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Item 3 of the provisional agenda

Exchange of information on measures aimed at promoting transport by inland waterway

Current state of the European network of inland waterways of international importance

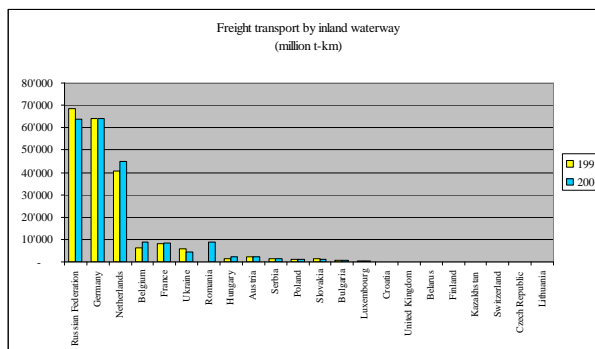
Addendum

Note by the secretariat

1. This document contains tables and figures referred to in the draft report on the current state of the development of the European network of inland waterways of international importance in the ECE region (ECE/TRANS/SC.3/2010/2).

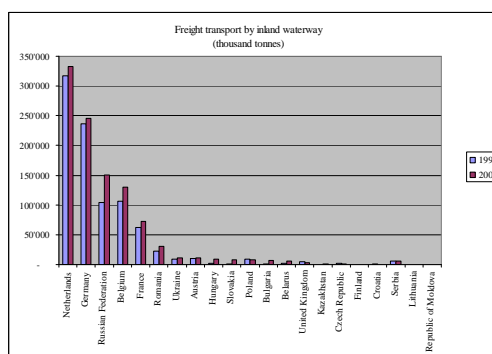
Data on the current state of the European network of inland waterways of international importance

Figure 1
Freight transport by inland waterways (tonne-kilometers)



Source: Main transport indicators in the UNECE region, 2008

Figure 2
Freight transport by inland waterways (tonnes)



Source: Main transport indicators in the UNECE region, 2008

Table 1
Freight transport by inland waterway in 1000 million t-km

	1970	1990	1995	2000	2005	2007	2007/1995 % change
Austria	1.29	1.66	2.05	2.44	1.75	2.60	27
Belarus	1.20	1.80	0.10	0.03	0.09	0.09	-10
Belgium	6.73	5.45	5.73	7.22	8.57	9.29	62
Bulgaria	1.83	1.61	0.53	0.31	0.76	1.01	91
Croatia			0.03	0.06	0.12	0.11	263
Czech Republic	0.85	1.55	0.28	0.08	0.06	0.04	-86
Finland	2.00	1.10	0.08	0.12	0.08	0.09	13
France	12.73	7.58	6.63	9.11	8.91	9.21	39

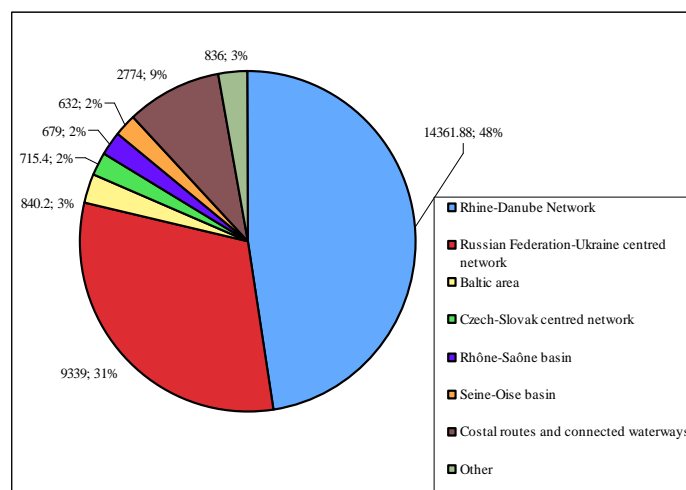
Germany	48.81	54.80	63.98	66.47	64.10	64.72	1
Hungary	1.76	2.04	1.21	0.89	2.11	2.21	83
Italy	0.35	0.12	0.14	0.17	0.09	0.09	-36
Lithuania	0.12	0.16	0.02	0.00	0.00	0.01	-45
Luxemburg	0.30	0.34	0.34	0.37	0.34	0.35	3
Netherlands	30.74	35.66	35.46	41.27	42.23	41.87	18
Poland	2.30	1.03	0.88	1.17	0.33	0.28	-68
Romania	1.35	2.09	3.11	2.63	8.44	8.19	163
Russian Federation	163.87 ^(a)	213.95 ^(a)	90.00	65.00	71.00	86.03	-4
Serbia			0.34	0.38	0.34	0.35	3
Slovakia	1.58	2.87	1.47	1.38	0.74	1.00	-32
Switzerland	0.14	0.20	0.16	0.12	0.10	0.13	-20
Ukraine	n.a.	11.93	5.68	5.90		5.67	0
United Kingdom	0.30	0.20	0.20	0.21	0.17	0.16	-18
Total	278.26	346.14	218.42	205.35	210.33	233.49	-33

^(a) Figures before 1991 are for Russian Federation only, excluding Baltic, Caucasian and Asian Soviet Republics.

