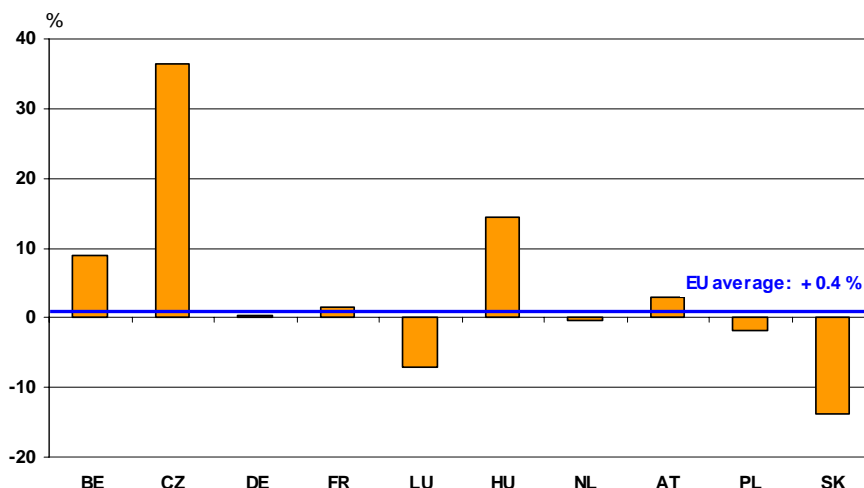


Inland Waterways Freight Transport in Europe in 2005

Figure 1: 2004-2005 growth rates of inland waterways freight transport by Member State (on the basis of transport volume in tonnes)



Highlights

In 2005, the total volume of this mode of transport in the European Union was about 465 million tonnes (based on national and international – load transport). National and international transport accounted for 47 % and 53 % respectively.

Germany, the Netherlands and Belgium are the three main contributors to this activity. In 2005, they accounted for 87 % of goods carried in Europe (based on national and international – load transport). However, in terms of total annual growth 2004-2005, the Czech Republic (36%) and Hungary (15%) recorded the highest figures. The EU average growth was about 0.4%.

In Poland, national transport was predominant based on the volume in tonnes transported. In the remaining Member States, international transport (loads plus unloads) was the main type with the exception of Luxembourg where transit transport was by far the most important.

At national level, crude and manufactured minerals and building material account for almost half of the commodities carried by inland waterways transport. Self-propelled barges carry 78 % of commodities.

Regarding Accession Countries, inland waterways are essentially used for domestic goods transport in Romania, while Bulgaria recorded its highest figures for international transport.

Statistics in focus

TRANSPORT

13/2006

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Inland waterways transport in the EU: general development by type of transport

Table 1 provides information on the evolution of the quantity forwarded since 2002. Comparing 2005 with 2004, a global increase of approximately 0.4 % can be observed for total freight transport at EU-level. In 2005, the total amount of goods transported by inland waterways in the EU was 465.3 million tonnes representing about 128.5 million Tonne-Km.

The figures recorded for Germany and the Netherlands reflect the key role of the Rhine axis for inland waterways freight transport. These two countries account for 68 % of the goods carried by this mode in Europe. Then, around 20 % are attributable to Belgium and 8 % to France. Finally, Austria is responsible for only 1 % of the goods carried by inland waterways while the remaining 3 % were recorded by the new Member States.

In the two countries which carry the highest quantity of goods by inland waterways, the Netherlands and Germany, the quantity in tonnes of goods transported is quite similar in 2002 and 2005. However, both of them recorded a growth since 2003.

In 2005 the Czech Republic registered a significant increase of 36 % on the amount of goods transported compared to 2004. On the contrary, Slovakia recorded a fall in the quantity of goods transported of 14 %.

