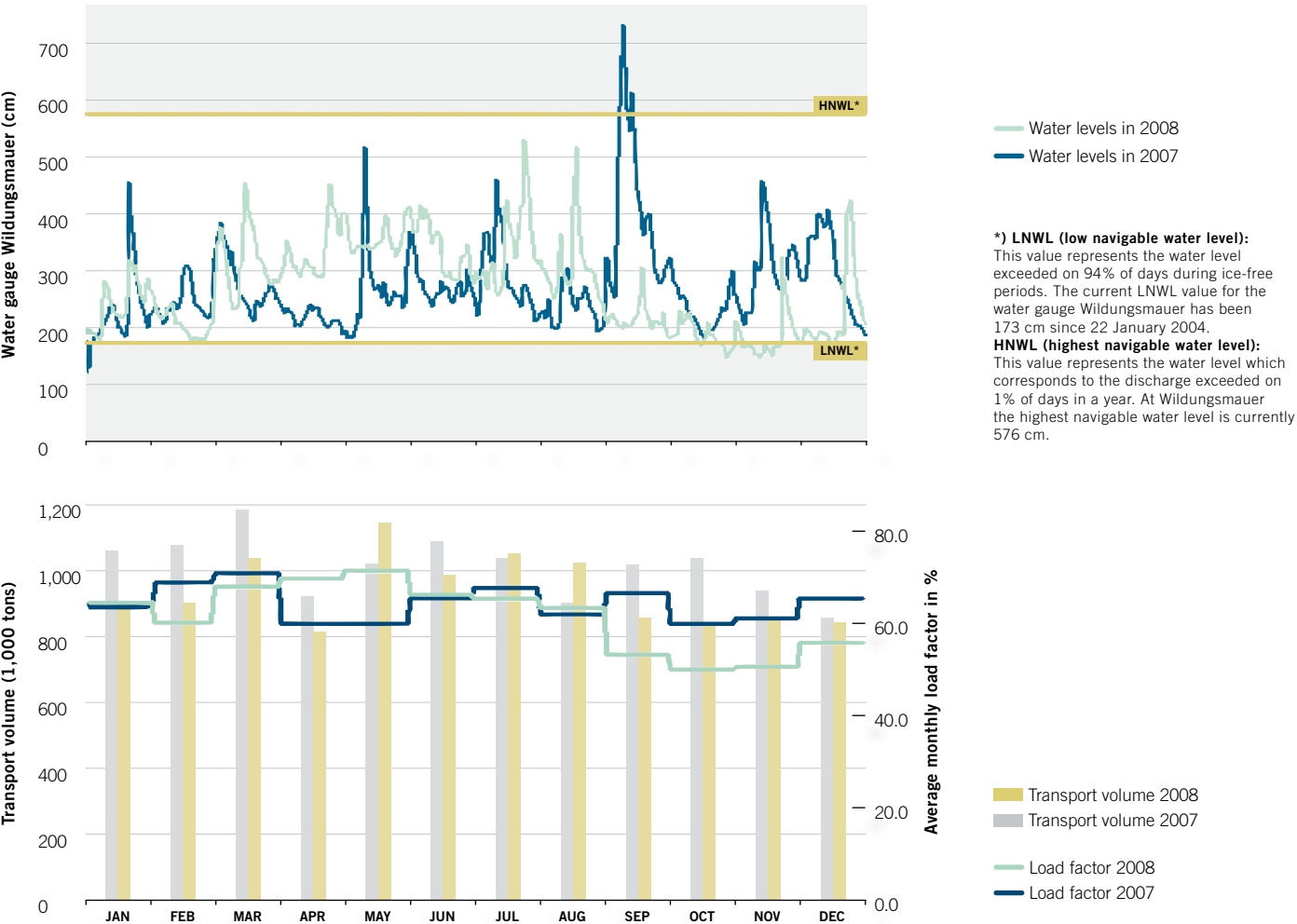
Weather-related closures of the Danube waterway may either result from serious high water conditions or strong icing. Closures may apply to the whole Austrian section of the Danube waterway or individual sections of the river. During these official closures, navigation on the Danube is prohibited.

In the past 17 years, only five closures due to high water occurred on the Austrian Danube, whereby the waterway was closed to navigation for an average of six days. Within the same period, the Danube was closed three times due to ice, with the average closure period totalling 16 days. While ice impedes navigation mainly during the months of January and February, high water situations mostly occur at the beginning of spring and in midsummer.

Hence, in the long-term annual average from 1992 to 2008, the Austrian section of the Danube waterway was open to navigation on 98.8% of the days or on 360 days per year.

Low water events do not require the waterway to be closed to navigation. However, in this case, the usability of the Danube for freight transport is restricted in terms of efficiency. The relationship between fairway conditions and the potential capacity utilisation of cargo vessels will be described in greater detail in the following chapter «Fairway Conditions».