^(b) Figures for Czechoslovakia and Slovakia are assigned to the two countries in these years in proportions of 65 (SVK) 35 (CS).

Source: OECD

Figure 3
The sub-networks of the AGN network



Source: the UNECE Inventory of Main Standards and Parameters of the E Waterway Network (Hereafter, the UNECE Blue Book) (ECE/TRANS/SC.3/144/Rev.1).

Table 2
Inland Waterways of International Importance (the 1996 European Agreement on Main Inland Waterways of International Importance)

Type of inland waterway	Classes of navigable waterways	Motor vessels and barges					Pushed convoys					Minimum height under bridges ¹ H (m)	Graphical symbols on maps
		Type of vessel: General characteristics					Type of convoy: General characteristics						
		Designation	Maximum length	Maximum beam	Draught ²	Tonnage	Length	Beam	Draught ³	Tonnage			
	L (m)	B (m)	d (m)	T (t)	L (m)	B (m)	d (m)	T (t)					
1	2	3	4	5	6	7	8	9	10	11	12	13	14
of inter-national importance	IV	Johann Welker	80–85	9.5	2.50	1,000–1,500		85	9.5 ⁴	2.50–2.80	1,250–1,450	5.25 or 7.00 ⁵	
	Va	Large Rhine vessels	95–110	11.4	2.50–2.80	1,500–3,000		95–110 ⁶	11.4	2.50–4.50	1,600–3,000	5.25 or 7.00 or 9.10 ³	
	Vb												
	VIa							95–110 ¹	22.8	2.50–4.50	3,200–6,000	7.00 or 9.10 ³	
	VIb		140	15.0	3.90			185–195 ¹	22.8	2.50–4.50	6,400–12,000	7.00 or 9.10 ³	
	VIc							270–280 ¹	22.8	2.50–4.50	9,600–18,000	9.10 ³	
								195–200 ¹	33.0–34.2 ¹	2.50–4.50	9,600–18,000		
VII							275–285 ⁷	33.0–34.2 ¹	2.50–4.50	14,500–27,000	9.10 ³		

¹ Allows for a safety clearance of about 0.30 m between the uppermost point of the vessel's structure or its load and a bridge.

² Allows for expected future developments in ro-ro, container and river-sea navigation.

³ The draught value for a particular inland waterway to be determined according to the local conditions.

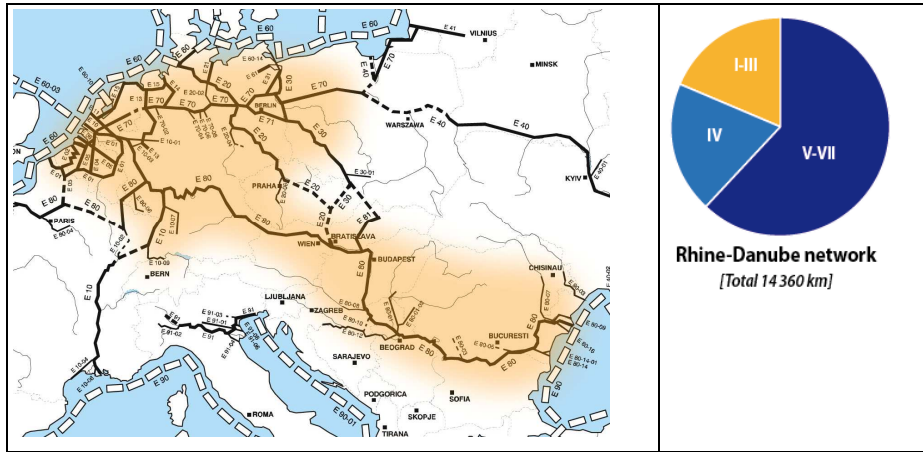
⁴ Some existing waterways can be considered as class IV by virtue of the maximum permissible length for vessels and convoys, even though the maximum beam is 11.4 m and the maximum draught 4.00 m.

⁵ Checked for container transport: 5.25 m for vessels transporting 2 layers of containers; 7.00 m for vessels transporting 3 layers of containers; 9.10 m for vessels transporting 4 layers of containers. 50% of the containers may be empty or ballast should be used.

⁶ The first figure takes into account the existing situations, whereas the second one represents both future developments and, in some cases, existing situations.