Table 1: Evolution by Member State of total goods transport

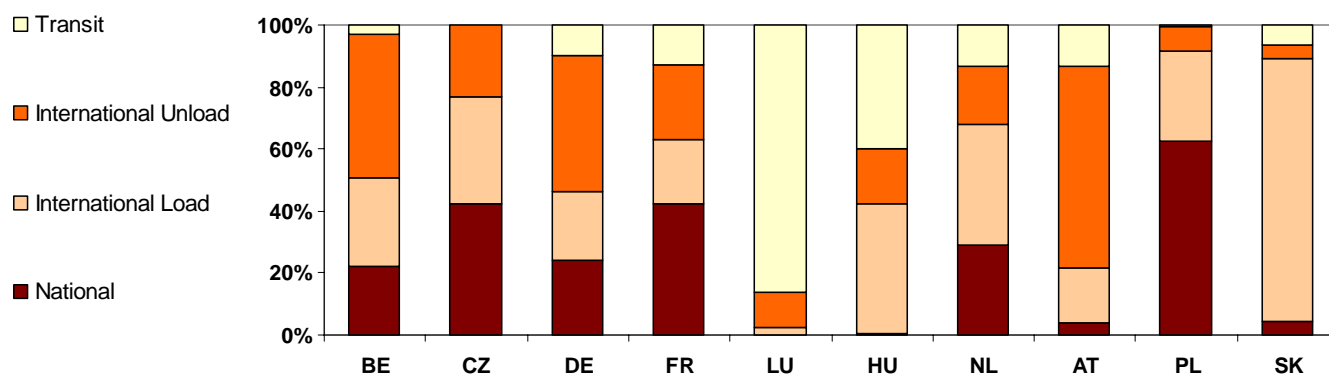
	BE	CZ	DE	FR	LU	HU	NL	AT	PL	SK	EU ¹
	in 1000 tonnes										
2002	134 463	1 569	231 746	67 092	11 285	7 093	311 507	12 316	:	3 293	459 110
2003	137 145	1 184	219 999	63 670	9 704	6 137	293 390	10 737	:	2 624	436 149
2004	147 151	1 179	235 861	67 312	11 180	7 356	319 219	9 072	7 297	2 725	463 409
2005	160 397	1 610	236 765	68 347	10 377	8 413	317 639	9 336	7 166	2 350	465 267
Growth Rate (%) 2002-2005	19.3	2.6	2.2	1.9	-8.0	18.6	2.0	-24.2	:	-28.6	1.3
	in Mio tkm										
2002	8 073	62	64 166	8 269	370	1 668	40 804	2 846	:	98	126 355
2003	8 230	49	58 154	8 024	316	1 517	39 031	2 276	:	94	117 692
2004	8 392	48	63 667	8 416	370	1 904	43 092	1 747	370	91	128 096
2005	8 566	63	64 096	8 905	342	2 110	42 225	1 753	327	88	128 475
Growth Rate (%) 2002-2005	6.1	2.1	-0.1	7.7	-7.5	26.5	3.5	-38.4	:	-10.0	1.7

¹ In order to avoid double counting, the total in 1000 tonnes corresponds to the sum of national and international load transport.

Three kinds of transport can be considered when looking at freight transport via inland waterways: national, international and transit transport. At European level, and considering transit transport as international transport, national and international represent 47 % and 53 % respectively of total transport by inland waterways

(based on national and international-load transport). However, at national level the picture is different. Looking at Figure 2, it appears that in Luxembourg, no commodity is transported at national level by this mode. Hungary, Austria and Slovakia also display very low shares for domestic transport.

Figure 2: Split of total goods transport by type of transport (based on volume in tonnes), 2005 (%)



On the other hand, in Poland, the Czech Republic, France, the Netherlands, Germany and Belgium, the shares of domestic transport in total inland waterways freight transport were considerable (62 %, 43 %, 42 %, 29 %, 24 % and 22 % respectively for each of these Member States in 2005).

Luxembourg recorded the largest proportion of transit transport, accounting for 86 % of inland waterways transport.

In international transport, Austria recorded the highest proportion of unloads (65 %) while Slovakia reported the highest proportion of loads (85 %).

Table 2: International intra-EU goods transport declared by relation in 2005 (1000 tonnes)

Loading country \ Unloading country	Unloading country										TOTAL
	BE	CZ	DE	FR	LU	HU	NL	AT	PL	SK	
BE		5	12 721	4 814	197	15	26 813	3	6	7	44 581
CZ	9		525	:	:	:	21	:	:	:	555
DE	14 850	349		2 160	329	288	30 856	1 047	364	17	50 260
FR	4 446	:	4 731		90	:	6 251	0	0	:	15 518
LU	42	:	142	2		:	78	:	:	:	264
HU	8	:	657	1	9		526	822	:	:	2 023
NL	38 934	18	74 445	4 767	433	374		882	9	44	119 906
AT	88	:	550	16	:	442	130		:	176	1 402
PL	13	:	2 032	:	:	:	40	:		:	2 085
SK	4	:	378	:	:	15	114	1 301	:		1 812
TOTAL	58 394	372	96 181	11 760	1 058	1 134	64 829	4 055	379	244	238 406

Turning to international freight transport, it is interesting to consider which are the main countries exchanging commodities. The quantity of goods exchanged between countries is notably influenced by economic aspects but also on the structure of the trans-European network.

