

# The main features of Recent Developments in Trade Logistics and the Future Trend

Beijing 23rd June 2008

Vincent Valentine

Transport Section

Division on Technology and Logistics



## Contents

### A. Recent Developments

1. World economy
2. Seaborne trade
3. World fleet
4. Freight rates
5. Port developments
6. Inland transport
7. Asia and Latin America

### B. Future trends

1. Infrastructure investment
2. Rising commodity prices
3. Transport developments
4. Conclusion

# A. Recent Developments

## 1. World Economy

### World economic growth 2005 – 2008<sup>a</sup>

<i>Region / Country</i>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008<sup>b</sup></b>
<b>WORLD</b>	<b>3.5</b>	<b>3.9</b>	<b>3.8</b>	<b>2.8</b>
<b>Developed countries</b>	<b>2.4</b>	<b>2.8</b>	<b>2.5</b>	<b>1.5</b>
<i>of which:</i>				
United States	3.1	2.9	2.2	1.0
Japan	1.9	2.4	2.1	1.3
EU (27)	1.9	3.1	2.9	2.1
<i>of which:</i>				
Germany	0.9	3.0	2.5	1.7
France	1.9	2.2	2.1	1.9
Italy	0.2	1.9	1.5	0.5
United Kingdom	1.9	2.8	3.0	2.3
<b>Developing countries</b>	<b>6.6</b>	<b>7.1</b>	<b>7.3</b>	<b>6.3</b>
<i>of which:</i>				
China	10.4	11.1	11.9	9.6
India	8.8	9.4	8.5	8.2
Brazil	3.2	3.7	5.4	4.2
South Africa	5.1	5.4	5.1	4.1
<b>Economies in Transition</b>	<b>6.6</b>	<b>7.5</b>	<b>8.4</b>	<b>7.3</b>
<i>of which:</i>				
Russian Federation	6.4	6.7	8.1	7.5

Source: UNCTAD secretariat calculations based on UNCTAD Handbook of Statistics online; United Nations, Department of Economic and Social Affairs (UN/DESA), LINK Global Economic Outlook 2008 (mid-2008 update, [http://www.un.org/esa/analysis/link/global\\_economic\\_outlook.htm](http://www.un.org/esa/analysis/link/global_economic_outlook.htm)); and national sources.

a Calculations for country aggregates are based on real GDP in dollars at base year 2000.

b Forecast.

## 2. Seaborne trade

### World seaborne trade

- It is estimated that world seaborne trade by volume amounts to 77 per cent of total world trade. Some 16 per cent of world trade passes overland, 6.7 per cent through pipelines and only 0.3 via air<sup>[1]</sup>.

Source: <sup>[1]</sup> Lloyds MIU (2007)

## Development of international seaborne trade, selected years (Millions of tonnes)

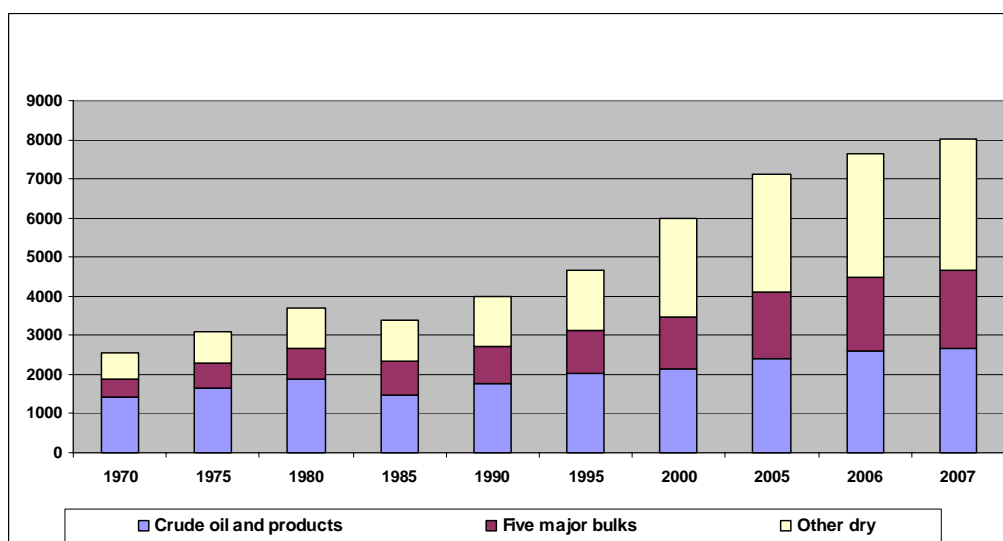
Year	Oil	Main bulks <sup>a</sup>	Other Dry cargo	Total (all cargoes)
1970	1,442	448	676	2,566
1980	1,871	796	1,037	3,704
1990	1,755	968	1,285	4,008
2000	2,163	1,288	2,533	5,984
2006	2,595	1,876	3,181	7,652
2007 <sup>b</sup>	2,681	1,997	3,344	8,022

43%

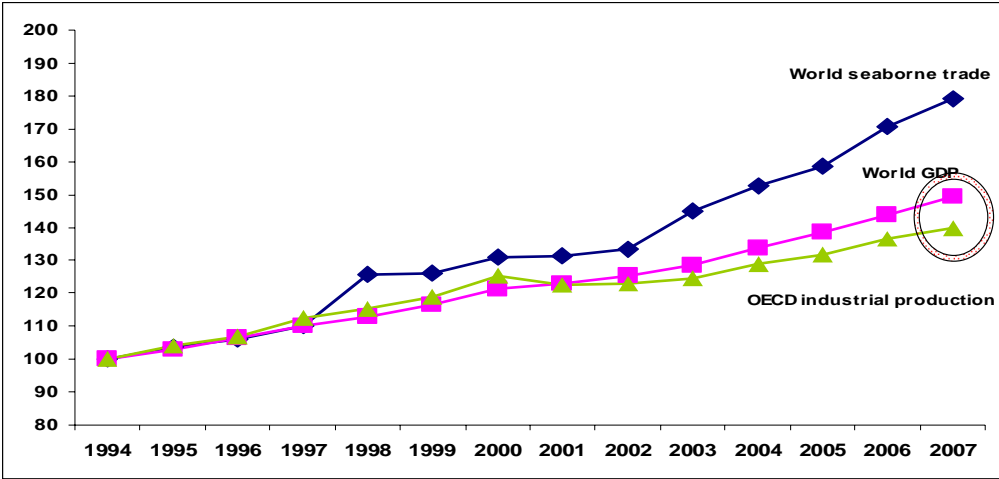
66%

Source: Estimated by UNCTAD secretariat on the basis of annex II and data supplied by ports and specialized sources.  
 a Iron ore, grain, coal, bauxite/alumina and phosphate.  
 b Preliminary.

## International seaborne trade for selected years (Millions of tonnes loaded)

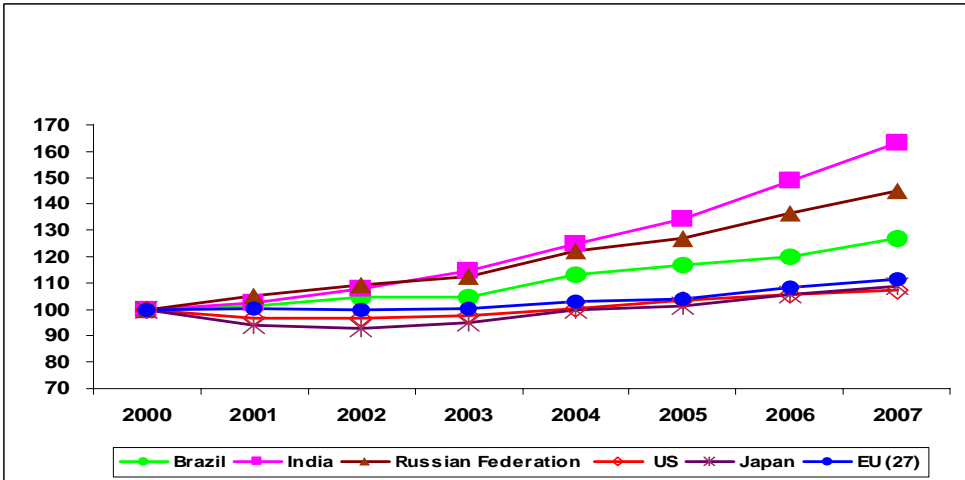


### Indices for world economic growth (GDP), OECD industrial production, and world seaborne trade (volume), 1994 – 2007 (1994 = 100)



Source: UNCTAD secretariat on the basis of OECD Main Economic Indicators, April 2008; UNCTAD Trade Development Report 2008 and UNCTAD Review of Maritime Transport, various issues.

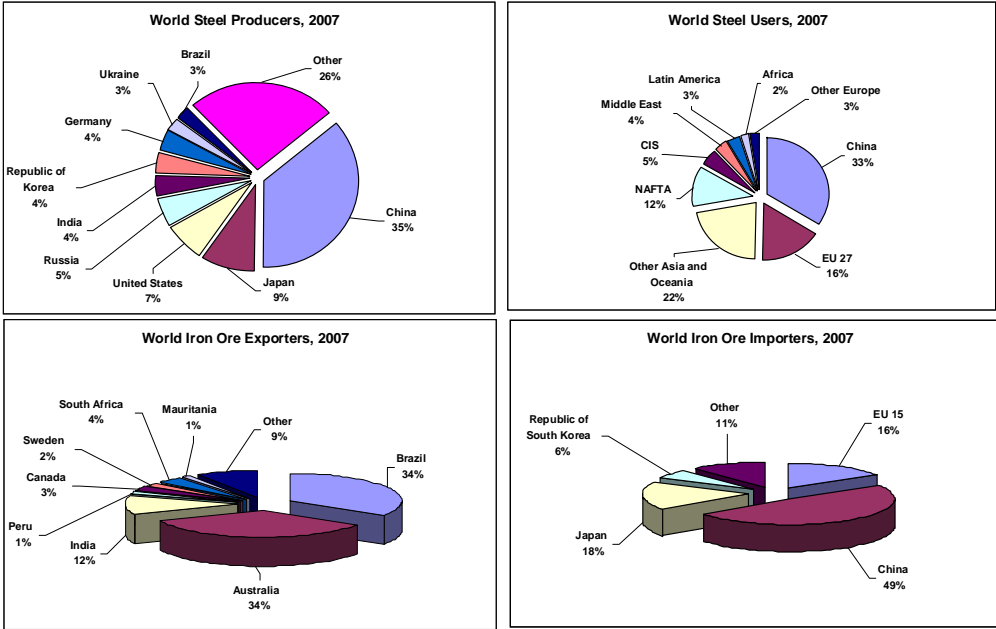
### OECD Industrial Production Index, selected countries, 2000-2007 (2000 = 100)



Source: UNCTAD secretariat on the basis of OECD Main Economic Indicators, April 2008.