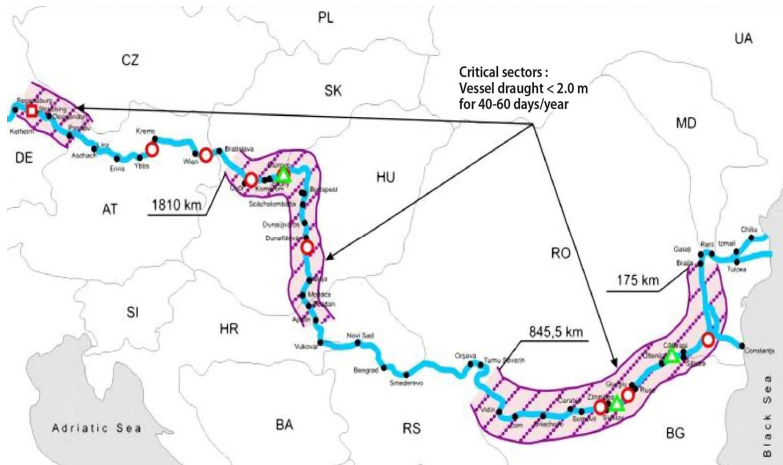
⁷ Convoys consisting of a larger number of barges can also be used on some sections of waterways of class VII. In this case, the horizontal dimensions may exceed the values shown in the table.

Figure 4
The Rhine-Danube network



Source: the UNECE Blue Book.

Figure 5
Critical sectors on the Danube in terms of its carrying capacity.



Source: Draft "Principales directions et recommandations dans le domaine de la politique nautique sur le Danube", Danube Commission, Budapest, 2009.

Table 3
Number of craft in the Rhine Fleet by year of build and size

31/12/2008 Number of craft in the Rhine fleet, by year of build and size								
<i>Year/Class</i>	<i><400t</i>	<i>400–999t</i>	<i>1000–1499t</i>	<i>1500–1999t</i>	<i>2000–2999t</i>	<i>3000t & +</i>	<i>unknown</i>	<i>Total</i>
< 1930	249	325	189	67	19	2	6	857
1930–1949	137	209	150	18	6	2	8	530
1950–1969	876	1251	899	185	78	21	35	3345
1970–1979	160	289	237	196	282	38	7	1209
1980–1989	108	535	114	159	347	104	16	1383
1990–1999	75	125	52	63	260	47	4	626
2000–2008	37	39	45	77	239	164	23	624
unknown	6	4	3	2	5	1	79	100
Total	1648	2777	1689	767	1236	379	178	8674
	19%	32%	19%	9%	14%	4%	2%	100%

Source: International Vessel Registration (IVR)

Table 4
Capacity of the Rhine Fleet, by year of build and size

31/12/2008 Capacity of the Rhine Fleet, by year of build and size									
<i>Year/Class</i>	<i><400t</i>	<i>400–999t</i>	<i>1000–1499t</i>	<i>1500–1999t</i>	<i>2000–2999t</i>	<i>3000t & +</i>	<i>Un-known</i>	<i>Total</i>	<i>average size</i>
< 1930	54 761	217 728	234 978	110 917	44 265	6 259		668 908	786
1930–1949	31 362	152 057	178 851	29 280	13 399	6 571		411 520	788
1950–1969	200 357	871 275	1 076 239	309 201	176 763	196 577		2 830 412	855
1970–1979	26 285	197 290	308 096	336 576	688 837	365 288		1 922 372	1 599
1980–1989	24 156	305 799	143 416	276 677	884 402	383 338		2 017 788	1 476
1990–1999	12 232	79 624	67 326	106 527	672 412	173 803		1 111 924	1 788
2000–2008	5 850	30 580	56 672	132 315	629 407	650 541		1 505 365	2 505
unknown	682	2 648	3 953	3 102	12 629	3 767		26 781	1 275
Total	355 685	1 857 001	2 069 531	1 304 595	3 122 114	1 786 144	0	10 495 070	1 235
	3%	18%	20%	12%	30%	17%	0%	100%	(in tonnes)