Table 2 is a matrix and shows the quantity of goods exchanged in 2005 between the ten Member States. The declaring Member State is always the loading country.

It emerges that 83 % the international transport by inland waterways are carried out between the Netherlands, Germany and Belgium.

The Netherlands is the European country which exports the largest quantity by a large margin (119.9 million tonnes of goods). With Germany and Belgium, the Netherlands exchanged 113 million tonnes of goods, i.e. 95 % of its total international transport volume.

For exports, Germany is an important destination for all the Member States (about 96 million tonnes of goods): with 78 % coming from the Netherlands, 13 % from Belgium and 5 % from France. Germany is by far the country which imports the largest volume of goods.

Inland waterways transport by type of goods

Tables 3, 4 and 5 analyse groups of goods carried in each Member State for national, international and transit transport respectively.

Table 3 shows that at national level, crude and manufactured minerals and building material (Chapter 6 of the NSTR/R classification) accounted for more than 40 % of the commodities carried. 21 % are petroleum products (NST/R Chapter 3). The breakdown by type of goods carried remained similar throughout the years.

At international level (see Table 4), the products most carried consisted of 'Crude and manufactured minerals, building material' (NST/R chapter 6). Their share was 18 % of all commodities carried. The chapters 'Petroleum products' (NST/R chapter 3) and 'Ores and metal waste' (NST/R chapter 4) each accounted for 15 %. As for national transport, the global proportions did not change in recent years.

Tables 3, 4 and 5 also reveal differences between Member States: at national level, Austria distinguished itself from other European countries by mainly carrying petroleum products (NST/R Chapter 3) and 'Crude and manufactured minerals, building material' (NST/R Chapter 6). These commodities together accounted for 70 % of the goods transported.

For the Czech Republic, crude and manufactured minerals and building materials (NST/R Chapter 6) represented 94 % of the total. The breakdown by goods groups was similar in Belgium and Germany and also wider spread. Around 30 % of all the commodities transported still consisted of crude and manufactured minerals and building materials (NST/R Chapter 6). In France and the Netherlands, the transport of these goods was even more predominant since their proportion accounted for around 59 % (France) and 45 % (Netherlands) of the total.

Table 3: National transport of goods (in 1000 tonnes) by NST/R Chapter declared in 2005

National	NST/R Chapters										TOTAL	TOTAL (%)
	0	1	2	3	4	5	6	7	8	9		
BE	520	1 013	4 242	7 453	1 504	1 282	11 678	1 649	2 218	3 851	35 409	16.2
CZ	21	0	0	0	1	0	643	14	0	6	685	0.3
DE	2 554	3 441	7 571	14 770	3 115	1 505	15 657	1 044	5 262	1 744	56 662	25.9
FR	2 981	461	1 809	3 274	161	246	17 066	84	1 035	1 819	28 936	13.2
LU	-	-	-	-	-	-	-	-	-	-	-	-
HU	1	0	0	29	0	0	12	0	0	12	54	0.0
NL	1 298	6 817	2 732	19 407	1 619	1 064	41 433	1 271	5 512	10 854	92 007	42.1
AT	9	2	0	137	1	85	111	11	0	1	356	0.2
PL	5	5	682	62	261	71	3 004	52	276	48	4 466	2.0
SK	9	0	0	0	0	0	94	0	0	0	103	0.0
TOTAL	7 398	11 740	17 036	45 131	6 661	4 253	89 698	4 125	14 302	18 334	218 679	
TOTAL (%)	3.4	5.4	7.8	20.6	3.0	1.9	41.0	1.9	6.5	8.4		100

Table 4: International transport of goods (in 1000 tonnes) by NST/R Chapter declared in 2005