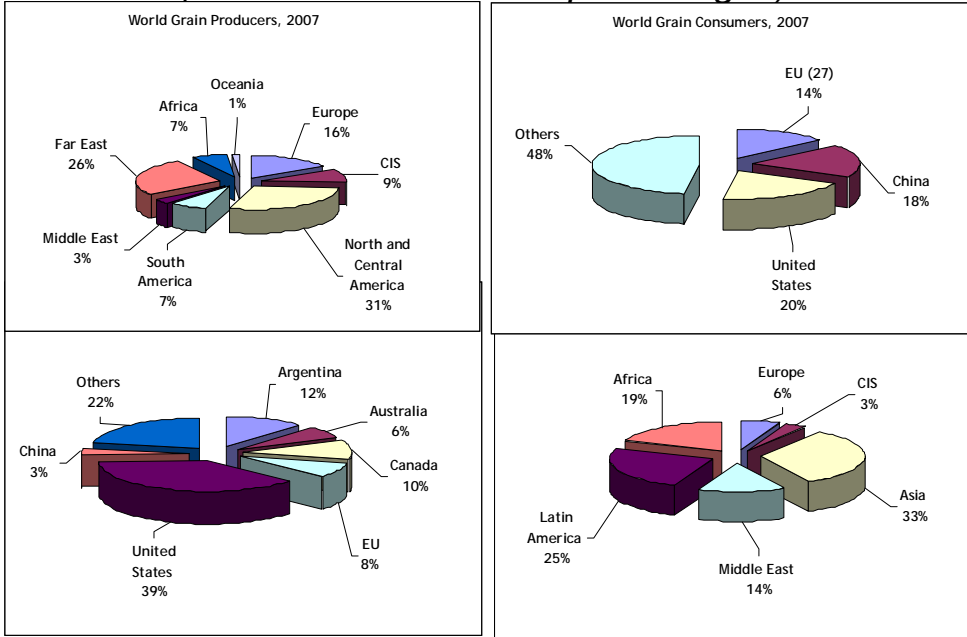
## Major bulks (steel and iron ore): producers, consumers and traders in 2007

*(World market share in percentages)*



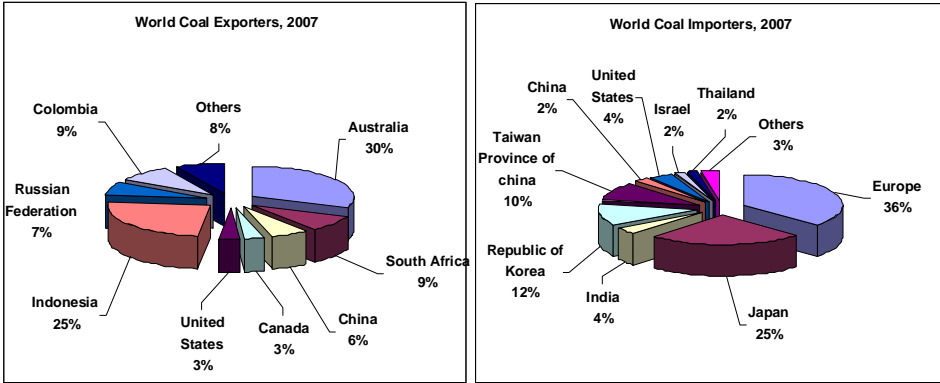
## Major bulks (grain): producers, consumers and traders in 2007

*(World market share in percentages)*



## Major bulks (coal): producers, consumers and traders in 2007

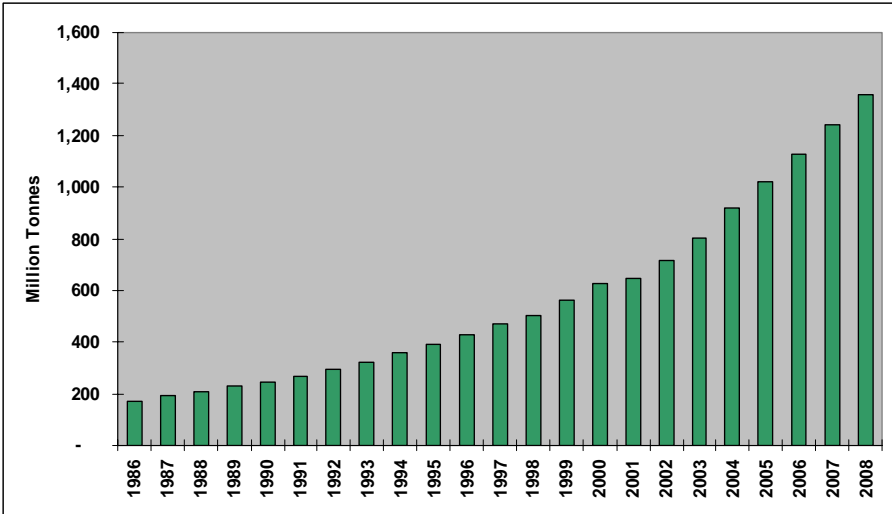
*(World market share in percentages)*



Source: UNCTAD secretariat on the basis of data supplied in Clarkson Research Services, *Shipping Review & Outlook*, Spring 2008; *Dry Bulk Trade Outlook*, May 2008; The Economist Intelligent Unit, *World commodity forecasts: food, feedstuffs and beverages*, May 2008, and International Grains Council (IGC).

## International containerized trade growth, 1986 – 2008

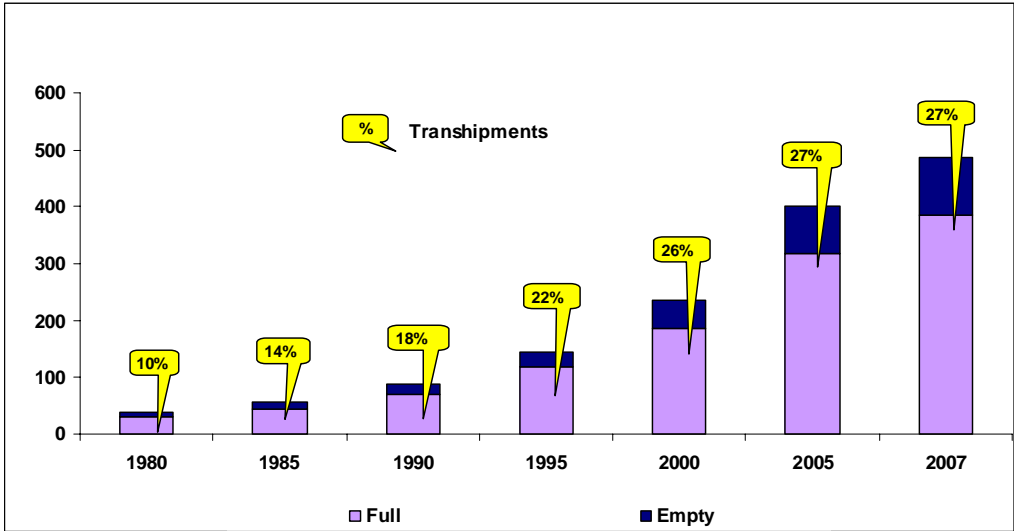
*(Million tonnes)*



Source: Clarkson Research Services, *Shipping Review Database*, Spring 2008, p. 101.

# International container port traffic, 1980 – 2008

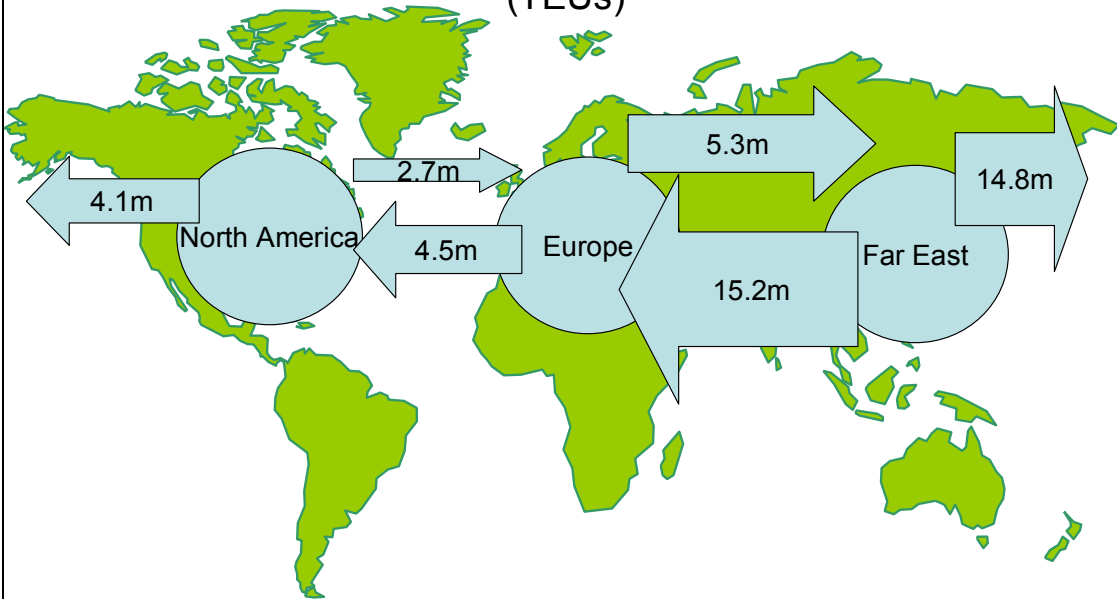
(Million teus)



Source: UNCTAD based on data provided by Drewry Shipping Consultants in the *Drewry Annual Container Market Review and Forecast 2006/2007*, September