ANNUAL DEVELOPMENT OF FAIRWAY CONDITIONS AT GAUGE OF REFERENCE WILDUNGSMAUER 2008



Source: Statistics Austria, via donau

FAIRWAY CONDITIONS

LOW WATER IN THE 4TH QUARTER  
LOWER VESSEL CAPACITY UTILISATION

The year 2008 witnessed rather unfavourable **fairway conditions** in the free-flowing sections of the Austrian Danube compared to 2007. Although in the previous year, the Danube was not closed to navigation due to high water or ice, there was an extensive low water period starting in September, which lasted until the end of December. These adverse conditions were reflected in the load factor for cargo vessels: From September to December the average load factor only amounted to about 50%, while in the first half of the year cargo vessels achieved a favourable load factor of up to 70%.

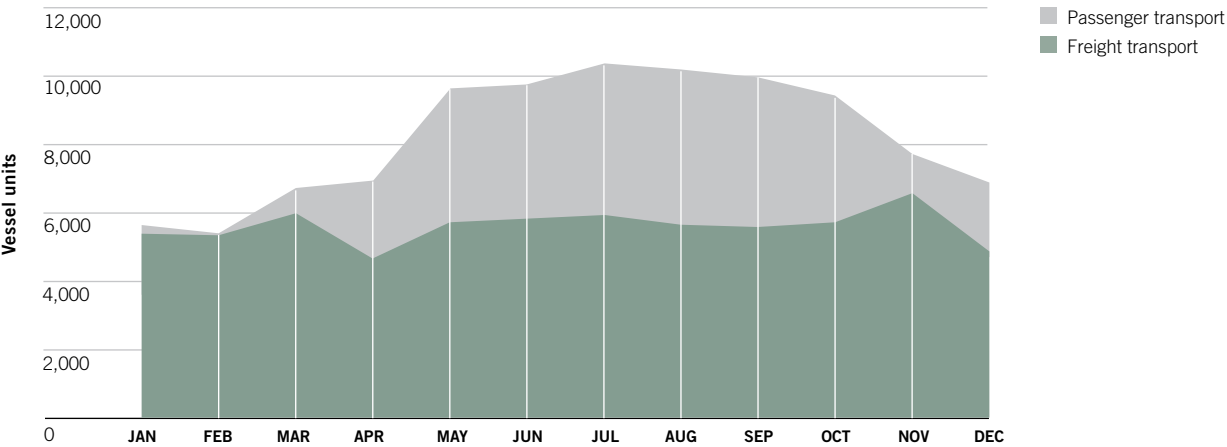
With **61.3%**, the **average monthly load factor** of cargo vessels was nearly 3% lower in 2008 than in 2007.

In inland waterway transport the available fairway depth determines the **draught loaded** of a vessel and hence the possible loading quantity. When loading their vessels, vessel operators sometimes have to estimate fairway conditions for the individual sections of a river several

days before actually passing a critical section by means of so-called gauges of reference. The **Wildungsmauer water gauge** in the chart above constitutes such a gauge of reference for the free-flowing section of the Danube between Vienna and Bratislava. Fairway conditions and the load factor of vessels are directly related to each other. The general rule is that if relatively high draughts loaded are possible, the average **load factor** of vessels increases and vessel operators require fewer trips to transport the same volume of cargo. These interrelations become very clear when comparing the two charts for the years 2007 and 2008.

Larger cargo volumes per vessel increase the ratio of freight revenues and costs, which in turn improves the **competitive position** of navigation. This again makes navigation as a transport mode more interesting to the manufacturing industry and increases the overall cargo volume carried on the Austrian Danube.

VESSEL UNITS\* IN FREIGHT AND PASSENGER TRANSPORT  
LOCKED THROUGH AT AUSTRIAN LOCKS 2008



YEAR 2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Freight transport	5,393	5,382	6,041	4,572	5,816	5,872	5,977	5,754	5,626	5,675	6,507	5,773
Passenger transport	240	41	677	2,313	3,902	4,008	4,428	4,513	4,354	3,772	1,355	1,454
Total	5,633	5,423	6,718	6,885	9,718	9,880	10,405	10,267	9,980	9,447	7,862	7,227

TOTAL PER YEAR	Freight transport	% over previous year	Passenger transport	% over previous year	Total	% over previous year
2008	68,388	-7.3%	31,057	+2.6%	99,445	-4.4%
2007	73,769	+6.6%	30,284	+0.8%	104,053	+4.9%
2006	69,184	-10.9%	30,048	+4.8%	99,232	-6.6%
2005	77,606	+2.1%	28,683	+12.3%	106,289	+4.6%
2004	76,036	+7.9%	25,536	+10.9%	101,572	+8.7%

\* Vessel units in freight transport comprise 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 comprise day-trip vessels and cabin vessels.