International	NST/R Chapters										TOTAL	TOTAL (%)	
	0	1	2	3	4	5	6	7	8	9			
BE	Total	3 252	4 411	8 988	20 823	7 775	7 355	28 173	3 688	12 256	23 777	120 498	23.6
	Load	735	1 287	4 064	8 242	1 404	2 931	8 702	1 528	6 181	10 586	45 660	8.9
	Unload	2 516	3 123	4 924	12 581	6 371	4 424	19 471	2 161	6 076	13 191	74 839	14.6
CZ	Total	305	353	10	0	13	17	65	90	44	26	924	0.2
	Load	293	113	10	0	2	17	5	82	6	24	551	0.1
	Unload	13	240	0	0	11	0	60	8	38	2	372	0.1
DE	Total	5 375	10 224	22 201	19 652	30 968	10 091	25 842	4 508	14 208	13 472	156 542	30.6
	Load	3 328	3 338	1 045	4 182	2 287	5 318	16 986	1 685	6 604	8 587	53 360	10.4
	Unload	2 047	6 886	21 155	15 470	28 681	4 773	8 856	2 823	7 604	4 885	103 182	20.2
FR	Total	5 805	2 494	4 106	3 013	2 242	1 852	7 041	1 189	1 254	1 575	30 570	6.0
	Load	5 653	1 995	60	993	229	1 046	4 797	157	203	1 125	16 257	3.2
	Unload	152	498	4045	2021	2013	806	2244	1031	1052	449	14 312	2.8
LU	Total	0	0	62	498	227	124	437	87	0	4	1 440	0.3
	Load	0	0	0	0	13	103	145	9	0	4	274	0.1
	Unload	0	0	62	498	214	21	292	79	0	0	1 166	0.2
HU	Total	1 880	1 064	181	1 170	68	369	70	147	3	71	5 023	1.0
	Load	1 878	371	22	794	47	292	61	0	3	22	3 489	0.7
	Unload	2	692	159	375	22	78	9	147	0	49	1 533	0.3
NL	Total	5 232	10 746	21 182	31 977	33 498	5 803	30 763	2 903	16 355	25 509	183 967	36.0
	Load	685	7 009	19 877	24 508	31 954	3 553	12 889	2 109	9 597	11 030	123 211	24.1
	Unload	4 547	3 736	1 305	7 469	1 544	2 250	17 874	794	6 758	14 479	60 756	11.9
AT	Total	680	429	161	1 776	3 039	342	474	762	39	19	7 723	1.5
	Load	143	52	3	617	11	122	123	555	16	11	1 653	0.3
	Unload	537	377	157	1 159	3 028	220	351	207	23	9	6 070	1.2
PL	Total	36	122	1 092	0	259	492	329	289	46	8	2 674	0.5
	Load	34	72	1 092	0	223	72	275	275	37	5	2 086	0.4
	Unload	2	50	0	0	35	420	54	15	8	3	588	0.1
SK	Total	137	128	45	608	768	66	30	257	30	29	2 097	0.4
	Load	133	73	45	608	760	61	9	247	30	24	1 989	0.4
	Unload	4	54	0	0	8	5	21	10	0	5	107	0.0
TOTAL	22 703	29 969	58 028	79 518	78 857	26 512	93 225	13 921	44 236	64 489	511 456		
TOTAL (%)	4.4	5.8	11.3	15.5	15.4	5.2	18.2	2.7	8.6	12.6		100	

Table 5: Transit transport of goods (in 1000 tonnes) by NST/R Chapter declared in 2005

Transit	NST/R Chapters										TOTAL	TOTAL (%)
	0	1	2	3	4	5	6	7	8	9		
BE	1 282	285	199	39	330	545	604	762	405	39	4 490	4.9
CZ	-	-	-	-	-	-	-	-	-	-	-	-
DE	3 278	2 109	3 934	4 402	1 763	1 614	2 693	559	517	2 692	23 561	25.5
FR	141	330	196	3 426	108	733	1 818	182	686	1 220	8 842	9.6
LU	1 776	784	3 656	49	1 080	702	572	231	81	8	8 938	9.7
HU	106	180	147	80	1 499	530	159	186	116	332	3 337	3.6
NL	1 083	1 447	3 733	5 515	1 695	5 185	4 877	1 792	5 736	10 600	41 664	45.2
AT	257	457	16	91	1	148	50	112	23	103	1 258	1.4
PL	5	1	0	0	15	5	0	0	0	1	27	0.0
SK	18	17	23	27	10	33	9	1	0	14	150	0.2
TOTAL	7 945	5 611	11 904	13 630	6 502	9 495	10 781	3 825	7 565	15 009	92 266	
TOTAL (%)	8.6	6.1	12.9	14.8	7.0	10.3	11.7	4.1	8.2	16.3		100

Concerning the breakdown by chapter of products for international transport (see Table 4), it is less easy to profile countries. Member States shipped the various product groups in different proportions. Hungary and the Czech Republic had the highest share of agricultural products and live animals (NST/R Chapter 0), accounting for 37 % and 33 % respectively of all goods transported. In Luxembourg, the transported goods consisted mainly of crude and manufactured minerals and building materials (NST/R Chapter 6) and petroleum products (NST/R Chapter 3) accounting for almost two - thirds of the total.