Source: IVR

Figure 6
Evolution of the Rhine fleet in terms of its capacity

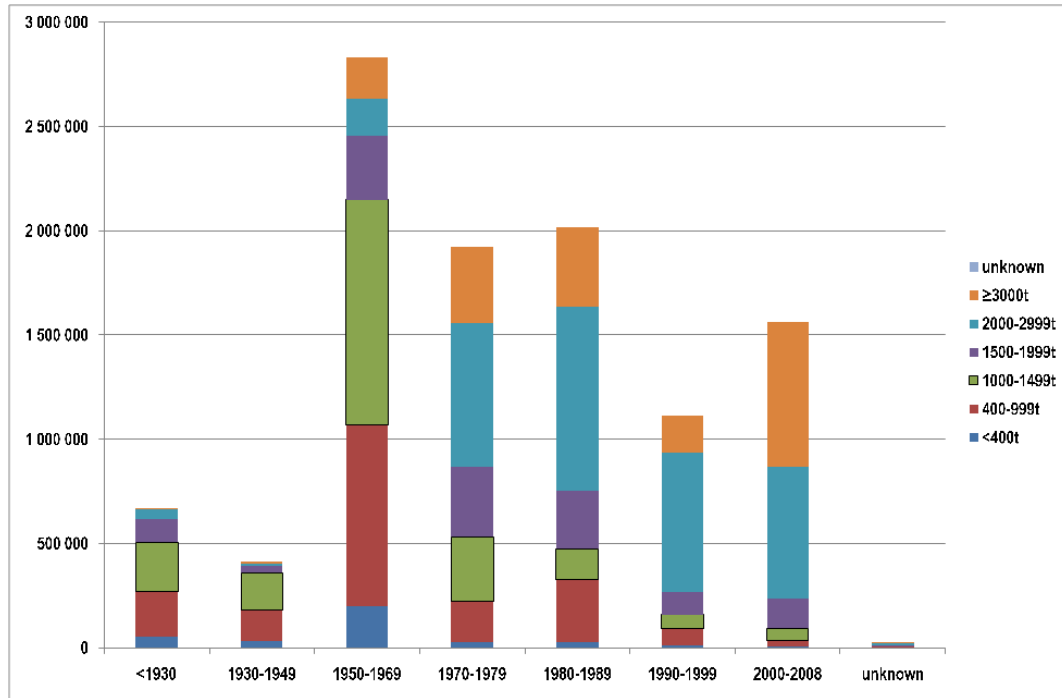


Table 5
Number of craft in the Rhine fleet by year of build and length

31/12/2008		Number of craft in the Rhine fleet by year of build and length				
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total
< 1930	708	185	63	1	77	1 034
1930–1949	368	121	33	0	20	542
1950–1969	2 351	736	212	1	58	3 358
1970–1979	648	247	282	2	32	1 211
1980–1989	932	118	311	5	19	1 385
1990–1999	328	52	218	11	21	630
2000–2008	183	38	325	67	15	628
unknown	14	5	2	1	80	102
Total	5 532	1 502	1 446	88	322	8 890
	62%	17%	16%	1%	4%	100%

Source: IVR

Table 6
Capacity of the Rhine fleet, by year of build and length

31/12/2008		Capacity of the Rhine fleet, by year of build and length					
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total	average size
< 1930	311 771	241 711	116 543	2 991	9 590	682 606	660
1930–1949	206 107	146 380	56 941	0	3 251	412 679	761
1950–1969	1 497 265	916 975	398 070	3 777	15 308	2 831 395	843
1970–1979	896 563	369 122	617 403	5 434	33 888	1 922 410	1 587
1980–1989	952 861	203 413	827 981	26 059	7 732	2 018 046	1 457
1990–1999	416 555	82 640	550 782	41 898	20 138	1 112 013	1 765
2000–2008	265 465	68 292	859 447	309 234	3 088	1 505 526	2 397
unknown	10 638	7 652	5 270	2 728	493	26 781	263
Total	4 557 225	2 036 185	3 432 437	392 121	93 488	10 511 456	1 182
	43%	19%	33%	4%	1%	100%	

Source: IVR (craft with known length are more numerous than those with known deadweight).

Table 7
Number of self-propelled craft in the Rhine fleet, by year of build and length

31/12/2008		Number of self-propelled craft in the Rhine fleet, by year of build and length				
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total
< 1930	578	159	54	0	64	855
1930–1949	281	113	27	0	14	435
1950–1969	1591	702	189	1	21	2504
1970–1979	70	209	258	2	4	543
1980–1989	36	72	243	4	4	359
1990–1999	27	35	173	11	3	249
2000–2008	40	26	266	67	9	408
unknown	2	4	2	1	29	38
Total	2625	1320	1212	86	148	5391
	49%	24%	22%	2%	3%	100%

Source: IVR.

Table 8
Capacity of the Self-propelled Rhine fleet, by year of build and length

31/12/2008		Capacity of the Self-propelled Rhine fleet, by year of build and length					
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total	average size
< 1930	263 503	206 383	9 016	0	7 739	575 641	673
1930–1949	166 967	135 689	43 496	0	2 197	348 349	801
1950–1969	936 368	862 481	335 425	3 777	7 711	2 145 762	857
1970–1979	41 701	300 286	545 004	5 434	3 841	896 266	1 651
1980–1989	26 420	106 422	596 511	11 251	388	740 992	2 064
1990–1999	10 237	50 812	419 684	41 898	68	522 699	2 099
2000–2008	26 462	41 250	684 522	309 234	28	1 061 496	2 602
unknown	339	5 552	5 270	2 728	0	13 889	366
Total	1 471 997	1 708 875	2 727 928	374 322	21 972	6 305 094	1 170
	23%	27%	43%	6%	0%	100%	

Source: IVR.