Source: via donau

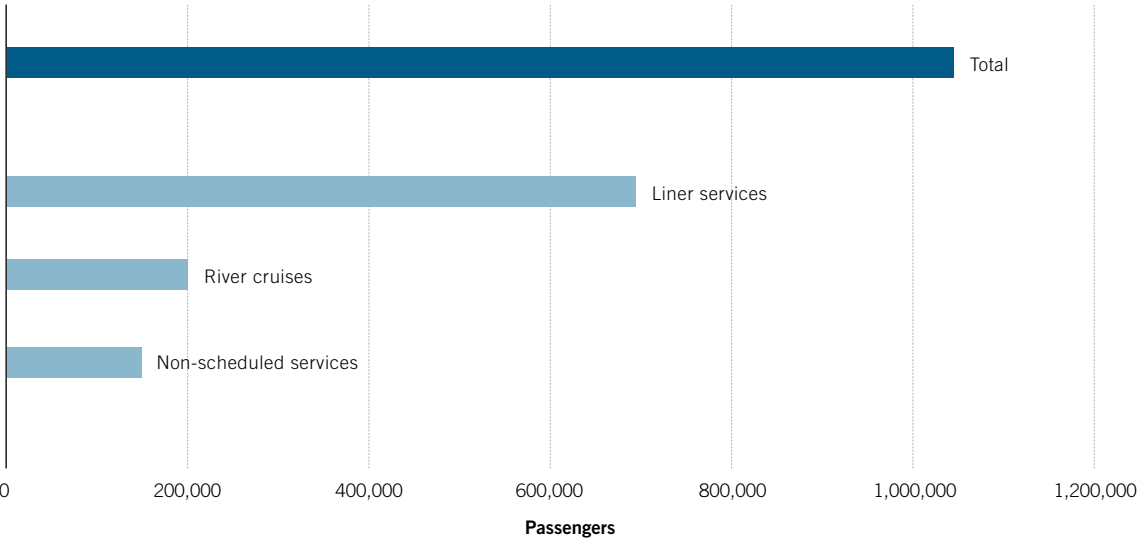
LOCKED-THROUGH VESSEL UNITS

UP AND DOWN  
ABOUT 100,000 VESSELS LOCKED THROUGH

In 2008, a total of 99,445 vessel units were locked through upstream and downstream at the nine Austrian Danube locks (excluding Jochenstein power station at the Austro-German border). 42,070 of these units were motor cargo vessels and motor tankers, 26,318 were pushers and 31,057 were passenger vessels. 59,839 cargo and tank lighters or barges were locked through as parts of convoys. Compared to the previous year, the number of cargo vessel units that passed through the locks on the Austrian section of the Danube declined by 7.3%, while the number of locked-through passenger vessels increased by 2.6%. On average, this marks a decrease of 4.4% in the total number of all locked-through vessel units in 2008. Freight traffic accounted for 68.8% and passenger traffic for 31.2% of the total vessel volume.

An average of 11,049 convoys and individual vessels passed through any given lock on the Austrian Danube in 2008 (a reduction of 512 vessel units compared to 2007). This amounts to 920 (-43) vessel movements per month and an average of about 30 locked-through units per day and lock. In general, the vessel volume in passenger transport is considerably lower during the winter months of November to March (particularly so in February). The highest vessel volume in 2008 was recorded at the Freudenau lock in Vienna with 14,103 vessel units that passed through (9,166 in freight transport and 4,937 in passenger transport), followed by the Greifenstein lock with 11,321 units (7,951 in freight and 3,370 in passenger transport). The lowest volume was reported by the Aschach lock, the westernmost lock in Austria, with 10,025 units (6,512 in freight and 3,513 in passenger transport).

PASSENGERS ON THE AUSTRIAN DANUBE 2008



NUMBER OF LANDINGS AND PASSENGERS AT VIENNA PASSENGER PORT*	Vessel landings	% over previous year	Handled passengers	% over previous year
2008	4,434	+1.4%	380,529	+24.8%
2007	4,371	-6.6%	304,836	+15.0%
2006	4,681	+27.8%	265,099	+47.3%
2005	3,664	+9.4%	179,942	+10.9%
2004	3,350	+17.2%	162,211	+25.7%

Figures from 2006 incl. Twin City Liner  
\* Landing stages at Handelskai, Nussdorf and Danube Canal, incl. cabin vessels, Twin City Liner and hydrofoils (on the route Vienna – Bratislava/Budapest)  
Source: DDSG Blue Danube Schifffahrt GmbH, Danube Tourist Commission, Donau-Touristik GmbH, MAHART Passnave Passenger Shipping Ltd., via donau, Viennese Danube Space Land and Shores Operating and Development Company