Concerning the breakdown by goods categories carried over inland waterways in transit (see Table 5), the share of agricultural products and live animals is much higher than observed for national and international transport (NST/R Chapter 0 accounted for 9 % of total transit transport, 3 % of national transport and 5 % of international transport). France, Germany, Slovakia and the Netherlands registered a fairly significant share of petroleum products (NST/R Chapter 3) in transit transport (39 %, 19 %, 18 % and 13 % respectively).

Inland waterways by type of vessels

The importance of each type of vessel for inland waterways freight transport is given in Table 6. Unsurprisingly, self-propelled barges are by far the most used vessels for freight transport at European level. In 2005, 78 % of the commodities were carried on such vessels. Pushed barges took a share of about 21 % of all the goods. The role of towed barges was marginal (1 %). However, here again, the situation is

quite specific to each Member State. Luxembourg for instance did not record the use of any towed barges. In the other Member States, the share of self-propelled tankers varied widely. In France, this kind of vessel represented a low share (less than 5 %), whereas in Belgium, Germany and the Netherlands, the share relatively to all the self-propelled barges was at least 20 %. Towed barges were used most in Slovakia and Austria with shares of 46% and 19% respectively.

Table 6: Total transport by type of vessels (in 1000 tonnes) declared in 2005

Vessel type	BE	CZ	DE	FR	LU	HU	NL	AT	PL	SK
Self propelled barges	128 950	603	188 803	54 572	9 257	2 630	255 252	4 079	673	234
Self propelled tankers	37 753	:	50 932	2 908	562	615	78 006	817	57	:
Other self propelled barges	91 197	:	137 871	51 664	8 695	2 015	177 246	3 263	616	:
Towed barges	222	:	532	78	0	710	856	1 765	36	1 090
Towed tankers	0	:	16	0	0	143	2	2	0	:
Other towed barges	222	:	515	78	0	566	854	1 763	36	:
Pushed barges	31 225	:	47 430	13 697	1 120	5 074	61 521	3 492	6 457	237
Pushed tankers	1992	:	1904	1851	0	569	4233	1186	0	:
Other pushed barges	29 233	:	45 526	11 846	1 120	4 504	57 288	2 306	6 457	:
Other goods carrying vessels		1 006	0	0	0	0	10	0	0	789
TOTAL	160 397	1 609	236 765	68 347	10 377	8 414	317 639	9 336	7 166	2 350

Inland waterways freight transport in the Accession Countries

As Accession Countries, Bulgaria and Romania also report inland waterways freight transport data according to the principles set out in the Directive. The figures presented in Table 7 were supplied on a voluntary basis. The main inland waterways connected with third

countries networks are the Rhine-Main-Danube axis and the Elbe-Oder-Danube axis. The Danube represents the main European river linking Western Europe to Central and Eastern Europe up to the Black Sea.

Table 7: Evolution of total goods transport by type of transport (in 1000 tonnes and Mio tkm)

	1000 tonnes							Mio tkm
	Total	National	International				Transit	Total
			load	unload	of which EU-15			
		load			unload			
BULGARIA¹								
2002	6 395	539	1 877	3 980	204	87	:	562
2003	7 269	773	2 301	4 196	143	89	:	613
2004	4 406	904	470	3 033	211	157	:	697
2005	5 271	1 875	384	3 011	201	171	:	757
ROMANIA								
2002	:	:	:	:	:	:	:	:
2003	:	:	:	:	:	:	:	:
2004	29 893	24 717	2 222	2 954	:	:	:	6 955
2005	32 845	27 335	2 000	3 511	:	:	:	8 436

1: Data for vessels used for ferrying purposes and dredgers have been included up to 2003. Data from 2004 includes dredgers but not vessels for ferrying purposes. This explains the decrease in the total goods transport reported by Bulgaria from 2004 since ferry transport with Romania has been excluded.

Looking at the data reported by the two Accession Countries, it becomes obvious that the use of waterways is very different: while it is essentially used for domestic goods transport in Romania, Bulgaria displays the highest figures for international transport. Imports (International – unload) were of particular importance.