Table 9
Number of craft in the Rhine barge fleet, by year of built and length

31/12/2008		Number of craft in the Rhine barge fleet, by year of built and length					
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total	
< 1930	249	26	9	1	71	356	
1930–1949	90	8	6	0	15	119	
1950–1969	766	34	23	0	44	867	
1970–1979	578	38	24	0	30	670	
1980–1989	896	46	68	1	17	1028	
1990–1999	302	17	45	0	21	385	
2000–2008	145	12	59	0	8	224	
unknown	13	1	0	0	52	66	
Total	3039	182	234	2	258	3715	
	82%	5%	6%	0%	7%	100%	

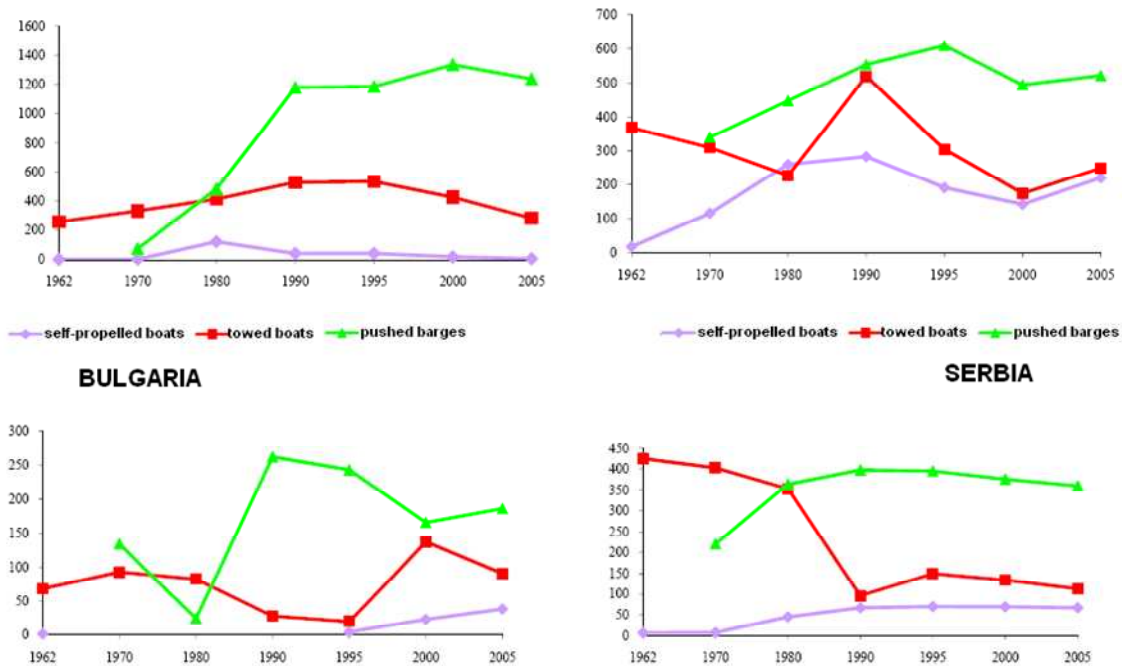
Source: IVR.