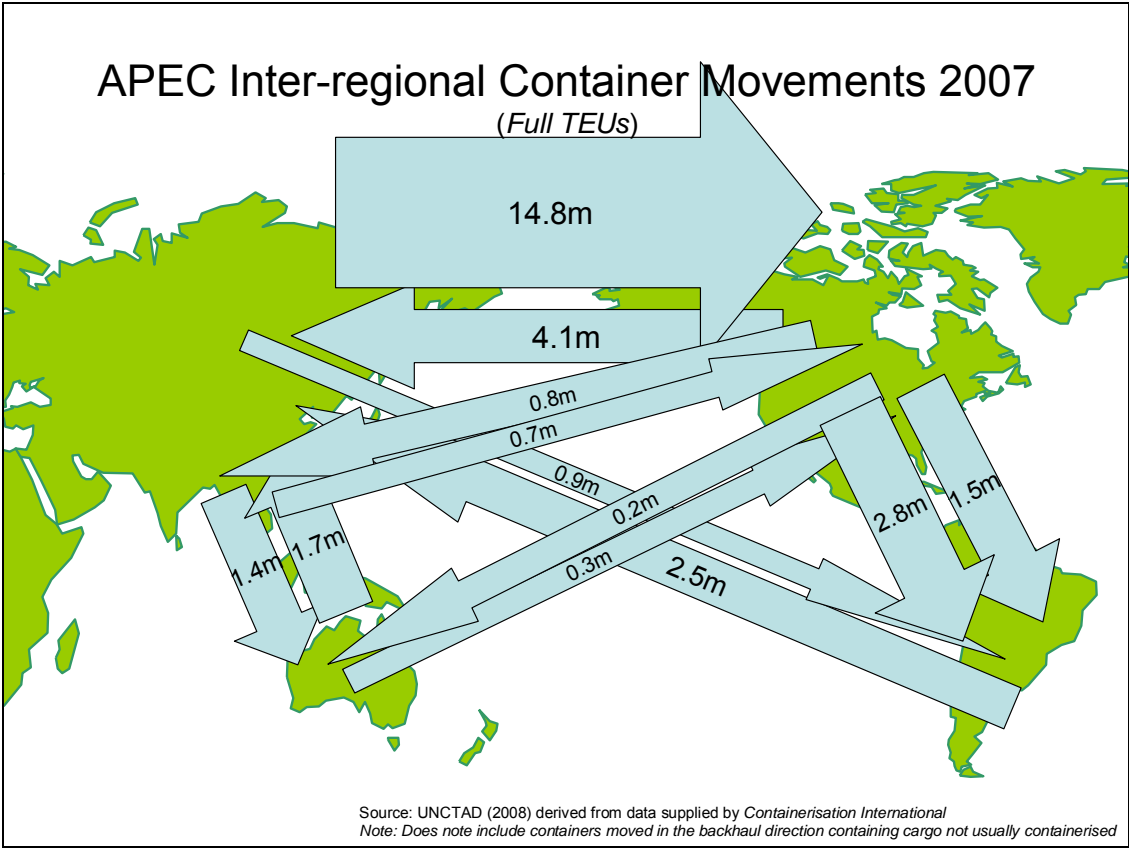
# Inter-regional Container Movements – 2007

(TEUs)



Source: UNCTAD (2008) derived from data supplied by *Containerisation International*  
 Note: Does not include containers moved in the backhaul direction containing cargo not usually containerised



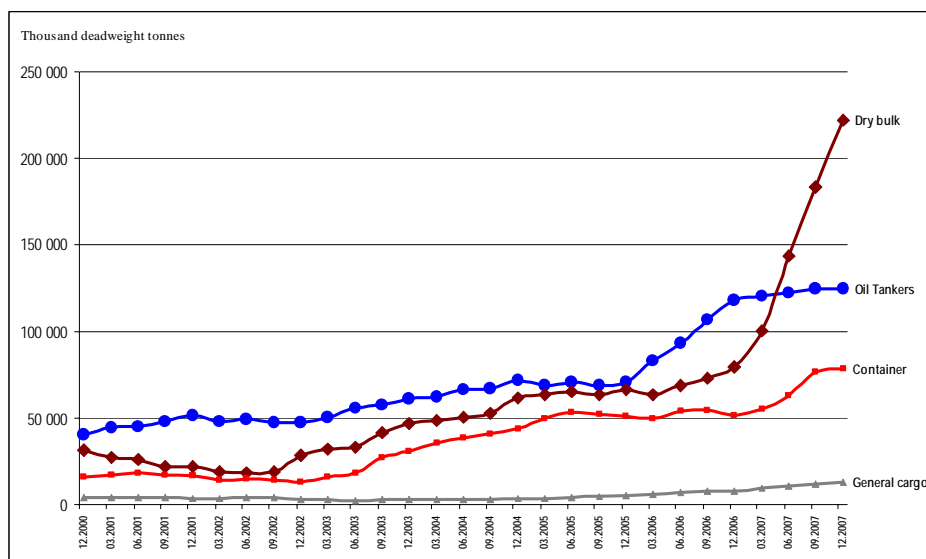


# 3. World fleet

## World fleet

- The world merchant fleet expanded by 7.2 per cent during 2007 to 1.12 billion deadweight tons (dwt) at the beginning of 2008.
- With historically high demand for shipping capacity the shipping industry responded by ordering more supply.
- Vessel orders are at their highest level ever, reaching 10,053 ships with a total tonnage of 495 million dwt, including 222 million dwt of dry bulk carriers.

## World Tonnage on order, 2000 - 2007a



Source: a Compiled by the UNCTAD Secretariat on the basis of data supplied by Lloyd's Register - Fairplay. Ships of 100 GT and above.

## World fleet size by principal types of vessel, 2005–2008a

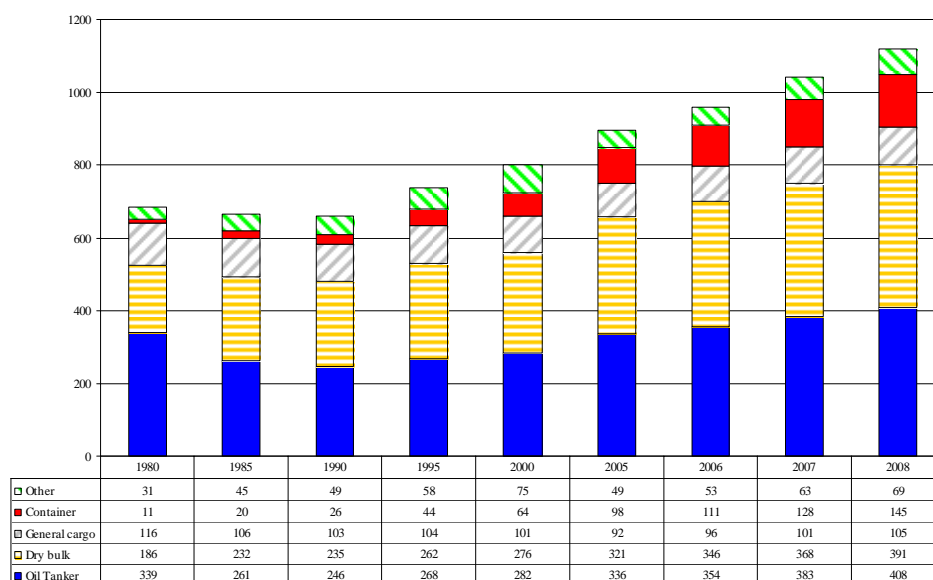
(Beginning-of-year figures, in thousands of dwt)

Principal types	2005	2006	2007	2008	Percentage change 2008/2007
<b>Oil tankers</b>	336 156	354 219	382 975	407 881	6.5
	<i>37.5</i>	<i>36.9</i>	<i>36.7</i>	<i>36.5</i>	<i>-0.3</i>
<b>Bulk carriers</b>	320 584	345 924	367 542	391 127	6.4
	<i>35.8</i>	<i>36.0</i>	<i>35.3</i>	<i>35.0</i>	<i>-0.3</i>
<b>Ore/bulk/oil</b>	9 695	7 817	5 614	4 284	-23.7
	<i>1.1</i>	<i>0.8</i>	<i>0.5</i>	<i>0.4</i>	<i>-0.2</i>
<b>Ore/bulk</b>	310 889	338 107	361 928	386 842	6.9
	<i>34.7</i>	<i>35.2</i>	<i>34.7</i>	<i>34.6</i>	<i>-0.1</i>
<b>General cargo ships</b>	92 048	96 218	100 934	105 492	4.5
	<i>10.3</i>	<i>10.0</i>	<i>9.7</i>	<i>9.4</i>	<i>-0.2</i>
<b>Containerships</b>	98 064	111 095	128 321	144 655	12.7
	<i>10.9</i>	<i>11.6</i>	<i>12.3</i>	<i>12.9</i>	<i>0.6</i>
<b>Other types of ships</b>	48 991	52 508	62 554	68 624	9.7
	<i>5.5</i>	<i>5.5</i>	<i>6.0</i>	<i>6.1</i>	<i>0.1</i>
<b>Liquefied gas carriers</b>	22 546	24 226	26 915	30 011	11.5
	<i>2.5</i>	<i>2.5</i>	<i>2.6</i>	<i>2.7</i>	<i>0.1</i>
<b>Chemical tankers</b>	8 290	8 919	8 823	8 236	-6.7
	<i>0.9</i>	<i>0.9</i>	<i>0.8</i>	<i>0.7</i>	<i>-0.1</i>
<b>Ferries and passenger ships</b>	5 589	5 649	5 754	5 948	3.4
	<i>0.6</i>	<i>0.6</i>	<i>0.6</i>	<i>0.5</i>	<i>0.0</i>
<b>Other</b>	12 566	13 714	21 062	24 427	16.0
	<i>1.3</i>	<i>1.1</i>	<i>1.9</i>	<i>2.2</i>	<i>0.3</i>
<b>World total</b>	895 843	959 964	1 042 328	1 117 779	7.2
	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	

Source: a Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay. Vessels of 100 GT and above. Percentage shares are shown in italics.

## World fleet by principal vessel types, selected years<sup>a</sup>

(Beginning of year figures, millions of dwt)



Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay. a Cargo carrying vessels of 100 GT and above.

## Long term trends in the cellular containership fleet<sup>a</sup>

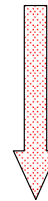
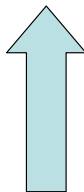
World total	1987	1997	2006	2007	2008	growth 2008/2007
Number of vessels	1 052	1 954	3 494	3 904	4 276	9.53
TEU capacity	1 215 215	3 089 682	8 120 465	9 436 377	10 760 173	14.03
Average vessel size	1 155	1 581	2 324	2 417	2 516	4.11

Source: Compiled by the UNCTAD secretariat on the basis of data supplied by Lloyd's Register – Fairplay.  
a Vessels of 100 GT and above. Beginning of year figures, except 1987, which are mid-year figures.