Table 8 provides indications of the quantity of goods exchanged between the EU Member States and the accession countries in 2005. The declaring country is the loading Accession Country.

The main partners of Romania are Bulgaria, Hungary, and Austria. With these three countries, Romania exchanged a volume of 753 000 tonnes of goods, which corresponded to 84 % of its total for international transport.

Principal partners of Bulgaria were Germany and Romania with whom it exchanged 233 000 tonnes of goods, i.e. 77 % of the total volume of international transport.

Table 8: Goods transport declared by relation in 2005 (1000 tonnes)

Loading country \ Unloading country	Unloading country												TOTAL
	BE	CZ	DE	FR	LU	HU	NL	AT	PL	SK	BG	RO	
RO	1	11	111	:	:	230	10	207	:	11	316	:	897
BG	:	0	157	0	:	13	:	44	:	13	0	76	303
TOTAL	1	11	268	0	0	243	10	251	0	24	316	76	1200

➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

The figures presented in this publication have been extracted from the Eurostat inland waterways transport database. This includes the statistics of national, international and transit transport of the Member States, collected under Council Directive 80/1119/EEC. Data are reported by 10 Member States of the European Union: Belgium (BE), Germany (DE), France (FR), Luxembourg (LU), the Netherlands (NL), Austria (AT), Czech Republic (CZ), Hungary (HU), Poland (PL) and Slovakia (SK). According to Article 2 of the Directive, Member States in which the total volume of goods transported annually by inland waterways as international or transit transport does not exceed one million tonnes shall not be obliged to supply the statistics required under the terms of this Directive. Also, two accessing countries, Bulgaria (BG) and Romania (RO), provide data according to the Directive requirements

Data availability

Poland: data from 2002 and 2003 are not available; data for 2004 include only transport by vessels registered in Poland and therefore exclude foreign vessels transport on Polish inland waterways.

Romania: data from 2002 and 2003 are not available.

In tables 4 and 5, the total has been calculated as the sum of declared values and includes double counting.

Symbols

“.” non available
“-“ non applicable.

Definitions of various kinds of inland waterways transport

Total goods transport at European level in tonnes: It includes transport declared by each Member state as national and international load. In other words, it doesn't take into account international unload because of double counting at European level. Total goods transport in tkm are reported on national territory and therefore include national, international and transit transport.

National inland waterways transport: inland waterways transport between two places (a place of loading and a place of unloading) located in the same country irrespective of the country in which the inland waterways transport vessel is registered.

International inland waterways transport: inland waterways transport between two places (a place of loading and a place of unloading) located in two different countries.

Inland waterways transit: inland waterways transport through a country between two places (a place of loading and a place of unloading) both located in another country or in other countries provided the total journey within the

country is by an inland waterways transport vessel and that there is no transshipment in that country.

Self-propelled barge: inland waterways transport freight vessel having its own means of mechanical propulsion.

Self-propelled tanker barge: self-propelled barge intended for the bulk transport of liquids or gases.

Towed barge: inland waterways transport freight vessel designed to be towed which does not have its own means of mechanical propulsion.

Towed tanker barge: towed barge for the bulk transport of liquids or gases.

Pushed barge: inland waterways transport freight vessel which is designed to be pushed and does not have its own means of mechanical propulsion.

Pushed tanker barge: pushed barge for the bulk transport of liquids or gases.

Breakdown by goods groups

The NST/R classification (Standard Goods Nomenclature for Transport Statistics / revised) consists of 24 goods groups. Because of the lack of space, it is not possible to present all 24 groups separately. The individual goods groups have thus been aggregated at NST/R chapter level. A brief description of the NST/R chapters is given in the relevant section of the commentary to enhance readability.

NST/R chapters

- | | |
|----|---|
| 0: | Agricultural products and live animals |
| 1: | Foodstuffs and animal fodder |
| 2: | Solid mineral fuels |
| 3: | Petroleum products |
| 4: | Ores and metal waste |
| 5: | Metal products |
| 6: | Crude and manufactured minerals, building material |
| 7: | Fertilizers |
| 8: | Chemicals |
| 9: | Machinery, transport equipment, manufactured articles and miscellaneous articles. |

This publication was prepared with the assistance of Mrs Sandrine Cipponeri and Nicolas Marchadour, Sogeti Luxembourg S.A.

Further information:

Data: [EUROSTAT Website/Home page/Data](#)

Transport



Inland waterways transport



Inland waterways transport measurement - goods (Council Directive 80/1119/EEC)

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