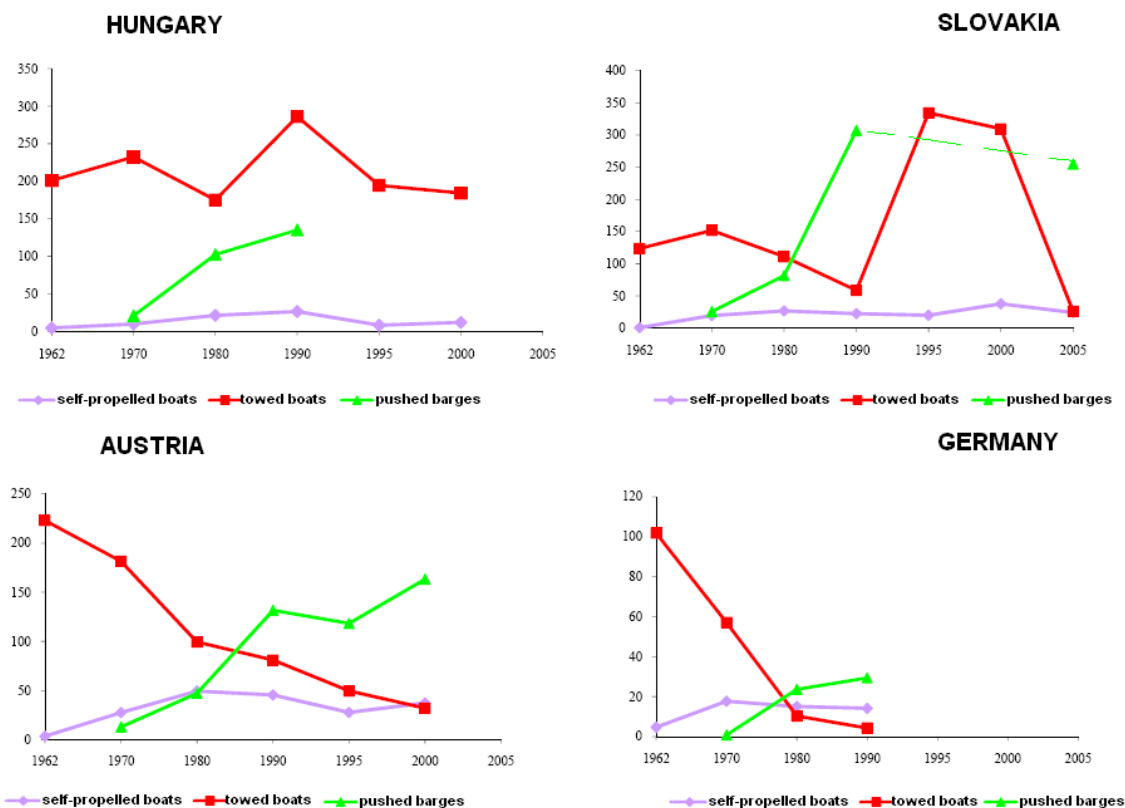
Table 10
Capacity of the Rhine barge fleet, by year of build and length

31/12/2008							
Capacity of the Rhine barge fleet, by year of build and length							
Year/Class	<76.75m	76.75–85.74m	85.75–110.74	≥110.75m	unknown	Total	average size
< 1930	57 290	35 328	18 527	2 991	6 527	120 663	339
1930–1949	39 713	10 691	13 445	0	1 640	65 489	550
1950–1969	561 464	54 494	62 645	0	8 013	686 616	792
1970–1979	854 862	68 836	72 399	0	30 085	1026 182	1 532
1980–1989	926 441	96 991	231 470	14 808	7 602	1277 312	1 243
1990–1999	406 339	31 828	131 098	0	20 138	589 403	1 531
2000–2008	239 136	27 042	174 925	0	3 088	444 191	1 983
unknown	10 299	2 100	0	0	493	12 892	195
Total	3 095 544	32 7310	704509	17 799	77 586	4 222 748	1 137
	73%	8%	17%	0%	2%	100%	

Source: IVR.

Figure 7
Evolution of the Danube fleet by country (1962 – 2005) (Thousand tones deadweight)





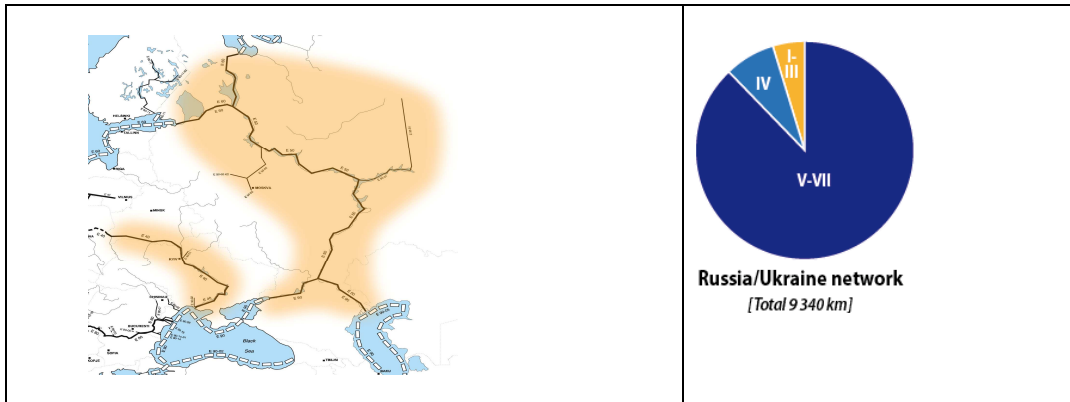
Source: Danube Commission, "ouvrage de référence statistique pour la période 1950-2005", Belgrade, 2008.