## 4. Freight rates

## Tanker freight indices, 2005–2007 (monthly figures)

	Lloyd's Shipping Economist				Baltic Tanker		
	>200	120–200	70–120	25–70	Clean	Dirty Index	Clean Index
October	87	147	190	213	217	1'281	1'095
November	74	118	133	199	194	1'223	853
December	66	136	189	210	251	996	931
<b>Average</b>	<b>93</b>	<b>141</b>	<b>164</b>	<b>228</b>	<b>247</b>	<b>1'295</b>	<b>1'112</b>
<b>2007</b>							
January	63	124	187	209	219	1'316	1'185
February	65	116	159	237	226	1'190	907
March	81	112	145	220	282	1'094	1'065
April	63	122	145	229	264	1'398	1'096
May	79	108	161	235	244	1'236	1'045
June	63	110	113	211	242	1'006	1'151
July	59	91	128	216	208	1'026	941
August	52	85	97	185	174	977	900
September	51	77	102	170	158	801	770
October	57	104	134	180	170	902	767
November	72	126	148	205	198	1'089	812
December	201	232	214	279	239	1'535	1'184
<b>Average</b>	<b>76</b>	<b>117</b>	<b>144</b>	<b>215</b>	<b>219</b>	<b>1'131</b>	<b>985</b>
<b>2008</b>							
January	112	124	178	205	215	1'914	1'083
February	97	119	141	182	195	1'174	938
March	108	156	175	202	197	1164	946



Source: Executive Summary in *Lloyd's Shipping Economist*, several issues; Baltic Tanker indices reported for the first working day of the month. Ship sizes are expressed in deadweight capacity

## Tanker market summary: clean and dirty spot rates, 2006–2007 (Worldscale (WS))

Vessel type	Routes	2006 Dec	Clean and dirty spot rates												% change 2006/2007	2008		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Jan	Feb	Mar
<b>VLCC/ULCC (200,000 dwt+)</b>																		
	Persian Gulf–Japan	58	58	59	82	50	81	63	63	56	54	57	71	195	236.2%	122	96	97
	Persian Gulf–Republic of Korea	59	58	55	81	53	72	60	55	53	52	53	86	189	220.3%	127	99	88
	Persian Gulf–Europe	58	54	52	66	45	69	60	50	45	42	42	82	163	181.0%	135	88	84
	Persian Gulf–Caribbean/East Coast of North America	55	53	48	73	49	63	60	45	45	43	43	55	159	189.1%	85	86	84
	Persian Gulf–South Africa	64	57	..	..	55	97	..	..	54	..	..	..	220	243.8%	..	..	..
<b>Suezmax (100,000–160,000 dwt)</b>																		
	West Africa–North West Europe	122	130	107	126	128	105	108	96	78	79	93	117	237	94.3%	149	124	173
	West Africa–Caribbean/East Coast of North America	130	129	116	116	113	108	112	99	79	79	93	114	251	93.1%	135	125	167
	Mediterranean–Mediterranean	161	154	113	136	124	110	113	87	78	75	125	138	223	38.5%	165	113	224
<b>Aframax (70,000–100,000 dwt)</b>																		
	North West Europe–North West Europe	151	169	168	138	139	129	105	128	87	104	125	140	190	25.8%	163	128	159
	North West Europe–Caribbean/East Coast of North America	200	167	185	130	170	178	124	126	97	..	114	125	190	-5.0%	170	138	173
	Caribbean–Caribbean/East Coast of North America	231	174	211	187	156	170	140	170	105	115	153	166	299	29.4%	204	168	240
	Mediterranean–Mediterranean	178	231	121	157	146	173	107	117	94	106	145	150	205	15.2%	183	146	192
	Mediterranean–North West Europe	207	188	110	161	140	142	103	115	91	117	135	133	193	-6.8%	187	137	174
	Indonesia–Far East	152	149	124	125	156	142	143	129	112	120	114	141	237	55.9%	180	143	140
<b>Handy-size (less than 50,000 dwt)</b>																		
	Mediterranean–Mediterranean	190	281	273	247	216	233	150	230	..	156	205	199	260	36.8%	198	180	191
	Mediterranean–Caribbean/East Coast of North America	174	200	213	195	203	..	..	200	167	148	153	177	262	50.6%	200	174	187
	Caribbean–East Coast of North America/Gulf of Mexico	243	212	205	214	207	198	161	176	161	158	154	168	334	37.4%	194	159	221
<b>All Clean Tankers</b>																		
	70,000–80,000 dwt Persian Gulf–Japan	172	156	133	146	135	133	132	137	153	140	115	142	195	13.4%	198	150	135
	50,000–60,000 dwt Persian Gulf–Japan	194	185	161	182	172	185	168	184	188	175	163	172	236	21.6%	224	171	182
	35,000–50,000 dwt Caribbean–East Coast of North America/Gulf of Mexico	282	209	222	288	233	223	242	201	155	133	145	177	203	-28.0%	216	190	189
	25,000–35,000 dwt Singapore–East Asia	302	303	257	276	223	313	246	292	294	302	243	218	322	6.6%	287	224	260

Source: *Drewry Shipping Insight*, various issues. Note: Two dots (..) means that no rate was reported.

## Dry cargo freight indices, 2004–2007

Period	Dry cargo tramp time-charter (1972 = 100)				Dry cargo tramp trip-charter (1985 = 100)			
	2005	2006	2007	2008	2005	2006	2007	2008
January	505	302	491	812	677	294	632	1018
February	481	298	480	657	715	292	577	
March	530	327	550		565	321	644	
April	507	326	576		624	325	707	
May	440	323	671		552	304	712	
June	373	331	626		412	359	759	
July	313	360	673		342	421	875	
August	290	417	718		285	475	920	
September	328	447	828		352	518	1078	
October	379	450	985		391	522	1044	
November	346	447	1013		376	463	1280	
December	320	484	926		332	594	1251	
<b>Annual average</b>	<b>401</b>	<b>376</b>	<b>711</b>	<b>735</b>	<b>469</b>	<b>407</b>	<b>873</b>	<b>1018</b>

Source: Compiled by Maritime Research and published by Institute of Shipping Economics and Logistics in Shipping Statistics and Market Review, 1/2, 2008.  
Note: All indices have been rounded to the nearest whole number

## Leading 20 service operators of containerships at the beginning of 2008

(Number of ships and total shipboard capacity deployed (TEUs))

Ranking	Operator	Country/territory	No. of ships in 2008	TEU capacity in 2008
1	Maersk Line	Denmark	446	1'638'898
2	MSC	Switzerland	359	1'201'121
3	CMA-CGM Group	France	238	701'223
4	Evergreen	Taiwan Province of China	177	620'610
5	Hapag Lloyd	Germany	142	491'954
6	COSCON	China	141	426'814
7	CSCL	China	122	418'818
8	APL	Singapore	117	394'804
9	OOCL	Hong Kong (China)	84	351'542
10	NYK	Japan	87	331'083
<b>Subtotal</b>			<b>1'913</b>	<b>6'576'867</b>
11	MOL	Japan	104	325'030
12	Hanjin	Republic of Korea	74	321'917
13	K Line	Japan	91	293'321
14	Yang Ming	Taiwan Province of China	83	276'016
15	Zim	Israel	84	243'069
16	Hamburg Sud	Germany	76	196'632
17	HMM	Republic of Korea	45	194'350
18	PIL	Singapore	72	140'135
19	Wan Hai	Taiwan Province of China	75	125'393
20	CSAV	Chile	48	108'927
<b>Total 1-20</b>			<b>2'665</b>	<b>8'801'657</b>
<b>World container cellular fleet at 1 January 2008</b>			<b>8'762</b>	<b>12'657'725</b>

15.5%

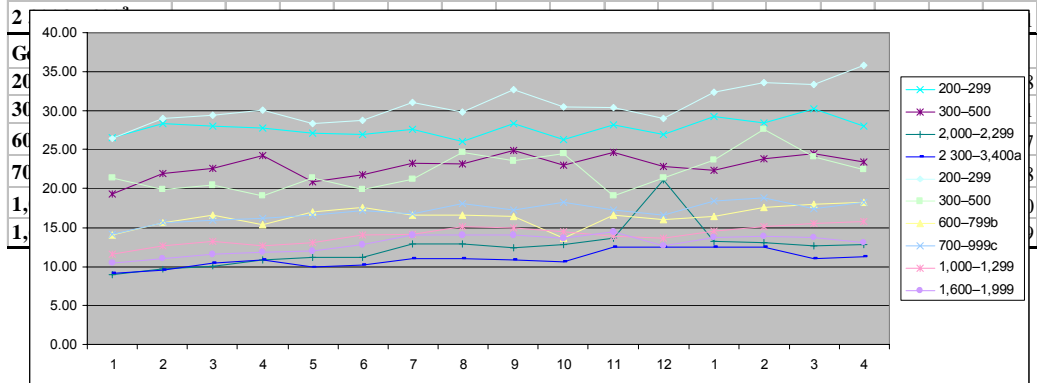
Source: UNCTAD secretariat, Containerisation International Online, Fleet Statistics, www.ci-online.co.uk.

## Containership time charter rates (\$ per 14-ton slot/day)

Ship type	Yearly averages							
	2000	2001	2002	2003	2004	2005	2006	2007
<b>Gearless</b>								
200? 99	15.71	15.74	16.88	19.57	25.02	31.71	26.67	27.22
300? 00	14.52	14.72	15.14	17.48	21.73	28.26	21.67	22.27
<b>Geared/Gearless</b>								
2,000? ,299	10.65	7.97	4.90	9.75	13.82	16.35	10.51	11.68
2,300? ,400 <sup>a</sup>			5.96	9.29	13.16	13.04	10.18	10.74
<b>Geared/Gearless</b>								
200? 99	17.77	17.81	17.01	18.93	27.00	35.35	28.04	29.78
300? 00	14.60	14.90	13.35	15.55	22.24	28.82	22.04	21.34
600? 99 <sup>b</sup>			9.26	12.25	19.61	23.70	16.62	16.05
700? 99 <sup>c</sup>			9.11	12.07	18.37	21.96	16.73	16.9
1,000? ,299	11.87	8.78	6.93	11.62	19.14	22.58	14.28	13.69
1,600? ,999	10.35	7.97	5.67	10.04	16.08	15.81	11.77	12.79

## Containership time charter rates (\$ per 14-ton slot/day)

Ship type	Monthly averages for 2007												Monthly averages for 2008			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
<b>Gearless</b>																
200? 99	26.52	28.35	28.01	27.76	27.08	26.90	27.58	25.92	28.25	26.20	28.10	27.00	29.23	28.49	30.16	27.96
300? 00	19.29	21.91	22.59	24.23	20.83	21.80	23.20	23.17	24.84	23.00	24.60	22.90	22.37	23.77	24.49	23.34
<b>Geared/Gearless</b>																
2,000? ,299	8.96	9.60	10.06	10.84	11.21	11.15	12.92	12.92	12.44	12.81	13.61	21.10	13.18	13.10	12.59	12.78



Source: Hamburg Shipbrokers' Association, [http://www.vhss.de/hax2006\\_001.pdf](http://www.vhss.de/hax2006_001.pdf), Institute of Shipping Economics and Logistics in Shipping Statistics and Market Review, Volume 52 No. 1/2 2008 pp54-55 and Dynaliner's Trades Review 2008, Fig18 pp33.  
<sup>a</sup> This category was created in 2002. Data for the first half of the year correspond to cellular ships in the range 2,300-3,900 TEUs sailing at 22 knots minimum.