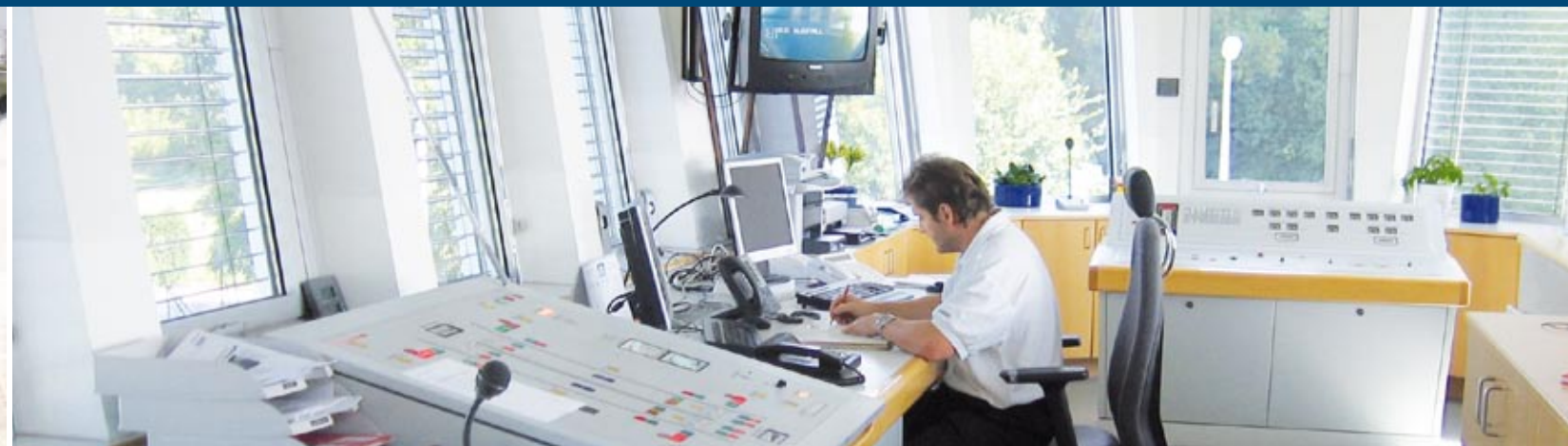
PASSENGER TRANSPORT

FROM DAY TRIPS TO CRUISES  
DANUBE POPULAR WITH PASSENGERS

In 2008, a total of nearly **1.1 million passengers** were carried by passenger vessels on the Austrian Danube. The major part thereof was accounted for by the approx. 700,000 passengers travelling on liner services. Cabin vessels carried about 198,000 cruise passengers. About 150,000 persons were transported on non-scheduled services (theme, special and charter trips). Since passenger transport data on the Danube ceased to be statistically recorded in 2003 due to a revision of legal foundations, these figures also include estimations. In 2008, a total of **106 different cabin vessels** with about 198,000 cruise passengers operated on the Austrian section of the Danube, making about 3,000 journeys (downstream and upstream). In the long-term comparison with the year 2003, this figure indicates an increase in passenger numbers by more than 40%. Being the most important place of departure and arrival for river cruises, the Bavarian Danube port of Passau recorded 1,751 landings of 104 cruise vessels with 213,793 passengers (+7.4% over 2007). A total of 11 vessels of Austrian companies with a capacity of more than 4,300 passenger places operated on **liner services** in 2008.

DDSG Blue Danube reported 222,000 passengers travelling on its liner services in the Wachau region and in Vienna. The two Twin City Liners carried 144,221 passengers on the route between Vienna and Bratislava. Donau-Touristik transported 19,826 passengers on the same route. The Slovakian and Hungarian hydrofoils operating on the routes Bratislava – Vienna – Bratislava and Budapest – Vienna – Budapest recorded 38,484 passengers. The Bavarian operator Wurm + Köck reported a total of 37,000 passengers using its liner services on the routes Linz – Schlögen – Linz and Linz – Vienna – Linz in 2008. **Non-scheduled services** on the Austrian Danube were provided in 2008 by about 45 passenger vessels (including the vessels primarily operated on liner services) with a total capacity of about 12,000 passenger places. DDSG Blue Danube carried 94,000 passengers on non-scheduled services. The operator schiffART linz carried 10,000 passengers, Donau-Touristik 27,400 passengers. Figures by all other companies providing non-scheduled services on the Austrian section of the Danube were not available for the period under review at the time of going to press.





FROM LEFT TO RIGHT: TAILWATER VIEW OF FREUDENAU LOCK, PERSENBEUG LOCK OPERATION CENTRE, MOTOR TANKER

## WATERWAY INFRASTRUCTURE

# FULL STEAM AHEAD WATERWAY PROJECTS

The guidelines for the development of a **trans-European transport network** (TEN-T) of the European Union include the further development of the Rhine/Meuse-Main-Danube inland waterway axis as **priority project 18**. In this respect, the **Integrated River Engineering Project on the Danube to the East of Vienna** between the Freudenau power station and the Austro-Slovakian border constitutes the most advanced project to eliminate nautical bottlenecks along the Danube. In 2008, the model tests establishing the general suitability of the granulometric riverbed stabilisation method were completed. In addition, the pilot project carried out near Witzelsdorf was continued with the practical testing of low water regulation by means of ecologically and nautically optimised groynes and the removal of the bank armouring on a length of 1.7 km. Construction works will presumably be completed in spring 2009. The public environmental impact assessment hearing for the overall project took place in October 2008; the basic development consent is expected to be granted in

the course of 2009. The large-scale field test near Bad Deutsch Altenburg is currently at the contract awarding stage and construction works will presumably start in autumn 2009. As regards the upgrading of the Danube on the **free-flowing section between Straubing and Vilshofen**, the German Federal Ministry of Transport in 2008 commissioned an additional variant-independent study with a volume of 33 million EUR, which is co-financed under the TEN-T. The study is intended to find the optimal technical solution for the improvement of the navigability of this river section, which will also meet the relevant ecological requirements. It is expected to be completed in 2012. 2008 marked the start of the detailed planning to improve fairway conditions on the **Hungarian section of the Danube** between the end of the Gabčíkovo navigation canal and the Hungarian-Croatian-Serbian border. At the end of 2008, a first detailed draft planning scheme to optimise the **Bulgarian-Romanian border section** of the