Table 11
Evolution of the total capacity of the Danube fleet by country between 1962 and 2005

Years	Boats in use													
	Tugs		Pushers		Self-propelled craft			Towed barges		Pushed barges		Total		
	Num-ber of units	Power in kw	Num-ber of units	Power in kw	Num-ber of units	Power in kw	Tonnes dwt	Num-ber of units	Tonnes dwt	Num-ber of units	Tonnes dwt	Num-ber of units	Power in kw	Tonnes dwt
1962	504	187263	82	43364	39827	2556	1767692	3142	230627	1807519
1970	717	214285	100	120300	180	125227	199733	2631	1758722	668	829488	4296	459812	2787943
1980	687	194300	194	218166	318	260481	441450	2195	1469513	1281	1788177	4675	672947	3699140
1990	634	177708	364	393624	423	314754	499973	2190	1598708	2143	2993692	5754	886086	5092373
2000	552	154848	398	512281	263	218300	348750	1699	1463342	1617	2573895	4529	885429	4385987
2005	292	86834	404	436255	342	216507	358087	900	825459	1949	2598564	3887	739596	3802680

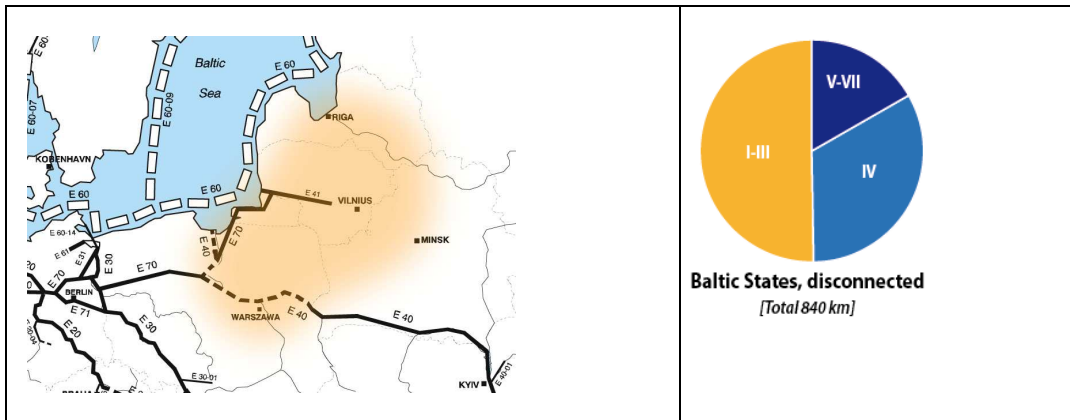
Source: Danube Commission, "ouvrage de référence statistique pour la période 1950-2005", Belgrade, 2008.

Figure 8
The Russian Federation-Ukraine centred network



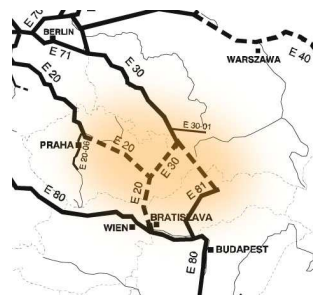
Source: the UNECE Blue Book.

Figure 9
The Baltic area



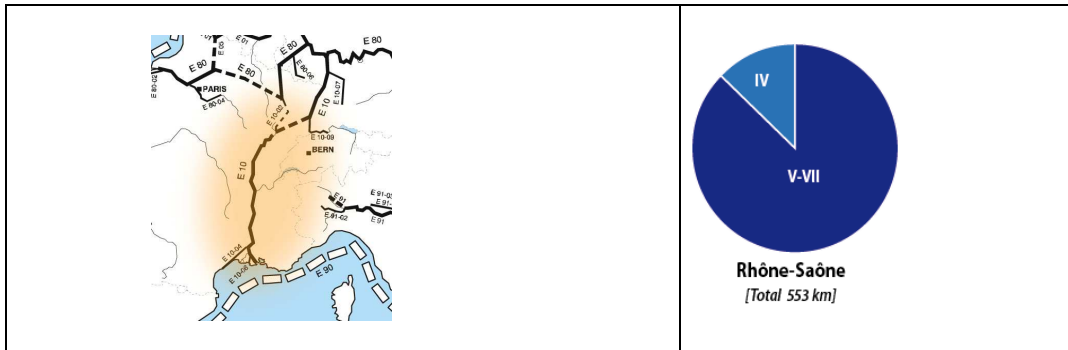
Source: the UNECE Blue Book.

Figure 10
The Czech-Slovak centred network



Source: the UNECE Blue Book.