## Freight rates (market averages) per TEU on the three major liner trade routes (*\$ per TEU and percentage change*)

	Trans-Pacific		Europe-Asia		Transatlantic	
	Asia-USA	USA-Asia	Europe-Asia	Asia-Europe	USA-Europe	Europe-USA
2006						
First quarter	1836	815	793	1454	995	1829
Change (%)	-2.2	-1.2	-3.9	-14.9	-1.4	0.8
Second quarter	1753	828	804	1408	1010	1829
Change (%)	-4.5	1.6	1.4	-3.2	1.5	0.0
Third quarter	1715	839	806	1494	1041	1854
Change (%)	-2.2	1.3	0.2	6.1	3.1	1.4
Fourth quarter	1671	777	792	1545	1066	1762
Change (%)	-2.6	-7.4	-1.7	3.4	2.4	-8.0
2007						
First quarter	1643	737	755	1549	1032	1692
Change (%)	-1.7	-5.1	-4.7	0.3	-3.2	-4.0
Second quarter	1675	765	744	1658	1067	1653
Change (%)	1.9	3.8	-1.5	7.0	3.4	-2.3
Third quarter	1707	780	777	1952	1115	1725
Change (%)	1.9	2.0	4.4	17.7	4.5	4.4
Fourth quarter	1707	794	905	2054	1147	1766
Change (%)	0.0	1.8	16.5	5.2	2.9	2.4
2008						
First quarter	1725	861	968	2021	1193	1700
Change (%)	1.1	8.4	7.0	-1.6	4.0	-3.7

YOY  
14.3%

YOY  
32.9%

Source: Containerisation International Online, [www.ci-online.co.uk](http://www.ci-online.co.uk).

## Liner freight indices, 2005-2007

(Monthly figures: 1995 = 100)

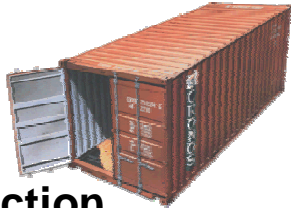
Month	Overall index			Homebound index			Outbound index		
	2005	2006	2007	2005	2006	2007	2005	2006	2007
January	96	104	88	89	95	89	101	113	88
February	95	105	88	88	95	89	102	113	87
March	95	106	86	88	97	88	102	114	85
April	98	105	87	91	96	91	105	113	84
May	103	101	88	97	92	92	108	110	85
June	108	104	92	101	94	96	114	113	88
July	108	105	94	102	96	101	115	113	87
August	106	98	95	100	92	103	111	103	88
September	106	96	98	100	92	106	112	100	90
October	109	95	97	102	93	105	116	97	89
November	111	91	97	104	89	101	118	93	93
December	110	87	100	103	86	104	117	88	96
Annual average	104	100	93	97	93	97	110	106	88

Source: Compiled by UNCTAD secretariat on the basis of information published by the Institute of Shipping Economics and Logistics, Shipping Statistics and Market Review, vol. 52, no. 3, March 2008, pp. 60 and 61.



# Containers

(Thousand TEUs)

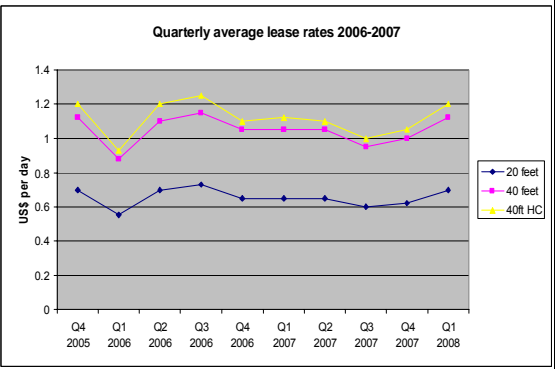
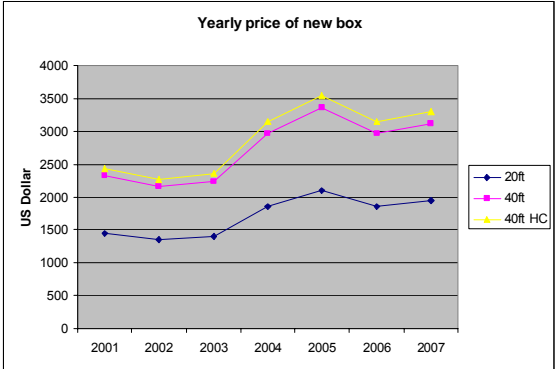


## Fleet

Year	Global	Lessor	Sea carrier fleet
2003	17'960	8'370	9'590
2004	20'005	9'125	10'880
2005	21'455	9'370	12'085
2006	23'345	9'830	13'515
2007	25'365	10'440	14'925

## Production

	2006	2007
Dry freight standard	2'710	3'480
Dry freight special	85	90
Integral reefer	176	195
Tank	14	16
Regional	115	119
<b>Total</b>	<b>3'100</b>	<b>3'900</b>



Source: Containerisation International, August 2007, p. 36-39.

# 5. Port developments

15 of the top 20 ports are in APEC member countries

## Port Developments

Port Name	2005	2006	2007	Percentage change 2006 -2005	Percentage change 2007-2006
Singapore	23192200	24792400	27932000	6.90	12.66
Shanghai	18084000	21710000	26150000	20.05	20.45
Hong Kong	22601630	23538580	23881000	4.15	1.45
Shenzhen	16197173	18468900	21099000	14.03	14.24
Busan	11843151	12030000	13270000	1.58	10.31
Rotterdam	9250985	9654508	10790604	4.36	11.77
Dubai	7619219	8923465	10653026	17.12	19.38
Kaohsiung	9471056	9774670	10256829	3.21	4.93
Hamburg	8087545	8861545	9900000	9.57	11.72
Qingdao	6307000	7702000	9462000	22.12	22.85
Ningbo	5208000	7068000	9360000	35.71	32.43
Guangzhou	4685000	6600000	9200000	40.88	39.39
Los Angeles	7484624	8469853	8355039	13.16	-1.36
Antwerp	6482061	7018899	8176614	8.28	16.49
Long Beach	6709818	7290365	7312465	8.65	0.30
Port Klang	5715855	6326294	7120000	10.68	12.55
Tianjin	4801000	5950000	7103000	23.93	19.38
Tanjung Pelepas	4177121	4770000	5500000	14.19	15.30
New York/New Jersey	4792922	5092806	5400000	6.26	6.03
Bremen/Bremerhaven	3735574	4428203	4892239	18.54	10.48
<b>Total top 20</b>	<b>186'445'934</b>	<b>208'470'488</b>	<b>235'813'816</b>	<b>11.81</b>	<b>13.12</b>

Source: Containerisation International, May 2008.



## Jebel Ali Port (United Arab Emirates)

- In June 2006 the port made 8,571 moves in 41 hours for the 9,000 TEU ship the MSC Rania.
- Average moves per hour > 60



Twin FEU

## Chiwan Container Terminal, Shenzhen, China







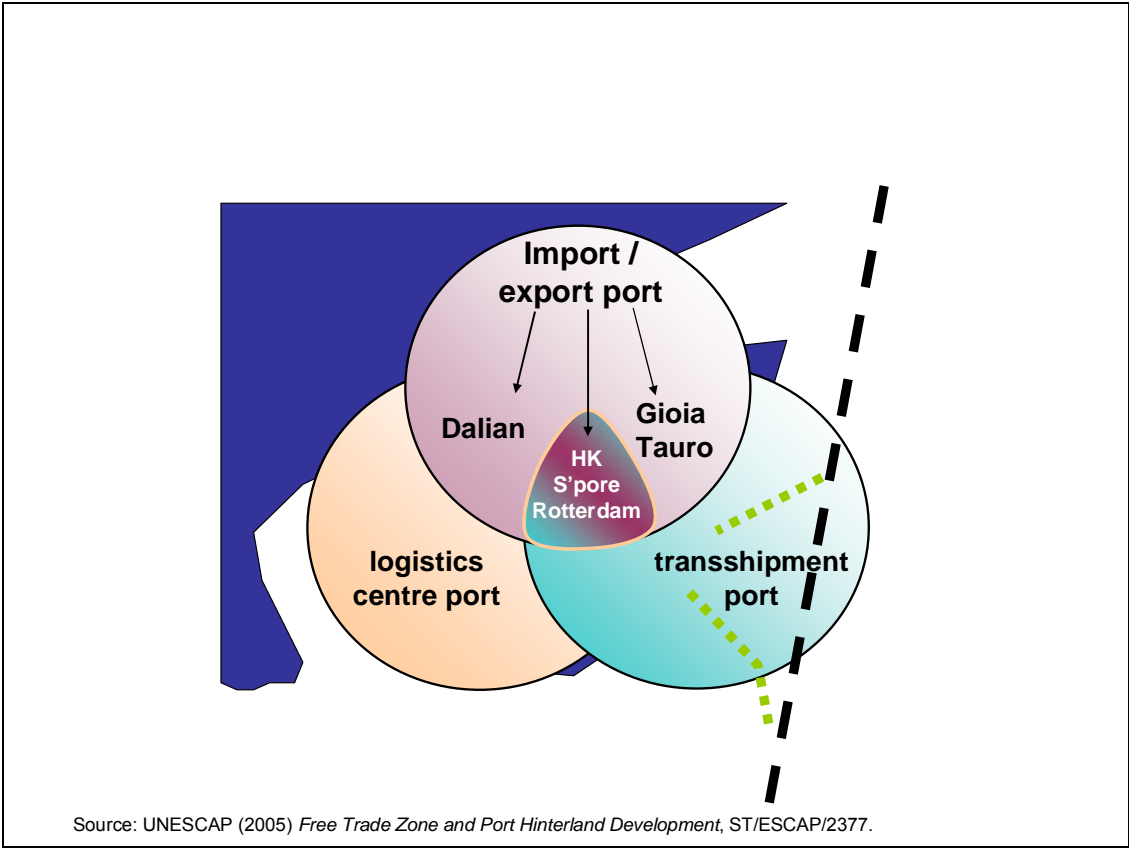
## Opportunities and Challenges

- Ports need:
  - Longer container berths
  - Deeper alongside access
  - Specialised port equipment
  - Sophisticated workflows supported by software programs.
  - An enabling environment which is conducive to creating value added service within or adjoining to ports
- Issues remain of how to retain the necessary safeguards to protect revenue, security, the environment and national land transport systems as well as how to finance projects.