Danube between the Iron Gate II barrage and Călărași was elaborated. Measures to improve the waterway infrastructure on the **Romanian section of the Danube** between Călărași and Brăila in 2008 included the preparation of additional documents for the environmental impact assessment. April 2008 witnessed the ground-breaking ceremony for the construction of the new **Deggendorf railway bridge**, the lowest transverse structure on the German stretch of the Danube. The new bridge will be constructed about 15 m further upstream with a clearance height of 8 m at the highest navigable water level (HNWL). Completion is planned for summer 2010, after that the old bridge will be removed. Tasked by the former European Agency for Reconstruction, the Italian engineering firm Italferr has started to prepare the planning and tender documents for the reconstruction of the **Žeželj bridge in Novi Sad**. The documents are to be made available by spring 2009. The existing temporary bridge which replaced the bridge that had been

destroyed in 1999 by NATO has a clearance width which is too small for convoys and a clearance height which is too low for cabin vessels. The power station operator Verbund-Austrian Hydro Power AG (AHP) in 2008 started to implement the optimised inspection plan for the **Austrian Danube locks**. In the course of an international tendering procedure, AHP tasked the industrial solution provider Christof Group with the inspection of the locks during the low-traffic period from November to March. A first joint inspection of the Ottensheim lock was successfully conducted in autumn 2008. In 2008, the reduction of **power-station-related fluctuations in water levels** at low water level on the free-flowing sections of the Danube below the Melk and Freudenau power stations was incorporated into the Weir Operating Regulations of Austrian Danube power stations. Since autumn 2008, AHP has operated a special power station control programme during times of low water level, facilitating the planning of waterway transport and hence enabling a better capacity utilisation of cargo vessels.





FROM LEFT TO RIGHT: GRAVEL TRANSHIPMENT AT THE PORT OF PANČEVO (SERBIA), WIENCONT TERMINAL IN VIENNA, PORT OF GALAȚI (ROMANIA)

## PORT INFRASTRUCTURE

# BETWEEN LAND AND WATER PORTS AS COMMERCIAL HUBS

According to the development plan for the [port of Linz](#), the commercial port's three oversized basins are to be reduced by a third of their size each in order to increase the available space for future industrial settlements in the port area and to create some spare ground for further port development. In the course of the past year, detailed project planning was completed and all plans were filed with the competent authorities. As a consequence of expansion, the transshipment area of the container terminal will also be enlarged. In 2008, the [port of Enns](#) managed to realise a number of multimodal investments. In this context, the expansion of the transfer station was launched and an area of approximately 15,000 m<sup>2</sup> was created for trimodal transshipment. The transshipment equipment used for combined transport in the container terminal was also renewed. What is more, the Danube ports of Enns and Galați (Romania) signed a co-operation agreement at the end of October. The [port of Krems](#) also managed to realise a number of new investments last year.

The open-air storage area was expanded by about 5,000 m<sup>2</sup> due to a reinforcement of the surface area. Moreover, new facilities for handling big bags were put in place. And last but not least, fork-lifts were replaced and their pool expanded through the purchase of new equipment. The new state-of-the-art terminal of WienCont, one of the subsidiary companies of the [port of Vienna](#), was taken into operation according to schedule in September 2008 and led to an increase in transshipment capacity to 500,000 TEU. The new railway bridge at the entrance to the port of Freudenuau not only considerably improved the available railway infrastructure of the port of Vienna but also enabled the construction of the new terminal as a through station. Furthermore, the addition of a new port crane as well as another raw-material storage hall with a capacity of 20,000 tons significantly enhanced the water-side infrastructure for bulk cargo. Finally, the construction of a port gate was started to increase flood protection for the port of Freudenuau.

After its conversion into a trimodal logistic hub, the [Bavarian port of Passau-Schalding](#) was reopened at the end of June 2008. Thanks to the installation of two special 275-metre terminal rail tracks, cargo may now be transhipped to rail, road or water. Despite ongoing construction work, transshipment volumes already recorded an above-average increase of 14.3% in 2008. In February 2008, the administration of all public Slovakian inland ports was handed over to the newly established public limited company «Verejné prístavy, a.s.» that is to prepare a plan for the further development of the [port of Bratislava](#) in the next few years. The container terminal of the [Hungarian Danube port of Budapest-Csepel](#) was expanded in 2008. The Mahart Container Center (MCC) was equipped with two new 630-metre rail tracks to enable the management of container block trains. In addition, an area of 30,000 m<sup>2</sup> was created for container storage. Future development phases include the construction of new warehouses on terminal grounds.