Figure 11
The Rhône-Saône basin



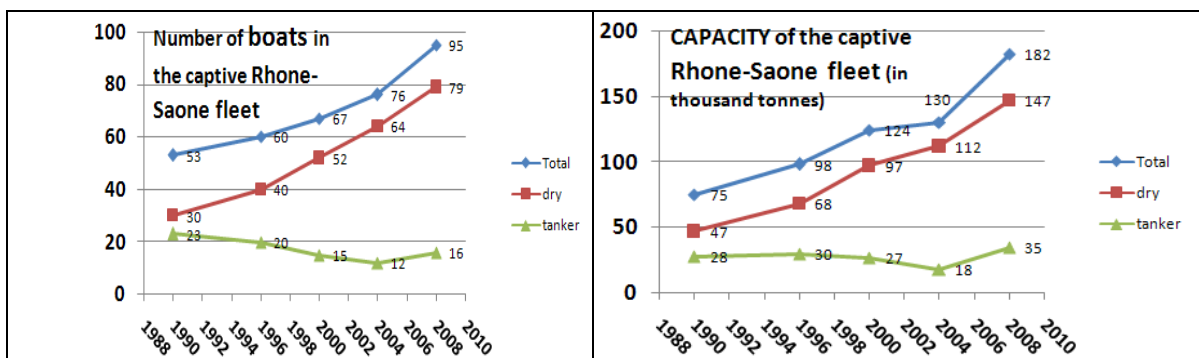
Source: the UNECE Blue Book.

Table 12
Public transport craft present in 2008 in the Rhône-Saône basin

	No	Tonnes	power kW	Average capacity (t)
Dry cargo fleet	79	147 240	32 524	1 864
Self-propelled barges	41	59 335	32 524	1 447
Pushed barges	38	87 905		2 313
Tanker fleet	16	35 322	8 290	2 208
Self-propelled tanker barges	7	13 898	8 290	1 985
Pushed tanker barges	9	21 424		2 380
Total	95	182 562	40 814	1 922

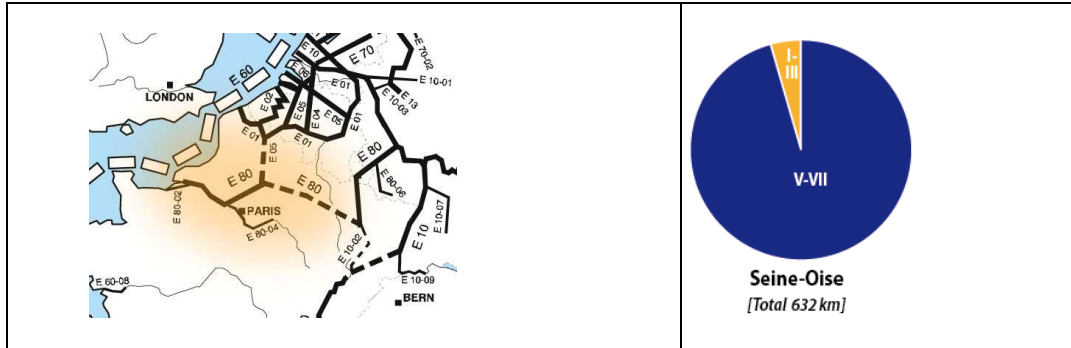
Source: Voies Navigables France (VNF) Lyon.

Figure 12
The size and capacity of the Rhone-Saone fleet



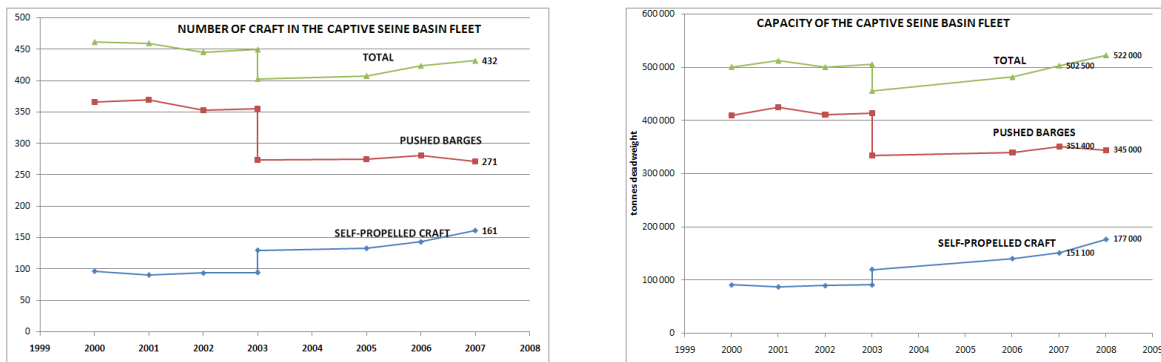
Source: VNF.

Figure 13
The Seine-Oise basin



Source: the UNECE Blue Book.

Figure 14
The fleet in the Seine-Oise Basin



Source: VNF & Consultant's estimates.