Port efficiency has to improve because port customers are getting bigger.



In 2006 the largest containership ever built, Emma Maersk, was launched with a reported capacity of 12,508 TEU capacity she requires a depth of 16 metres 156,907 DWT (carrying capacity)



# 6. Inland developments

## Rail freight traffic in 2007



- Grew by:
- 28% in Saudi Arabia
- 12.6% in Viet Nam
- 9.4% in India
- 7.6% in China
- 7.2% in the Russian Federation
- 1% in both Europe and in the United States.

Source: International Union of Railways (UIC)

## Beijing-Hamburg Container Express

- 10,000 kilometers (6,200 miles) in 15 days
  - (Via Mongolia, Russia, Belarus and Poland )
- The comparable journey by sea takes around 30 days

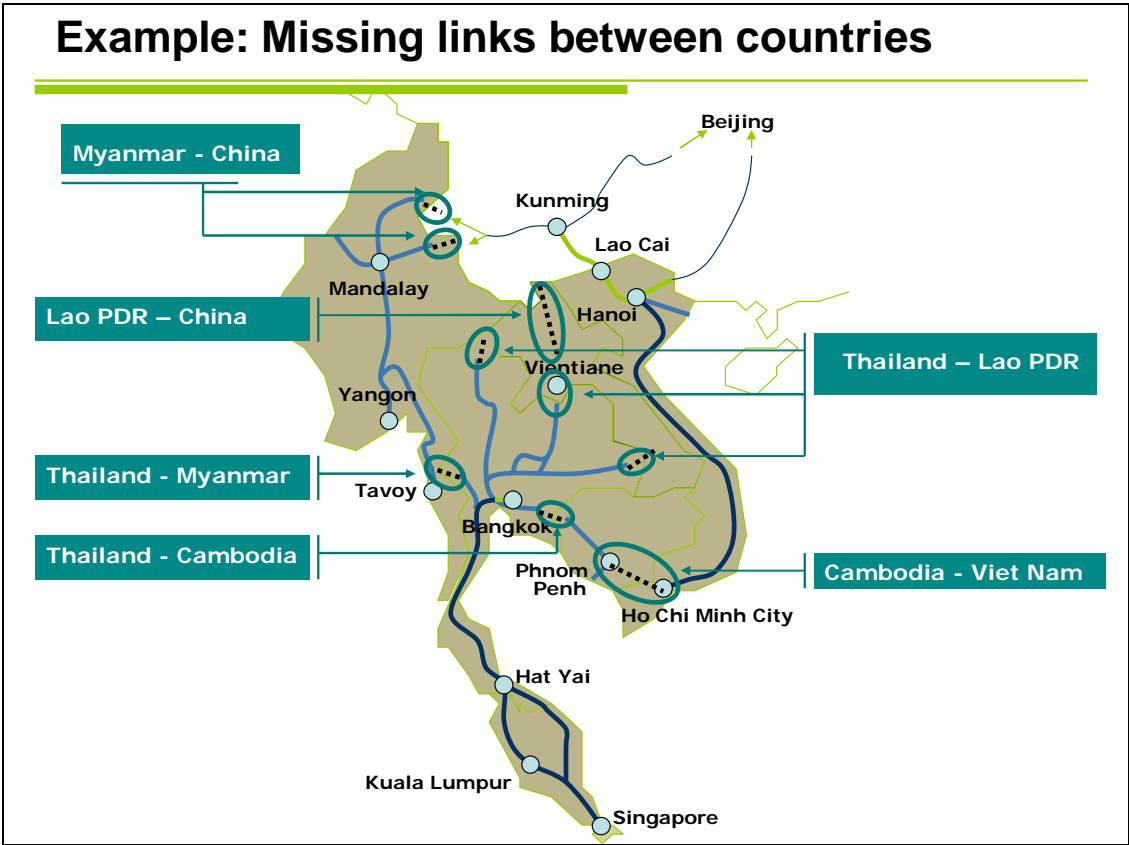
[mms://winmedia.ctv.com/worldwidewatch/2008/01/worldwidewatch\\_300\\_20080125\\_17.wmv](http://mms://winmedia.ctv.com/worldwidewatch/2008/01/worldwidewatch_300_20080125_17.wmv)