A Serbian-Austrian consortium carried out a pre-feasibility study concerning the creation of [a new port in Belgrade](#). The study was completed successfully in 2008 and recommends Krnjača as the best location for the new port. At the end of 2008, the first container terminal was successfully opened at the [Romanian port of Galați](#). This terminal shall not only increase container transshipment volumes but also set an import signal for container transport in general. Expanding over an area of 20,000 m<sup>2</sup>, the terminal shall also offer room for container storage. Future transshipment volumes are supposed to reach 7,000 to 8,000 TEU per year. The [port of Constanța](#) continued its successful operation during the whole of last year. With a total tonnage of 60 million tons and about 1.4 million TEU, the Black Sea port ranks ninth in the list of major European ports. Maritime and inland waterway transport proved especially successful last year with the port recording the management of a total of 8,000 inland vessels.





FROM LEFT TO RIGHT: MODERN CABIN VESSEL, AREA OF LINZ AS SHOWN ON THE ELECTRONIC NAVIGATIONAL CHART, AIS RADIO ANTENNA HIGH ABOVE THE STRUDENGAU REGION, DORIS IN OPERATION

## INNOVATION

# INNOVATIVE TECHNOLOGIES OPEN UP NEW HORIZONS

The Austrian **navigation information and management system DoRIS** (Danube River Information Services) has already entered into its third year of operation. Thanks to the provision of European funding, a total of 450 vessels that regularly navigate the Austrian section of the Danube, had already been equipped with AIS transponders by the beginning of 2008 and had thus been integrated into the system. As of 1 July 2008, vessels have been required to carry an automatic identification system (AIS) which means that all professionally operated vessels have been equipped with **AIS transponders** since then. In addition, an **electronic lock management system** was introduced for the nine Austrian Danube locks towards the end of 2008. This system not only assists lock managers in planning, managing and documenting lock passages but also reduces administrative workload to an absolute minimum. DoRIS and the electronic lock management system form the basis for the modernisation of Danube waterway transport management in Austria.

On an international level, the EU project **IRIS Europe** was completed successfully in 2008. Under the guidance of via donau and the Supreme Navigation Authority of the Austrian Federal Ministry for Transport, Innovation and Technology, pilot systems were introduced in the Danube area for both the **electronic exchange of dangerous goods reports** as well as the **international exchange of RIS data** in Austria, Slovakia and Hungary. These pilot systems, which will be particularly useful for all those involved in the logistic management of Danube navigation, will be further developed and taken into operation within the framework of the follow-up project **IRIS Europe II**. In the course of the latter, the obligation to carry an AIS transponder on board a vessel shall be expanded to both Slovakia and Hungary. The EU demonstration project **The Cleanest Ship**, which followed the EU project CREATING in 2008 and was met by a wave of public interest, mainly aimed at increasing the environmentally compatible operation of inland vessels. Within the project, a tanker was equipped

with state-of-the-art technological systems designed to reduce particulate matter and nitrogen oxide emissions and operated with low-sulphur fuel along the Rhine. All vessel operation data were continuously monitored, recorded and finally analysed. In the end, the most essential project result was that the applied technological systems could reduce emission levels caused by inland waterway transport by up to 90%.

The vastly growing container business definitely constitutes one of the future markets of inland navigation. At present, two **container liner services** are available on the Danube with Mainrom Line servicing the stretch from Constanța to Giurgiu and the Bulgarian shipping company BRP servicing the section from Constanța to Belgrade. Together with other shipping companies, these two aim at expanding existing services and implementing new liner services which shall also call at upper Danube destinations in Hungary and Austria. To promote the set-up of container liner services, the Austrian Federal Ministry for

Transport, Innovation and Technology established a **funding programme for intermodal transport on the Danube** in 2008 supporting the transport of intermodal transport units with up to 34 EUR per unit (40-foot containers). This programme aims at shifting transport to inland navigation as an environmentally friendly transport mode in order to tackle the enormous growth in road transport in the Danube corridor in an environmentally and socially compatible way.





FROM LEFT TO RIGHT: WEBSITES FEATURING EXTENSIVE SERVICE DIRECTORIES, «DONAU ON TOUR» EXHIBITION ON MS NEGRELLI, MS NEGRELLI ON ITS WAY TO SPITZ, GUIDED TOUR THROUGH «DONAU ON TOUR»

## KNOWLEDGE TRANSFER

# KNOWLEDGE IS THE FUTURE GETTING THE DANUBE MESSAGE ACROSS

via donau considers it one of its central tasks to acquire, gather and disseminate knowledge of Danube navigation. In recent years, via donau has therefore published an internationally renowned series of reference works including the **Manual on Danube Navigation**, the **Manual on Danube Ports** as well as the **Blue Pages**. In order to keep directories up-to-date, the web platform [www.danubeports.info](http://www.danubeports.info) was launched in 2008. This platform is accessible free-of-charge and offers ample technological and economic facts and figures concerning Danube ports from Kelheim to the Black Sea. For each port listed, platform visitors get an overview of contact details and information concerning port administration, terminal operators, transshipment and storage facilities as well as planned expansions and future projects.

As of May 2009, the Blue Pages will also be available online at [www.blaue-seiten.at](http://www.blaue-seiten.at) and provide users with a comprehensive service directory of transport and shipping companies active on the

Danube including full details about the key inland navigation companies as well as major forwarders and transport agencies. Apart from the publication of reference material, via donau engages in projects within the framework of its special **education and training** focus, such as the exhibition «donau on tour», the **Inland Navigation eLearning System INeS** and the company's intensified effort in **teaching Danube navigation**. This way, special-interest target groups are provided with in-depth knowledge about the Danube as a transport and eco-system.