# Trans-Asian Railway Network

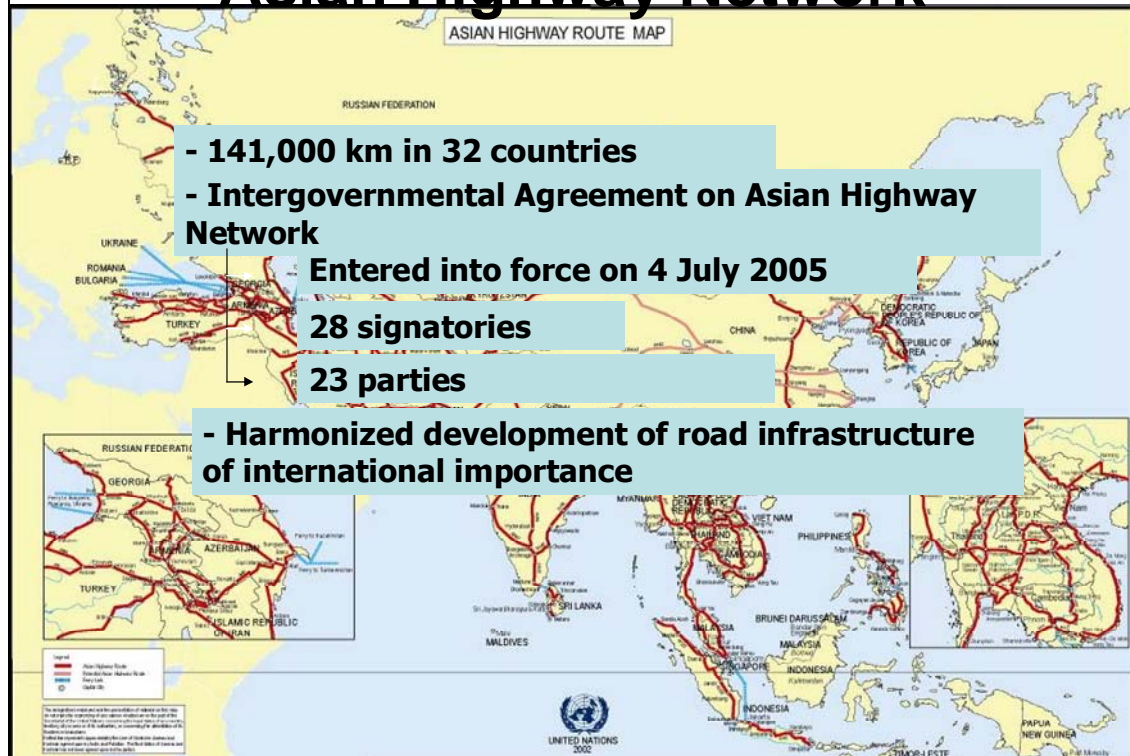


## Example: Missing links between countries





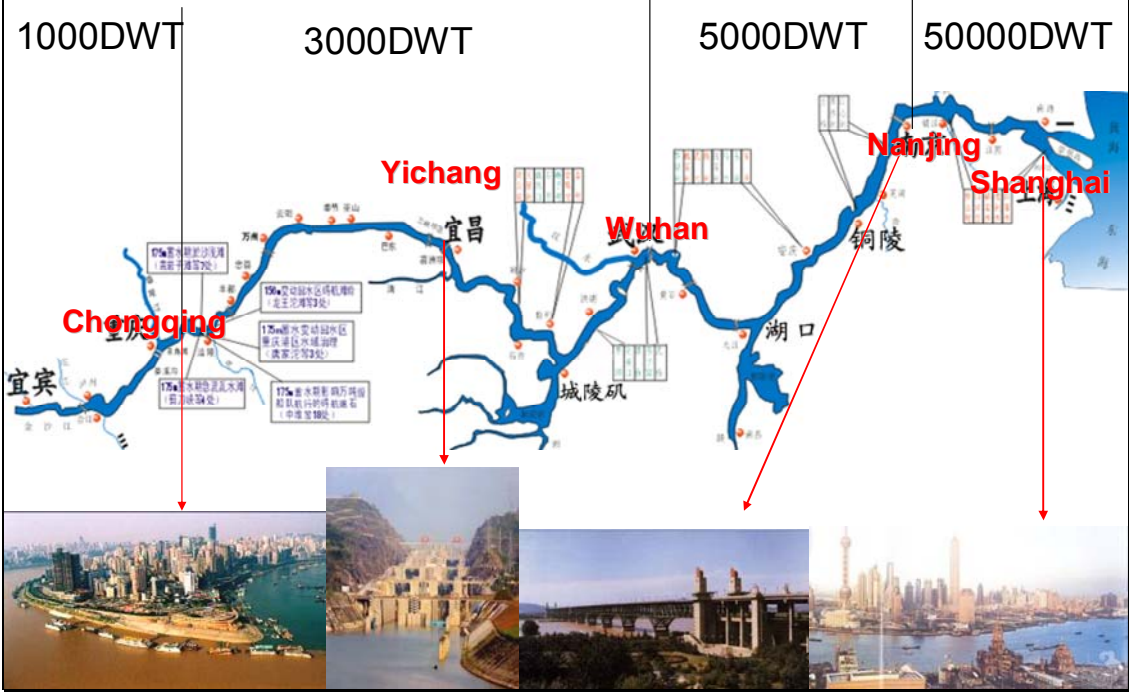
# Asian Highway Network



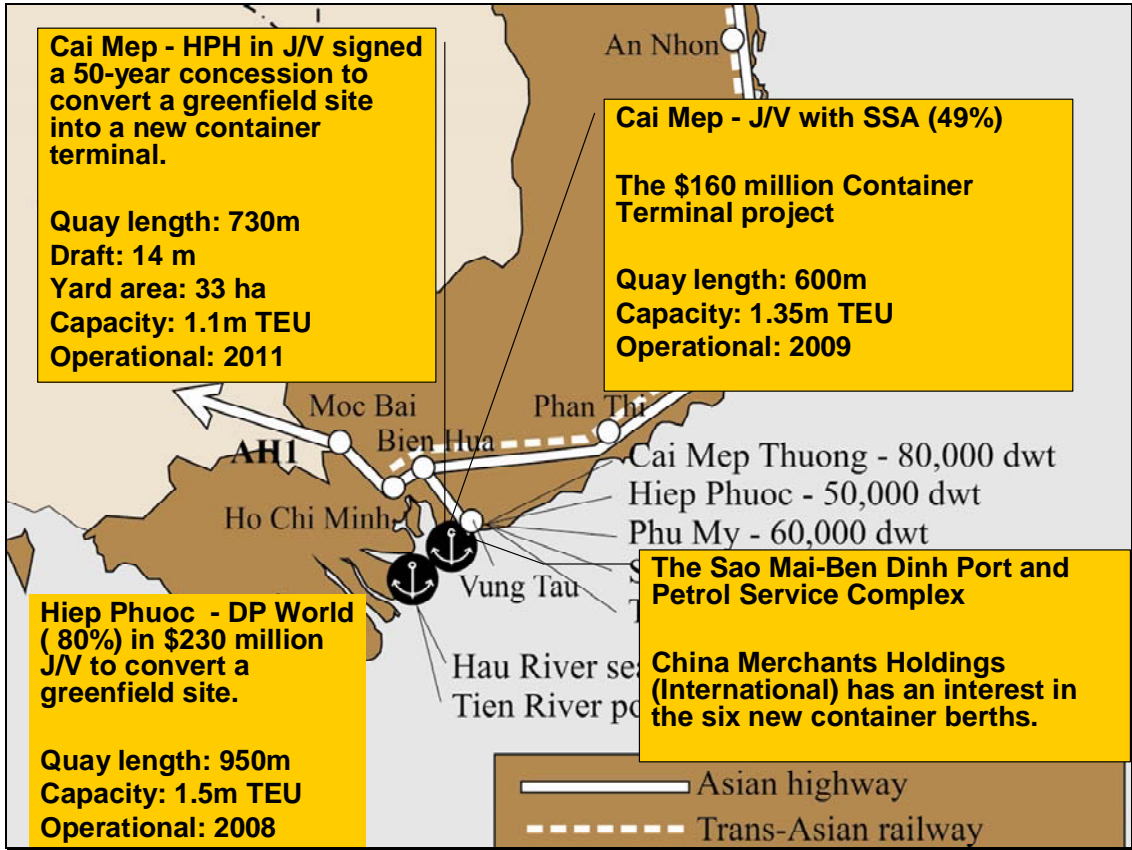
## Inland waterways

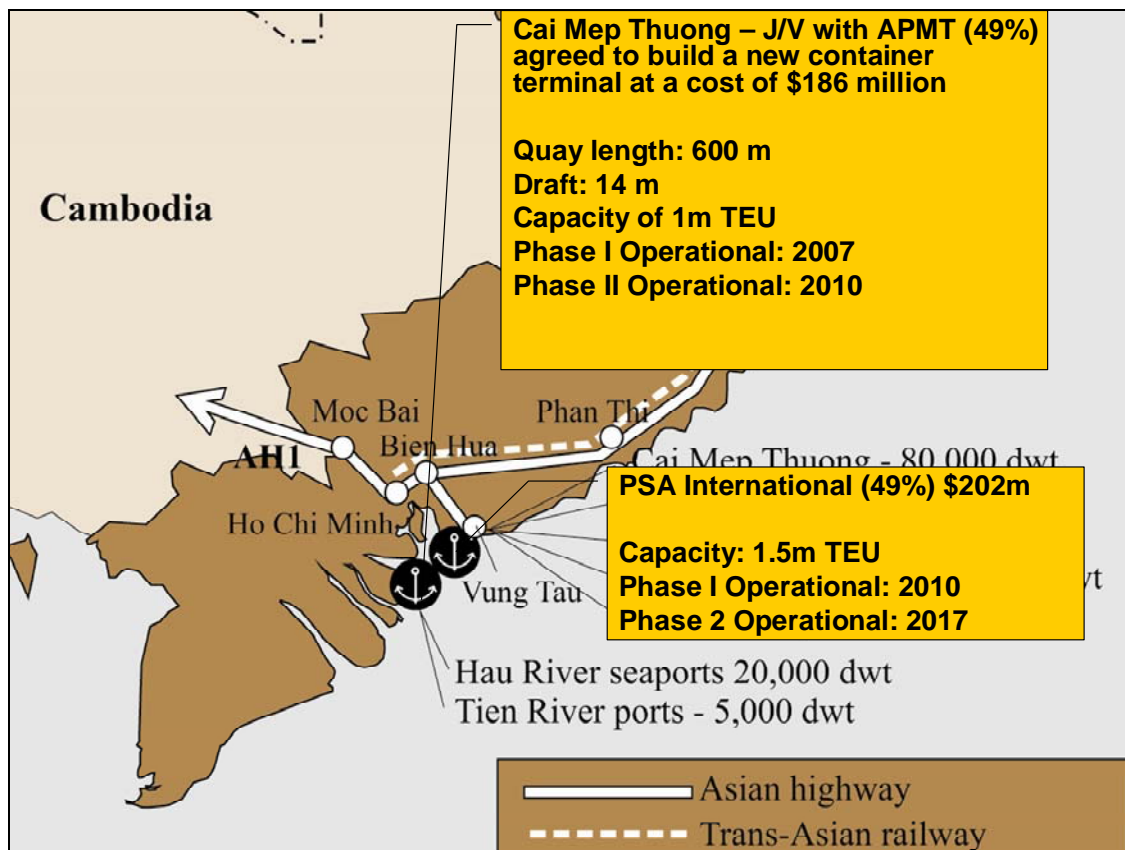
- Inland waterway systems remain an important transport route for many developed and developing countries where other transport systems are either underdeveloped or have become congested.
- In the Russian Federation inland waterways cargo volumes reached 170 million tons, in 2005.
- In Europe the figure was 465 million tons in 2005.
- In Asia, the Yangtze River handled 1 billion tons in 2006

# Yangtze River Waterway



## 7. Asia and Latin America





## Containerized trade growth, (Index, base year 2000)

### Imports

	2000	2001	2002	2003	2004	2005	2006	2007
Argentina	1.00	0.88	0.40	0.62	0.86	0.97	1.08	1.20
Chile	1.00	0.97	1.10	1.19	1.48	1.70	1.89	2.10
Colombia	1.00	1.12	1.17	1.28	1.57	1.86	2.25	2.52
Other countries WCSA <sup>[1]</sup>	1.00	0.94	1.02	1.00	1.25	1.27	1.35	1.44
Venezuela (Bolivarian Republic)	1.00	1.25	0.90	0.66	1.12	1.29	1.45	1.56
Central America	1.00	1.09	1.15	1.24	1.46	1.54	1.90	2.04
Peru	1.00	0.97	1.05	1.10	1.41	1.66	1.82	2.00
Other countries ECSA <sup>[2]</sup>	1.00	0.89	0.72	0.74	0.99	1.02	1.24	1.34
The Caribbean	1.00	1.09	1.09	1.04	1.25	1.36	1.48	1.52
Mexico	1.00	1.13	1.23	0.92	1.06	1.14	1.30	1.39
Brazil	1.00	1.00	0.83	0.83	1.51	1.73	2.06	2.28
Total LAC	1.00	1.05	1.00	0.95	1.27	1.41	1.62	1.76

<sup>[1]</sup> WCSA: West Coast of South America comprises of Chile, Peru, Ecuador and parts of Colombia.  
<sup>[2]</sup> ECSA: East Coast of South America comprises of Argentina, Uruguay and Brazil

Source: Wilmsmeier, based on UNECLAC on the basis of data from Global Insight Inc. (www.globalinsight.com).

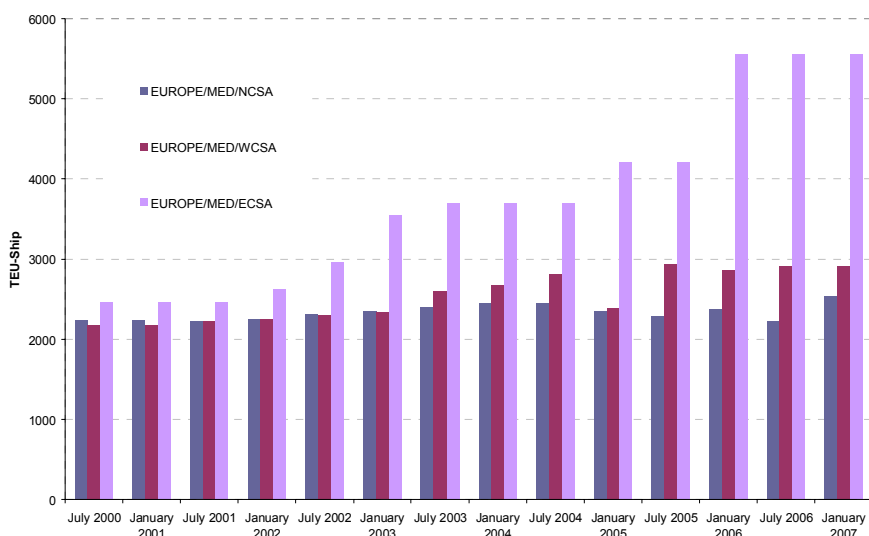
## Containerized trade growth, (Index, base year 2000)