**donau on tour** is an interactive exhibition for all age groups organised on board of the former stone freighter MS Negrelli. Touring the Austrian section of the Danube from April to October, the exhibition informs visitors about the diverse aspects of the river and its eco-system. As such, it provides fascinating facts about the Danube as a waterway and habitat ranging from details on the newest technological developments for inland waterway transport to information about nature-oriented hydro-en-

gineering projects and the fauna and flora along the Danube river banks. **Teaching Danube navigation** is an initiative carried out by via donau in co-operation with the Austrian Museum for Social and Economic Affairs and constitutes an important measure to familiarise Austrian pupils with the importance of the Danube waterway. At the beginning of secondary school, pupils are for the first time introduced to the fundamental economic principles regarding the efficient and environmentally friendly mode of waterway transport. In 2008, about 400 lessons on inland navigation were taught in 40 schools. In 2009, these activities will be continued. Within the framework of this initiative, about 17,000 pupils are familiarised with the basic facts about the Danube transport and eco-system which is not only key for Austria but also for the whole region.

Focusing on **intermodal inland waterway transport**, **INeS** is a web-based learning platform which applies innovative information and communication tools while integrating traditional teaching and

learning methods all the same. INeS addresses apprentices, pupils, students at universities and universities of applied sciences with a focus on logistics as well as professionals such as forwarders and shippers. All interested parties may access the platform free of charge at [www.ines.info](http://www.ines.info). Within the framework of the EWITA project, INeS is being updated at the moment and is planned to be re-launched during the first half of 2010. via donau considers it one of the key tasks in knowledge dissemination to **co-operate with different Austrian universities and universities of applied sciences** specialising in business and technological studies. To this end, via donau not only enables students to write practice-oriented master's theses but also offers several internships each year as well as participation schemes in national and EU-wide projects. Within the scope of the EU's Leonardo programme, via donau furthermore awards traineeships to students from Central and Eastern Europe who can thus gather several months of hands-on experience in the company.





## POLITICS

# GIVING WAY TO DANUBE NAVIGATION IMPULSES FOR BUSINESS AND ENVIRONMENT

In May 2008, the first progress report concerning the **National Action Plan Danube Navigation** (NAP) was presented by the Austrian Federal Ministry for Transport, Innovation and Technology and via donau ([➤ www.donauschiffahrt.info/nap](http://www.donauschiffahrt.info/nap)). Since the publication of the NAP in 2006, a wide range of activities has been started with some individual measures having already been completed successfully. Owing to its integration into the current government's official programme, further swift realisation of the action plan is guaranteed. The completion of all measures included in the NAP by 2015 will result in an intensified integration of Danube navigation into freight transport as well as a considerable shift of the latter from the road to the waterway. Austrian freight transport will thus be able to record a significant growth in efficiency and environmental compatibility which will in turn strengthen Austria as a business and industrial location.

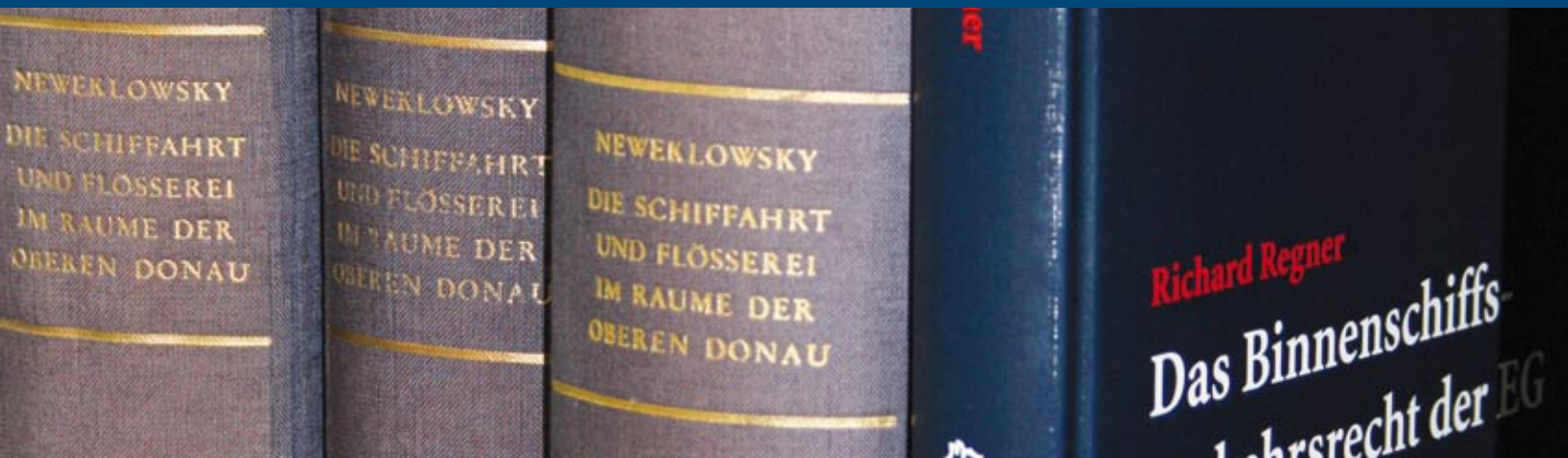
On 1 October 2008, the **PLATINA** project (Platform for the Implementation of NAIADES) was officially launched at a kick-off meeting in Brussels. Co-ordinated by via donau, the project will be carried out by 22 partners from a total of nine European countries. PLATINA is designed to provide both technical and organisational assistance in the realisation of the EU action programme NAIADES, which was introduced by the European Commission in 2006. A **Funding Guide for Inland Waterway Transport in Europe** was already presented at project kick-off which offers a detailed overview of available national and European funding programmes for inland navigation. Since March 2009, an online version of the Funding Guide has been available in four different languages at [➤ www.naiades.info/funding](http://www.naiades.info/funding). In addition, [➤ www.naiades.info/platina](http://www.naiades.info/platina) provides a detailed overview of all measures set within the framework of PLATINA.