### Exports

	2000	2001	2002	2003	2004	2005	2006	2007
Argentina	1.00	1.10	1.23	1.47	1.56	1.68	1.81	2.00
Chile	1.00	1.11	1.09	1.27	1.56	1.59	1.82	1.86
Colombia	1.00	0.95	1.07	1.31	1.50	1.66	1.78	1.86
Other countries WCSA	1.00	0.97	0.98	1.03	1.11	1.18	1.36	1.40
Venezuela (Bolivarian Republic)	1.00	0.93	0.84	0.84	1.05	1.05	0.97	0.91
Central America	1.00	1.02	1.04	1.11	1.22	1.31	1.90	2.04
Peru	1.00	1.25	1.31	1.30	1.68	1.92	2.24	2.35
Other countries ECSCA	1.00	1.15	1.00	1.37	1.55	1.85	1.87	1.96
The Caribbean	1.00	1.00	1.06	1.18	1.47	1.63	0.99	1.01
Mexico	1.00	1.70	1.35	1.25	1.39	1.45	1.55	1.65
Brazil	1.00	1.09	1.28	1.55	1.88	1.97	2.13	2.20
Total LAC	1.00	1.11	1.15	1.30	1.54	1.63	1.74	1.82

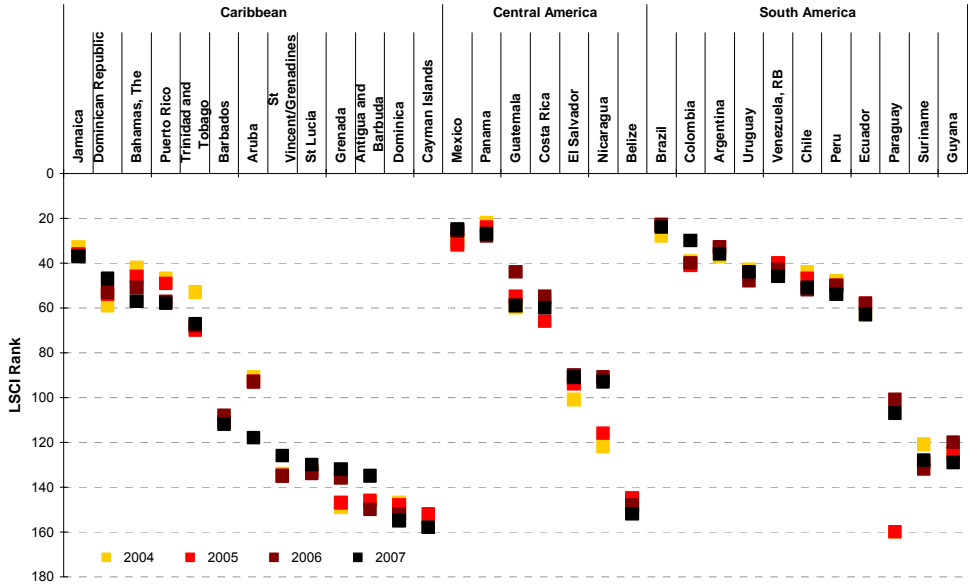
Source: Wilmsmeier, based on UNECLAC on the basis of data from Global Insight Inc. (www.globalinsight.com).

## Container ship size development South America –Europe Mediterranean trades, 2000 - 2007



Source: Wilmsmeier (2008) based on ComPair Data 2000-2007.

# Connectivity Latin America and the Caribbean, 2004-2006



Source: UNCTAD 2007, Trade Newsletter

# Geographical distribution of International Terminal operators in Latin America and the Caribbean, 2008



Source: Wilmsmeier and Sánchez, based on various port terminal operators



## The trend... financial firms

- In 2005 Babcock and Brown (Australia), **a private equity firm**, buys PD Ports (UK)
- In 2005/6 Peel Holdings (UK) buys MDHC (UK) (now 49 per cent owned by **Deutsche bank**).
- In 2006 DP World buys P&O Ports
- In 2006 Admiral Acquisitions, **a private equity firm** buys ABP (UK).
- In 2006 Ontario Teachers' **Pension Plan** Board (OTPPB) buys Orient Overseas Container Line (Hong Kong) entire terminal operations (excluding Long Beach and Kaohsiung).
- 2006/2007 **Macquarie Bank** buy 40% stake in Hanjin (S. Korea) terminals

## The cost of purchasing terminals (price/earnings ratio)

Sold	P/E ratio x 14 - In 2005 DP World purchased CSX Terminals.
	P/E ratio x 15 - In 2006 Admiral Acquisitions bought Associated British Ports
	P/E ratio x 19 - In 2006 DP World's purchase of P&O Ports
	P/E ratio x 16 - In 2007 Deutsche bank bought a share in Peel ports
Current share price	P/E ratio x 20 - Forth Ports
	P/E ratio x 25 - ICTSI
	P/E ratio x 36 - CMHI
	P/E ratio x 58 - SIPG

## **B. Future trends**

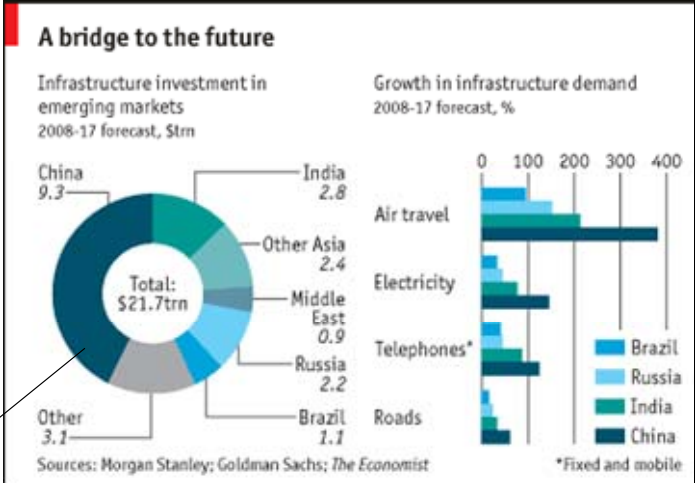
### **1. Infrastructure investments**





# Infrastructure investment

- Over half of the world's infrastructure investment is now taking place in emerging economies
- Emerging economies are likely to spend an estimated \$1.2 trillion on roads, railways, electricity, telecommunications and other projects in 2008

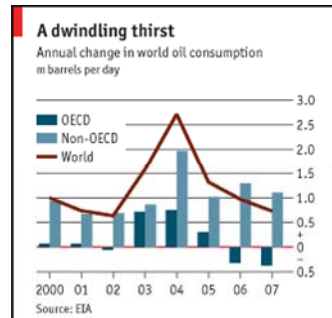


China 43%

Source: The Economist, Building BRICs of growth, 5th Jun 2008

## 2. Rising commodity prices

## Oil

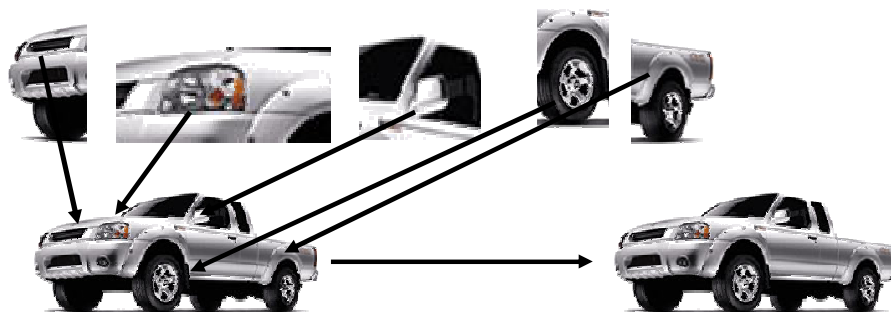


- In 1998 the price was at a mere US\$ 11 per barrel.
- USD\$54 per barrel January 2007
- USD\$96 per barrel December 2007
- Dipped below \$90 per barrel in January and February 2008
- USD140 in June 2008 as a result of a combination of weak supply growth coupled with a tight spare capacity.
- The previous recorded high was in April 1980 when the inflationary adjusted figure put the price of oil at the equivalent of US\$102.81 per barrel.<sup>[1]</sup>

[1] <http://www.nytimes.com/2008/01/02/business/02cnd-oil.html?hp>

## Globalization and international transport

- Globalisation has allowed for the assemble of goods to be performed on a global scale





## Rising commodity prices - food



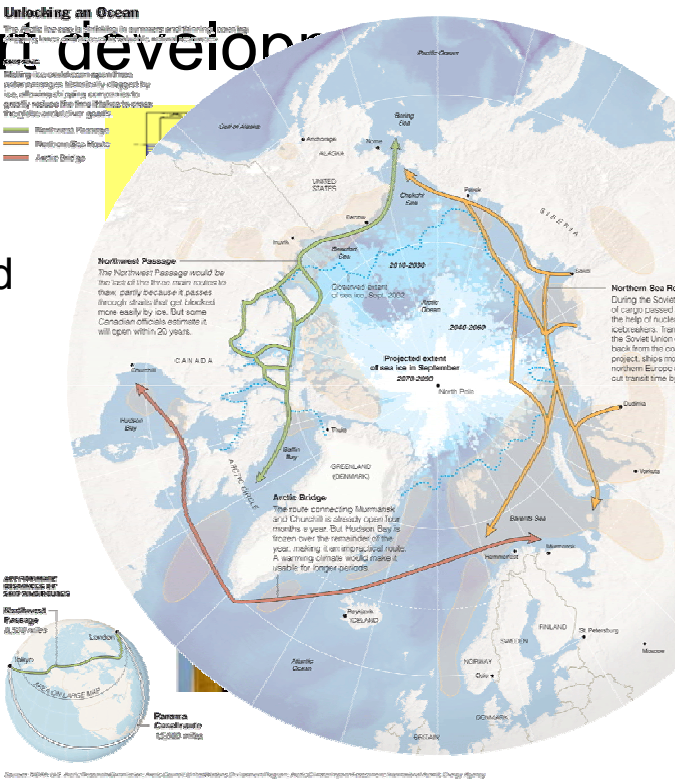
- Rise in oil prices has led to a significant increase in the cost of grain production, through raising the cost of fertilisers (corn, in particular, and wheat production are very fertiliser-intensive), and leading to a sharp rise in the storage, transport and distribution costs of grain output.
- Growing populations and disposable incomes;
- Increasing urbanisation; Declining stock of arable land
- Competition for Water supply
- Competition from Biofuels.



### 3. Transport developments

- Ship design – Malacca Max vessels or beyond
- New transport routes

### Transport developments



## Conclusion

- There is still a demand for shipping goods long distances.
- Will transport infrastructure improvements in Asia lead to better access to foreign markets or will the high cost of transport replace globalisation with regionalisation?
- Will new transport routes offset the higher cost in transportation?
- What is the future for APEC countries where distance between members is largely served by sea transportation?