The **4<sup>th</sup> Danube Summit** – the biggest conference and exhibition regarding Danube navigation – was held in the newly opened passenger terminal of the Romanian Black Sea port of Constanța in June 2008. 290 delegates of altogether 17 nations were presented with a diverse programme of interesting lectures and discussion rounds on topics ranging from infrastructure projects for maritime and inland navigation to new container services on the Danube and promotion activities for inland navigation. Presentations dealt with national infrastructure projects and state-of-the-art technologies for inland waterway transport as well as with port construction and operation.

The **co-ordinator for European waterway infrastructure projects** within the trans-European transport network (TEN-T) Karla Peijs published her first activity report in August 2008 (available online at

[➤ ec.europa.eu/transport/infrastructure/european\\_coordinators/2008\\_en.htm](http://ec.europa.eu/transport/infrastructure/european_coordinators/2008_en.htm)). The report summarises all measures that were undertaken between September 2007 and July 2008 for the Rhine/Meuse-Main-Danube and the Seine-Schelde waterways (priority projects 18 and 30 within the trans-European transport network) as well as other activities in the field of inland navigation.





## LAW

# NAVIGATION IN EUROPE UNIFORM RULES – NEW LEGISLATION

In 2008, the EU Directive 2005/44/EC on harmonised river information services (RIS) was realised in the framework of the **amendment to the Austrian Navigation Act** (Federal Law Gazette I No. 78/2008). The amendment comprises the obligation for administrative authorities to provide inland navigation with free-of-charge electronic navigational charts and notices to skippers, the power for executive bodies to issue statutory instruments regarding mandatory electronic reporting, as well as provisions on the storage, use and circulation of data to both authorities and private users. The amendment furthermore comprises changes concerning licences for skippers that include, among others, the possibility for candidates to apply for a preliminary licence once they have passed the respective exams.

Pursuant to the amendment to the Waterways Traffic Ordinance (Federal Law Gazette II No. 186/2008), all vessels navigating the

Danube from river km 1,880.200 to river km 2,199.300, the Traun, Enns or March waterways as well as the Vienna Danube Canal have had to carry **inland AIS transponders** as of 1 July 2008. All vessels not carrying a transponder after that date are equipped with a portable device by via donau or one of its transponder installation partners upon paying a deposit. All lent equipment is to be used for the passage through Austria only and has to be dismantled upon leaving the country. Vessels sailing in a pushed convoy or a coupled formation, non-free running ferries or small vessels are exempt from this provision.

The amendment of the **Ordinance on Docks and Other Facilities and Works on Waterways** (Federal Law Gazette II No. 298/2008) enables an adaptation of Austrian statutory provisions to modern-day dangerous goods legislation. In its amended version, the ordinance regulates the implementation of transshipment facilities for dangerous

liquid goods outside the port basin as enabled by the Navigation Act provided that technical equipment will prevent any negative impact on safety as well as on the protection of the river and the environment. Apart from regulating the general appearance, operation and use of docks, the ordinance also includes provisions concerning other waterway facilities, such as floating restaurants, hotels or stages.

On 29 February 2008, the **European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways** (ADN) entered into force. All ADN provisions have been applied as of that date. In April 2009, 11 contractual parties had already signed the agreement. Pursuant to the Directive of the European Parliament and of the Council on the inland transport of dangerous goods (2008/68/EC) all EU member states shall apply ADN regulations by 30 June 2011 at the latest. By means of both the agreement

and the directive, uniform legislation regarding the transport of dangerous goods on European inland waterways has been created which not only guarantees a high level of safety but also entails the recognition of ADN documents issued in Austria by another member state, as for example along the Rhine waterway.



## Danube waterway

### UN/ECE Classes

- VII
  - Vla, b, c
  - Va, b
  - IV
  - III
  - I, II
  - Other
- Lock
  - Lift lock
  - Chainage (river km)
- Cities**
- Capital
  - Other
  - National border

### Ports

- Major
- Other